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EXCAVATIONS AT WOODHAM WALTER AND AN ASSESSMENT OF ESSEX ENCLOSURES

East Anglian Archaeology 33

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EAST ANGLIAN ARCHAEOLOGY

Frontispiece: Cropmark complex at Thurrock (Cambridge Univ. Collect. No. BBS 72: *Copyright reserved*)

Excavation of a Cropmark Enclosure Complex at Woodham Walter, Essex, 1976

by David G. Buckley
and John D. Hedges

and

An Assessment of Excavated Enclosures in Essex

Together with a Selection of Cropmark Sites

by Deborah Priddy
and David G. Buckley

with contributions by
Peter Boyd, Caroline Cartwright, John Evans,
Elizabeth Healey, Hilary Major, Warwick J. Rodwell,
Michael C. Wadhams, and Tony J. Wilkinson

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Cover Illustration Aerial view of the Woodham Walter site from the south.
Photo: Ida McMaster

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Enclosures Paper
The origins of this paper arose from an undergraduate dissertation by Ms Carol Crook for the London Institute of Archaeology on excavated cropmark enclosures. Since her study many more sites have been excavated and the body of cropmark evidence has almost doubled. We would like to thank those excavators who have provided information about their sites, particularly those who have done so in advance of their own final publications: notably Mrs M.U. Jones, Philip Clarke and Tony Wilkinson. Much help has been given by colleagues in the Archaeology Section, and the text has benefitted from reading by John Hedges and Owen Bedwin.

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Editorial

This volume contains reports on two different but closely related aspects of the study of the historic landscape in Essex. The survey and recording of archaeological cropmarks by air photography and the subsequent plotting and interpretation of the evidence is the first step in a study which then demands selective excavation to enable sites to be placed in a more useful archaeological context. The excavation of the cropmark complex at Woodham Walter reported here is therefore to be considered in a wider programme of cropmark survey and research initiated in the early 1970s and now reviewed and assessed by the second paper in this publication. The research programme was originally motivated by the need to enhance the value of the information held in the County Sites and Monuments Record (SMR) and to transmit this information to the researcher, field archaeologist and planner in a more comprehensible form.

The compilation of a Sites and Monuments Record was one of the first duties of the writer when appointed to the office of County Archaeological Officer in 1972. As work on the Record proceeded it soon became apparent that cropmarks formed by far the largest source of unpublished archaeological evidence in Essex. Indeed, it was no overstatement to say that the wealth of cropmark information was quite exceptional and the recording and interpretation of this data became of fundamental importance to any understanding of the landscape and settlement history of the County.

The main corpus of photographic evidence was compiled from the national archives held by Cambridge University Committee for Aerial Photography and the Royal Commission on the Historical Monuments of England's Air Photographic Unit; and supplemented at a local level from the invaluable collections of Ida McMaster and the late Cmdr Dick Farrands. A great number of new sites were added to this source material over the following decade, especially during the unusually dry summers of the mid-1970s.

The emergent problem was how should one deal with this vast collection of air photographic data in a reasonable time and with limited resources in order that the information could be rapidly assimilated into the conservation and excavation policies. The method adopted was to accession the photographs to the SMR and interpret and transcribe the cropmark detail onto 1:10,560 scale map overlays. Detailed large-scale plotting by graphical methods was confined to those sites selected for research, preservation or excavation purposes. This method of sketch plotting proved to be the only viable way to proceed, and general patterns of historic settlement and landscape were readily identified over much of eastern and southern Essex.

The interpretation of the cropmark evidence was another matter, but again one that could not be ignored in the face of considerable development and agricultural pressures on the land. A policy of selective excavation and sampling of key elements within the cropmark complexes was pursued in order that a skeletal framework of dated enclosure types and associated field systems could be constructed. This work continues today and some 5% of the recorded cropmark enclosures have now been sampled. Whilst it is readily acknowledged that this work is still in its infancy, it is nevertheless a most valuable exercise to draw all the available information together in the form of a gazetteer for comparative and analytical assessment, the long term objective being the introduction of a meaningful classification for cropmark types. Any classification of cropmark sites, in particular enclosures, is fraught with difficulties and should ideally be considered in the total chronological and landscape setting of field systems, trackways, associated settlements, etc., if a real understanding of the political, social, and economic basis of the communities is to be fully understood. However, a start must be made somewhere and the subjective grouping of enclosures into broad morphological types ordered by size allows further progress to be made in the formulation of policies for research, excavation and conservation. It has been argued by some practitioners that classification is unnecessary, but this viewpoint has been countered by the argument that this is because the questions being asked were undemanding. There is no doubt that the classification of the corpus of cropmark evidence held in the Essex SMR is a necessary objective if the archive is to be both usable and intelligible and so allow more searching questions on the landscape history of the County to be answered. The pioneering work undertaken in Essex over the last decade and reported upon in this volume and elsewhere will form the basis for a continuing and more analytical computer-aided study both now and in the years to come.

John D. Hedges
July 1986

Excavation of a Cropmark Enclosure Complex at Woodham Walter, Essex, 1976

by David G. Buckley and John D. Hedges

Part 1
Introduction

I Summary

The cropmark enclosure complex at Woodham Walter, Essex was trial trenched in 1976 to determine the state of site preservation and confirm the postulated Iron Age and Romano-British site sequence of the principal cropmark features. Evidence was obtained for occupation in the Mesolithic, Neolithic, Bronze Age and Early pre-Roman Iron Age (EPRIA) periods, but this activity left few traces of structures. A sub-rectangular enclosure was constructed in the Middle pre-Roman Iron Age (MPRIA); this was abandoned in the Late pre-Roman Iron Age (LPRIA) and replaced by a much larger rectangular enclosure to the west which underwent several constructional phases prior to its desertion in the early Roman period. A series of adjoining square enclosures on the eastern side of the site was not securely dated, but may have been late Roman in date.

II Introduction

The enclosure complex at Woodham Walter (TL 812081) incorporates a particularly interesting range of enclosure types equalled at few other locations in the county. It is a cropmark site with no surviving earthworks, discovered during aerial reconnaissance by the Cambridge University Committee for Aerial Photography, and also by the Royal Commission on Historic Monuments (England), National Monuments Record, Air Photographs Unit. The principal cropmark features were interpreted as being of Iron Age and/or Romano-British date on the basis of their similarity to excavated enclosures elsewhere, but there was no conclusive evidence for this inferred dating prior to the excavations in 1976. The excavations were undertaken following a request by the Department of the Environment that the Essex County Council Archaeology Section carry out trial investigations to determine the state of preservation of the monument and confirm, if possible, the presumed nature and dating of the cropmarks prior to a decision being taken to schedule the site as an Ancient Monument.

III The Site

The site is located to the south of the River Chelmer and its floodplain, approximately 750m north of the village of Woodham Walter and 6.5 km due west of the head of the Blackwater estuary (see Figs 30 and 31). It lies within the angle formed by Hoe Mill Road and Manor Road, immediately to the east of Hoe Mill Barns, in Brook Field (Fig. 1; Pl. 1).

Topography and geology

by Tony J. Wilkinson

The group of cropmark enclosures is situated on a river terrace, the surface of which is some 5-6m above the flood plain of the River Chelmer. A small stream to the east flows northwards into the River Chelmer and the terrace slopes gently towards this stream. The Geological Survey (Chelmsford Sheet 241, 1:50,000 series Solid and Drift Edition) shows this as a second terrace gravel.

The Danbury-Tiptree ridge extends to the south-west of the site, and is generally recognised as a pre-glacial structural feature which acted as a barrier containing the ice front during periods of Pleistocene cold climate. Lobes of ice extended down the valleys and outwash streams, depositing the extensive spreads of sand and gravel which largely mask the solid geology of the London Clay in the Woodham Walter area. It is possible that the deposits in the vicinity of the site comprise not terrace deposits but the remains of an alluvial fan deposited at the mouth of a steep tributary basin draining the eastern Danbury Hills. The stream draining this basin is small today and not very active, flowing in a dissected channel to the east of the fan. Air photographs show the probable courses of former stream channels in Brook Field and west of Hoe Mill Road as wide dark cropmarks, presumably infilled with fine sediments; also visible are gently zig-zagging cropmarks which probably represent the remains of ice wedge casts. The presence of these natural features within the sand and gravels give Brook Field a varied subsoil. A more detailed report is available in the site archive.

Description of the monument

The site comprises enclosures, ring-ditches, trackways, land boundaries and pits. Three principal enclosures dominate the complex (Fig. 1):

1 A sub-rectangular enclosure with a single southern entrance;

2 A roughly rectangular enclosure to the west. This has multiple ditches to the west, south and east, but is open to the north where the 'terrace' edge appears to have served as a barrier. It is also possible that post-Roman changes in the course of the River Chelmer may have removed earthworks on this side. More than one constructional phase appears to be represented by the multiple ditches, particularly on the southern side where ditches cut across a former entrance. A clue to the depth of ditches is given by

their presence in the Little Acre Bit Field where they are still clearly visible on the air photographs despite a *c.* 1 m drop in level, a negative lynchet having been created to the north of Manor Road by the continuous ploughing of this field;

3 A series of five small linked rectangular enclosures with boundaries leading from them, located to the east of the above enclosures.

No archaeological finds had been recorded from Brook Field. However, finds of Iron Age and Roman date were recovered from the gravel quarry to the east (TL 817082) by J.M. Bull in 1943 and have recently been reported upon (Rodwell 1976a). Field-walking in advance of the 1976 excavations produced worked flints and Iron Age and Roman pottery both from Brook Field and Little Acre Bit Field. During the course of the excavations a Neolithic polished flint axe (Fig. 14, 32) was handed to the authors by Mr L.C. Saunders who had found it some years previously whilst ploughing Brook Field (approx. findspot TL 81100780).

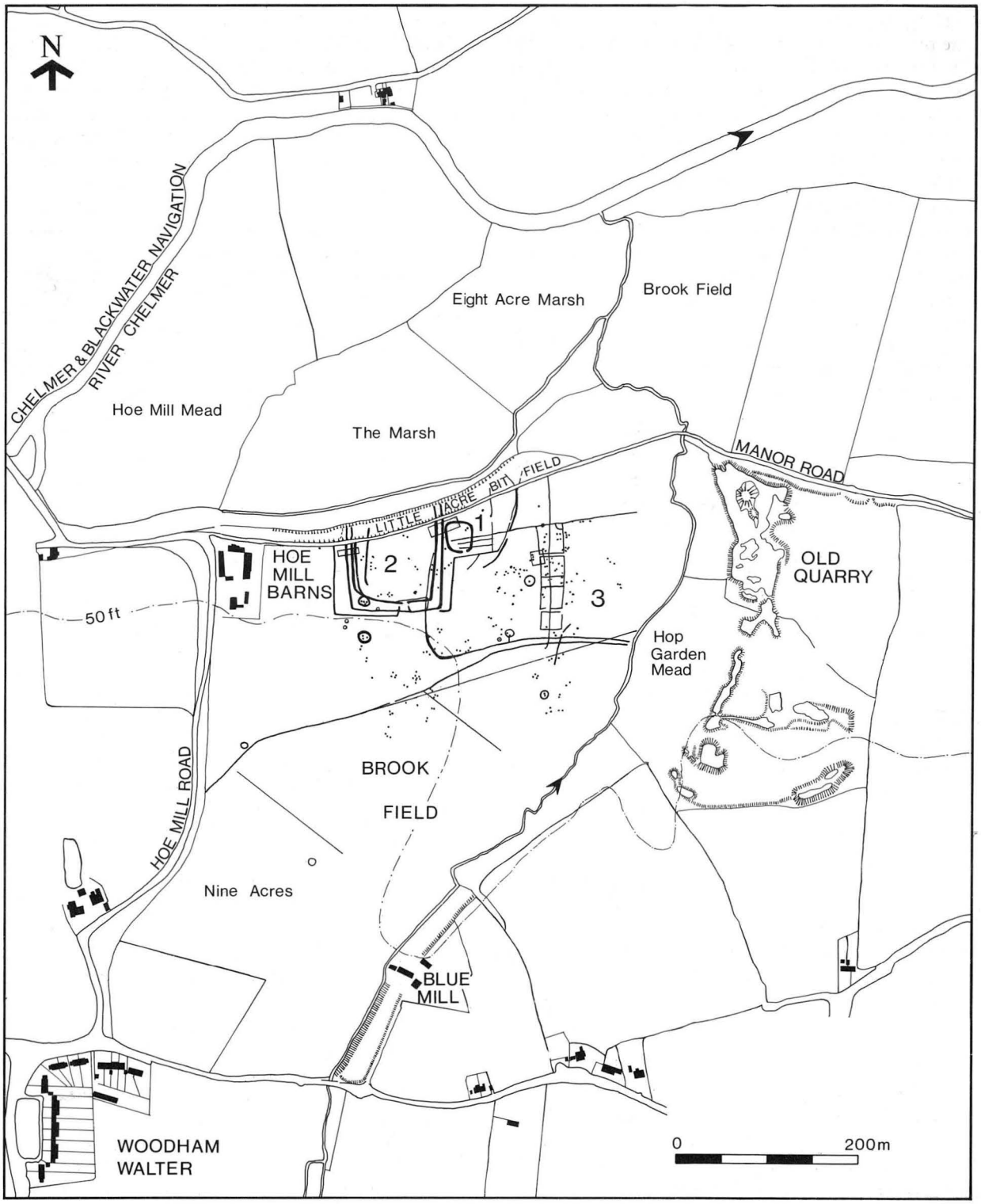

Fig. 1 Woodham Walter: Cropmark plan.

IV Objectives of the Excavation

The prime objectives of the trial excavations at Woodham Walter were briefly stated above. The first was to assess the state of preservation of the monument. This involved evaluating the threat posed by continued ploughing: a requirement heightened by a proposal to subsoil the site in the interests of improved crop performance. Brook Field had never previously been deep-ploughed and it was reasonable to expect good preservation of post-holes and other shallow features. An independent report (Essex County Council 1978) considered in detail the effects of ploughing and made certain recommendations for the future preservation of the site. This report was submitted to the Department of the Environment in April 1978 for consideration by the Ancient Monuments Board. Subsequently, the site was designated as a Scheduled Ancient Monument (Essex No. 176), in accordance with the recommendations in the above report.

The second aim was to confirm the assumed Iron Age and Romano-British date of the main enclosures, and, if possible, provide a site sequence. In addition, a greater understanding of the landscape history of the lower Chelmer-Blackwater river basin would result. The density and archaeological potential of cropmarks in this region (Fig. 30) is equal to those on the north bank of the Thames Estuary (Hedges and Buckley 1978, fig. 4). Unlike the latter, the Chelmer-Blackwater valleys have not undergone major development, and consequently little archaeological investigation of the cropmark sites has taken place. The elucidation of the landscape history of the Chelmer-Blackwater region is now a long-term project of the Essex County Council Archaeology Section. This work is a natural extension of excavations carried out by the Essex Archaeological Society and Chelmsford Archaeological Trust, notably at: Little Waltham (Drury 1978a); Chelmsford (Drury 1975 and forthcoming); Braintree (Drury 1976a); Rivenhall (W.J. Rodwell and K.A. Rodwell 1973 and 1986); Kelvedon (K.A. Rodwell and W.J. Rodwell 1975: K.A. Rodwell forthcoming); Heybridge (Drury and Wickenden 1982: Wickenden and Drury forthcoming); Maldon (Bassett in prep.); and Asheldham (Drury and Rodwell 1978 and in prep.). More recently the County Archaeology Section has continued excavations in Chelmsford (various reports in prep.); Braintree (Eddy 1983: Bedwin forthcoming); and Kelvedon (Eddy with Turner 1982 and in prep.). Extensive excavations of the Chignall St James cropmark complex (Buckley and Going 1977: Clarke in prep.) and the Witham Ivy Chimneys site (Turner 1982 and in prep.) have recently been completed, and trial excavation of the Springfield cropmark complex (Hedges and Buckley 1981 and in prep.; Priddy 1983a, 135-141) is continuing. Collectively a considerable volume of information is now available covering all periods, to which the Woodham Walter cropmark enclosure complex excavation makes an important contribution.

Part 2
The Excavations

I Method of Excavation

Limitations were placed upon the excavation design by the farmer's cropping, and the need to preserve rather than disturb those areas of the cropmark complex where good structural sequences might be expected to survive. Three main areas and a small trial pit were excavated (Fig. 2):

Trench A: 34m by 12m. Located to examine a corner of the sub-rectangular enclosure ditch and part of the interior. Also to examine lengths of two ditches on the eastern side of the rectangular enclosure.

Trench B: 15m by 14m. Located to examine part of the linked rectangular enclosures.

Trench C: 23m by 6m. Located to examine lengths of three ditches on the west side of the rectangular enclosure.

Trench D: 1m square by 1.35m deep. Dug to provide a rubbish pit, but which first served as a subsoil test hole. It was found to be located within one of the probable former stream channels and the excavated section could not be taken as typical of the side (see archive report). No archaeological features were encountered.

The site is known to have been ploughed for many years, and the decision was taken to remove the ploughsoil from Trenches A, B and C by machine (a Volvo BMLM641). The high cost and limited time available precluded a scientific investigation of post-depositional effects on the spatial distribution of artefacts within the ploughsoil. However, the machine stripping was carefully observed and a small quantity of worked flints, pottery, tile, and modern metalwork was collected in addition to the finds from field-walking prior to topsoil stripping.

Each trench was then cleared by hand to the base of the B-horizon (layer 2) and all possible features identified. The subsoil proved to be gravel in Trenches A and C, but included areas of fine leached loam filling the natural features. In Trench B a similar fine leached loam covered the whole area of the trench.

The ploughsoil or A-horizon (layer 1) in Trenches A and C had at its base a compacted clayey soil (layer 2). This

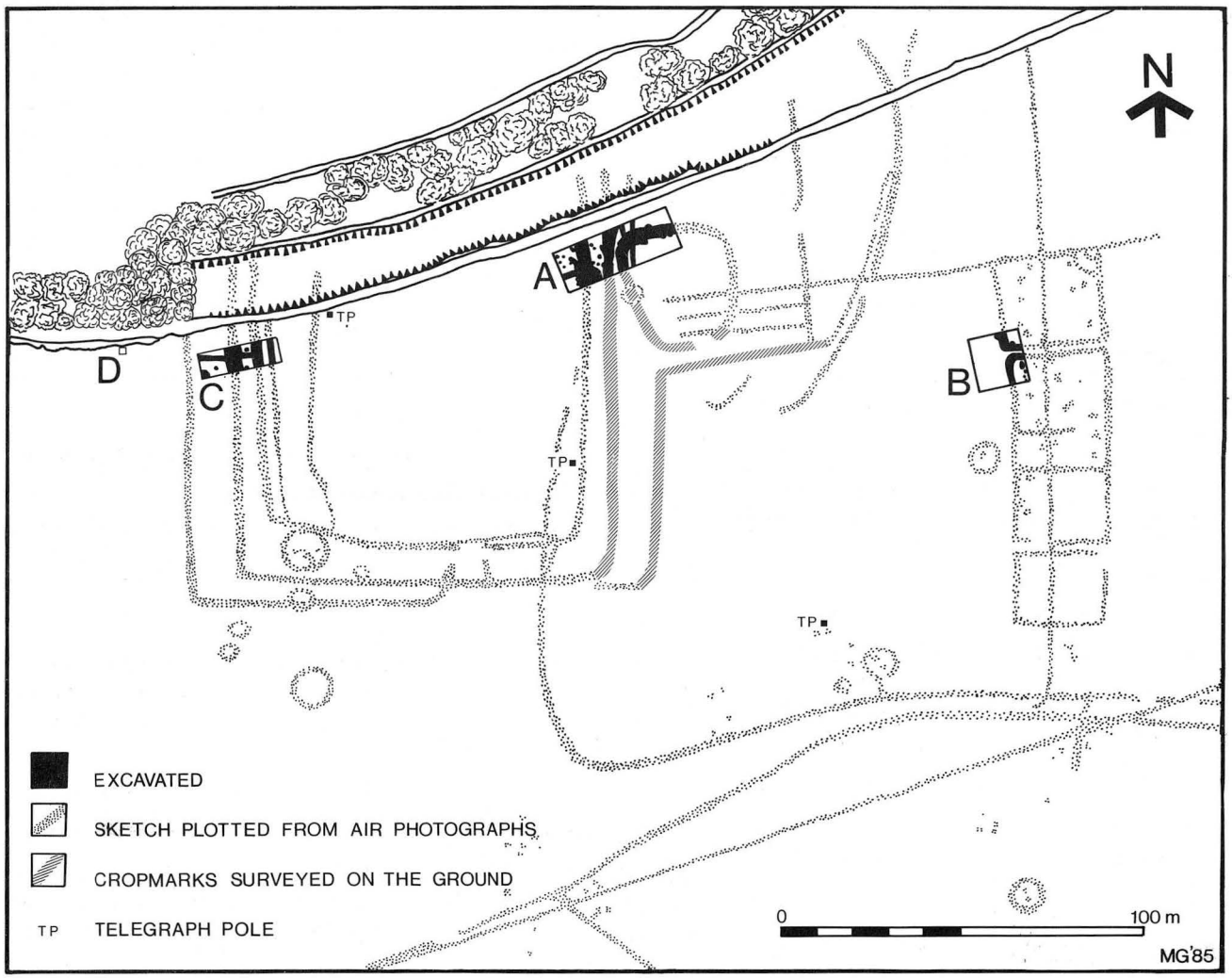

Fig. 2 Site plan and location of the trenches. Scale 1:2000

was of variable thickness, but in Trench A became markedly thicker at the headland immediately adjacent to Manor Road as a result of build-up against the road and the concentrated movement of farm machinery. These two layers have been omitted in most drawn sections in these two trenches and numbering of most fills of features commences at layer 3. Features were not discernible until layer 2 had been totally removed by hand. This task was made particularly difficult by the rapid hardening of layer 2 in the exceptionally hot and dry Spring. The fine loam subsoil of Trench B made recognition of archaeological features difficult. Removal of the ploughsoil (layer 1) over the whole trench and repeated careful trowelling produced no indication of the expected ditch features. A further 0.20 m (layer 2) was removed, excluding that area defined by grid lines E-56 (see below and Fig. 4), and all finds were three-dimensionally plotted, but no indication of features appeared. Excavation of a further 0.20 m of the apparently undisturbed soil (layer 3) from most of the trench finally removed the fine leached loam revealing the very bottom of the expected features, cut into a loose sand and fine gravel.

Numbering of features in Trench A commenced at 1, in Trench C at 100, and in Trench B at 200. The trenches were laid out for recording on a 2 m grid, site co-ordinates in Trench A reading from A-H and 0-18; in Trench B from A-J and 50-58; and in Trench C from A-E and 0-12.

Feature reference codes (e.g. AF1 III 6) are used in the text as follows:

A = excavation trench
F1 = feature number
III = segment within feature
6 = layer number

Excavation under the direction of the authors was carried out during the months of April and May 1976. Total excavation of the features revealed was undertaken with the exception of parts of the sub-rectangular enclosure ditch AF1, the total excavation of which was not possible with the limited grant money and time available. The site location and dimensions of all features excavated, together with a summary of finds, is given in Tables 3-5 in the appendix.

Descriptions of only the most significant feature sections have been included in the following section of this report. Detailed accounts of all features are deposited with the site archive in the Essex Sites and Monuments Record, Archaeology Section, County Hall, Chelmsford (Essex SMR No. TL 80/43). The Munsell Colour Chart (Munsell 1975) was employed for layer colour descriptions.

II Pre-Enclosure Occupation

Evidence was recovered for occupation within the area of the site during the Mesolithic, Neolithic, Bronze Age and EPRIA prior to construction of the first enclosure in the MPRIA.

Mesolithic

Mesolithic flintwork was recovered from Trenches A, B and C. The most marked concentration came from Trench C where a number of flint artefacts within CF105, 111 and 115 were attributable on typological grounds to the later Mesolithic. With the exception of CF105 these features may conceivably be of Mesolithic date. All had fills of fine, sandy, relatively pebble-free silt, 10 YR 2/1 (wet); 10 YR 5/5 (dry). AF5, 50 and 51 had comparable fills as did all the small features in Trench B. These fills were similar to that forming a distinct stratum above the sand and gravel in Trench B and it is possible that this layer was formerly more extensive, providing a light fertile soil during the earlier prehistoric period.

Neolithic

Early Neolithic activity is indicated only by way of a small number of flint artefacts. One feature (CF105) containing a small number of Grooved Ware sherds is attributable to the later Neolithic period. Features tentatively described above as Mesolithic may in fact have been of Neolithic date, containing, like CF105, residual Mesolithic flintwork. Residual Neolithic/Early Bronze Age sherds came from a number of later features (AF1, AF3, BF200). Flintwork associated with this later Neolithic activity is confined largely to waste material, with few finished artefacts (see flint report). The presence of grain, hazelnuts and charred oak within CF105 suggests a possible domestic occupation in the vicinity of Trench C.

Bronze Age

None of the pottery is diagnostically Bronze Age, although a sherd from AF3 may be of this date (Fig. 18, No. 69). Similarly there was no identifiable flintwork of this period. A number of ring-ditches in the complex (Fig. 29, a) may be considered as ploughed-out Bronze Age barrows, one of which was apparently respected by the LPRIA enclosure ditches (Fig. 29, d).

No features could be firmly attributed to the EPRIA/MPRIA, although sherds of these periods came from AF6, 7, 8, 12, 14, 16, 17, 19, 30, 38 and CF116. A single sherd from ditch AF3 (Fig. 18, No. 70) is characteristically EPRIA, while scattered throughout most of the excavated areas were small sherds of flint-gritted pottery belonging mainly, if not wholly, to the EPRIA/MPRIA. There is a sufficient number of these sherds to indicate EPRIA/MPRIA pre-enclosure occupation, and it is tentatively suggested that AF6 (Fig. 3) may have been the gully to a round-house constituting part of this occupation.

III The Middle Pre-Roman Iron Age Sub-Rectangular Enclosure

During the MPRIA a small sub-rectangular enclosure was constructed and continued in use into the LPRIA (Fig. 29, b-d).

Enclosure ditch AF1 (Figs 3, 5, 6 and 7)

The four excavated segments of the enclosure ditch (Fig. 3; I, III, V and X) revealed an eroded ditch approximately 3.0 m wide and 1.3 m deep. The fills recorded in segment I (Fig. 5, A-A) were as follows:

1 Modern ploughsoil comprising *c.* 20 cm of brown loam.
2 Brown loam and pebbles, clayey due to compaction.
3 Brown loam with small pebbles; 10YR 3/2 (wet), 10YR 5/3 (dry).
3a Fine brown-grey sandy silt, relatively stone-free; 10 YR 3/2 (wet), 10YR 6/3 (dry). The differentiation between 3 and 3a only became clear upon drying of the section, therefore all finds were recorded as from layer 3 in this segment.
4 Fine brown-grey sandy silt with pebbles; 10YR 4/2 (wet), 10YR 5/3 (dry).

Fig. 3 Trenches A and C: Plans. Scale 1:150

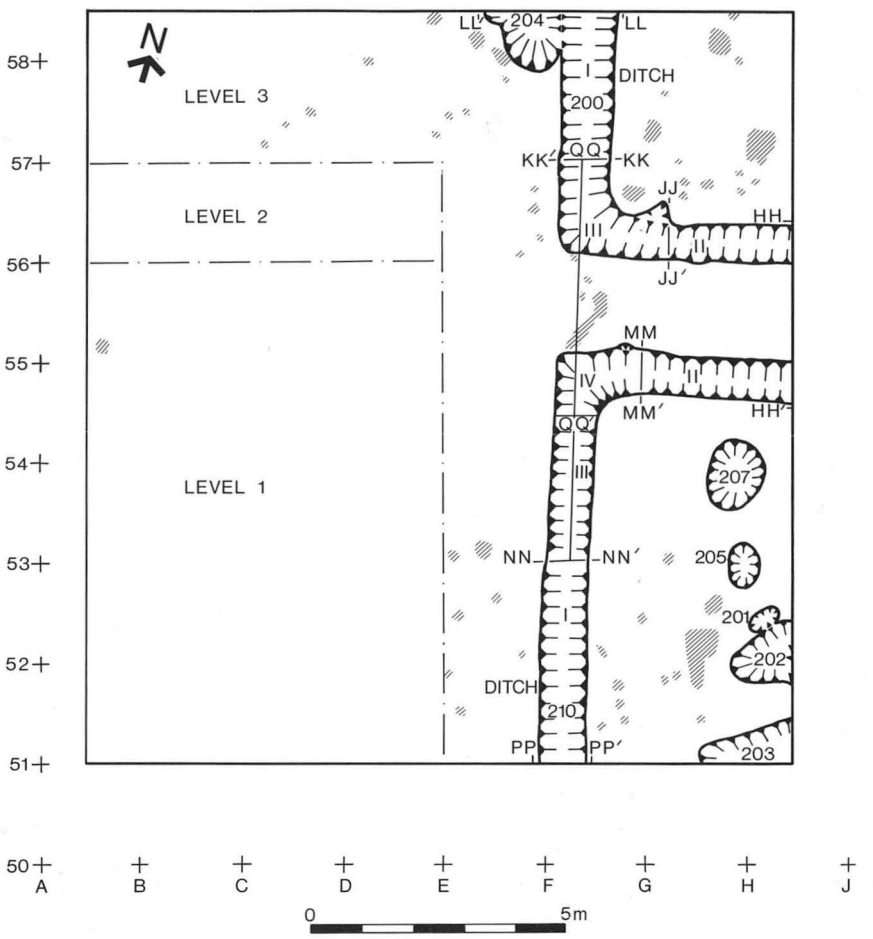

Fig. 4 Trench B: Plan. Scale 1:150

5 Sand, silt and pebbles with lenses of charcoal; 10YR 3/1 (wet), 10YR 6/3 (dry).
6 Sand and silt with a scatter of pebbles; 10YR 4/6 (wet), 10YR 6/3 (dry).
7 Sand and silt; pebbles common, particularly concentrated to the centre of the ditch; 10YR 3/3 (wet), 10YR 6/4 (dry).

On completion of the ditch excavation, selective box-sections were extended into the natural geology, firstly to confirm that the true ditch sides and floor had been exposed, and secondly to record the natural stratigraphy which, on some sites, may influence the erosion profile of the ditch where hard bands of sediment or rock are present. The geological stratigraphy recorded in AF1 (Fig. 5, A-A) was as follows:

a Mid-brown loam and pebbles; 10YR 4/3 (wet), 10YR 6/4 (dry).
b Small gravel and loose loam; 10YR 4/3 (wet), 10YR 7/4 (dry).
c Yellow-brown silt/sand, appeared clayey; 10YR 5/4 (wet), 10YR 7/4 (dry).
d Mixed layers as (b) with yellow clay pockets and red sand; 10YR 4/3 (wet), 7.5YR 5/6 (dry).
e Orange-red hard band of sand/silt; 7.5YR 4/6 (wet), 7.5YR 5/6 (dry).
f Loose fine gravel and sand; 7.5YR 5/6 (wet), 7.5YR 6/6 (dry).
g Red iron staining on floor of ditch; 7.5YR 4/6 (wet), 7.5YR 5/6 (dry).

Similar deposits were encountered in other sections, except where features cut periglacial ice wedge casts.

The fills of ditch AF1 in other segments appeared more complex (Fig. 5, B-B, C-C, D-D), but layer descriptions and finds have enabled a correlation to be made longitudinally (Fig. 7). The primary silting layers in each segment comprised clean silt, sand and pebbles in varying proportions relative to the constituents of the subsoil at the immediate ditch side. These deposits had accumulated rapidly, either following construction or after final re-cutting of the enclosure, to produce a wide V-shaped profile. There were no finds from these layers. Secondary silting continued at a slower rate, the layers still comprising relatively clean silt and sand with varying quantities of pebbles with, in addition, occasional bands of charcoal-rich deposits and, in one instance (Fig. 5, D-D, layer 8), a band of clay. These charcoal bands were observed in all four segments but were most evident in segment III where three distinct layers are shown on section D-D (Fig. 5). Finds from these layers comprise a few sherds of MPRIA to LPRIA pottery and small amounts of fired clay. Finally, shortly after deposition of the last spread of charcoal, the remaining ditch depression was backfilled. Along the northern circuit of the enclosure (segments I and III), the silts and sands of the upper, now truncated, levels of the ditch were dark in colour, containing much sooty earth and charcoal with quantities of MPRIA and LPRIA pottery and over 50 kg of wattle-impressed burnt daub. Elsewhere (segments V and X), these upper levels again comprised relatively clean silts and sands virtually devoid of finds.

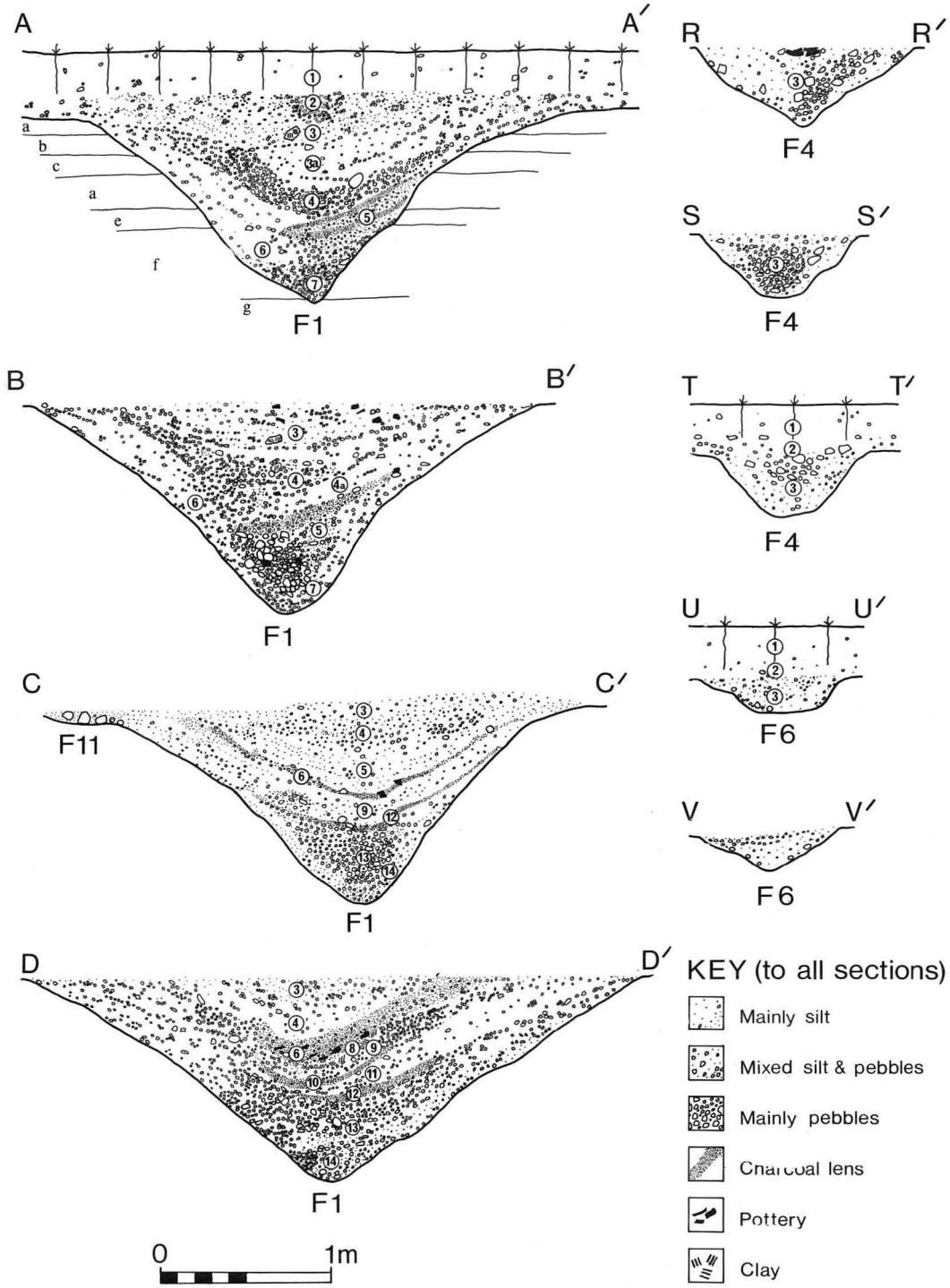

Fig. 5 Trench A: Sections and key to all sections. Scale 1:40

Enclosure interior (Fig. 3)
The limited excavation of the enclosure interior revealed only a small number of features. With the exception of AF49, these can be interpreted as the shallow remains of formerly more substantial post-holes. No structures were evident although AF33, 34 and 35 may have belonged to the edge of a structure central to the enclosure. The total absence of finds from these features precludes attributing them directly to enclosure occupation, although the charcoal-rich fills of AF30 and 32 might suggest a tenuous link with the burnt deposit in the upper levels of the enclosure ditch. Around the inner edge of the ditch, a *c.* 2m wide area without features provides negative evidence for an internal bank.

Dating
With the exception of a single iron brooch with a broad date range (p. 40) dating evidence is confined to the pottery. This was recovered in substantial quantities from the middle and upper levels of the ditch. It comprises a mixture of later MPRIA and LPRIA forms; a transitional group which would appear to have been deposited during

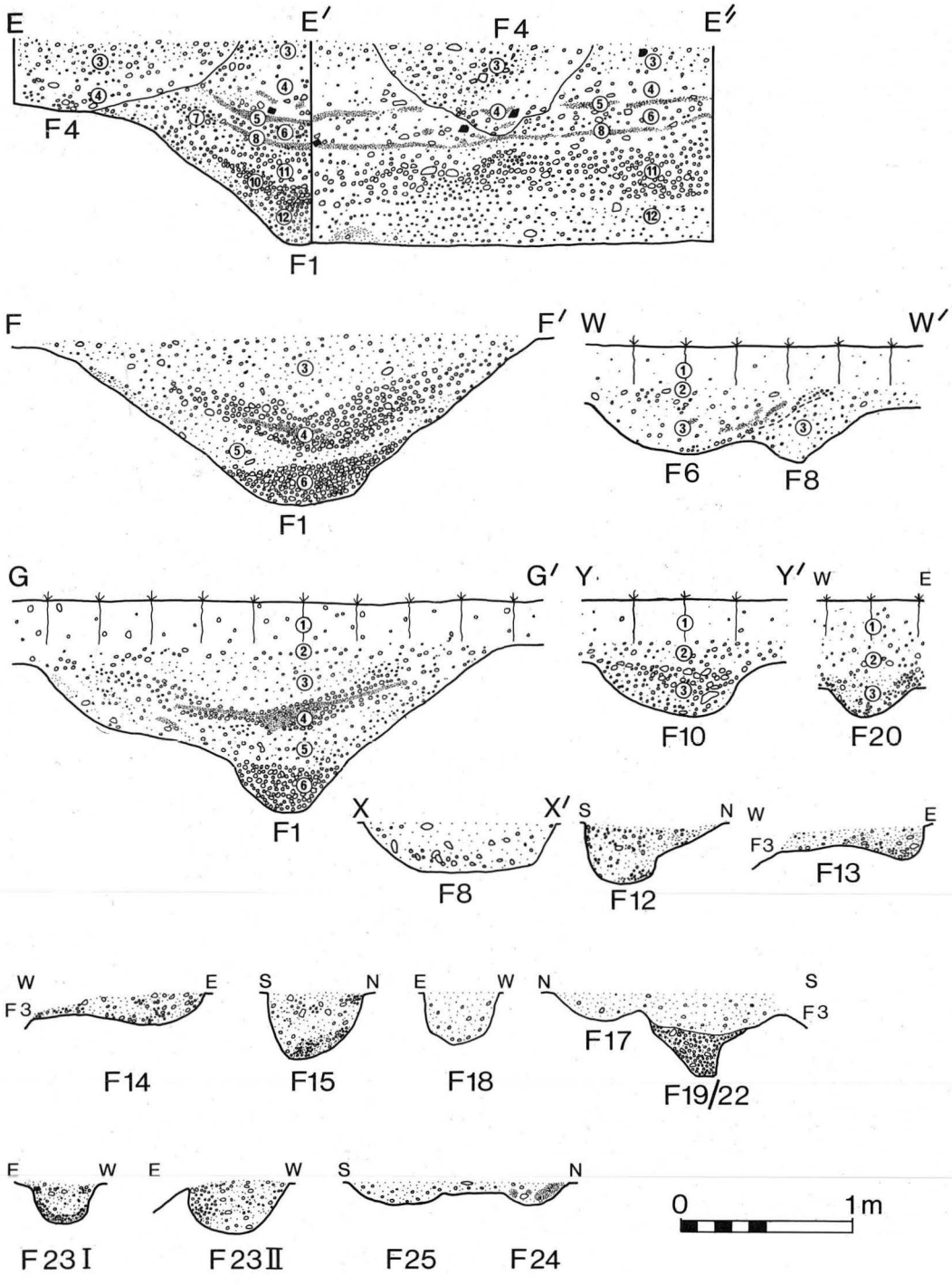

Fig. 6 Trench A: Sections. Scale 1:40

the early first century BC. A small quantity of MPRIA pottery came from the middle silts of the ditch but no pottery came from the primary levels.

As yet little experimental work has been published on the rates at which gravel-cut ditches silt-up naturally. Therefore, in the absence of finds, it is not easy to determine the time span represented by the sequence of primary and secondary deposits within ditch AF1. It is considered that the excavated layers within AF1 represent a single, continuous sequence of deposition with very rapid silting of the lower ditch followed by slower secondary silting containing occupation debris. The possibility that AF1 was re-cut cannot be totally ruled out, but if this did occur then the cleaning-out of the ditch was total, leaving no record within the ditch deposits.

The small quantity of MPRIA pottery and absence of EPRIA pottery from the middle levels of the ditch supports an MPRIA date for the construction of the sub-rectangular enclosure. How early in the MPRIA this took place cannot be determined. The large quantity of pottery in the upper levels of the enclosure ditch suggests that it was no longer functional by the early first century BC.

Function

Only limited structural evidence was recovered, but the large quantity of wattle-impressed burnt daub from the

upper levels of the enclosure ditch points to structures having been present. Total excavation of the enclosure interior might reveal the site of one or more huts, associated with a small enclosed agricultural settlement. The poor survival of environmental evidence permits only limited comment on the economy. Cattle and sheep are represented in the finds from the upper levels of AF1, but in too small a quantity to allow analytical study. The range of wood species identified from charcoal samples indicates a managed landscape around the settlement. A loomweight came from AF1 III 11.

Following the deposition of the primary silts, the ditch was used for the disposal of quite large quantities of charcoal. The volume of charcoal, coupled with a marked sparsity of finds, suggests that this deposit did not derive from purely domestic contexts, such as hearth fires which often contain quantities of burnt stone, discarded bone and pottery. A miniature vessel from one of the charcoal-rich layers (AF1 III 6; Fig. 15, No. 13) provides supportive evidence for a semi-industrial activity. Emission spectroscopy shows this vessel to have been used as a crucible for process involving either bronze or, more likely, enamel/glass preparation (p.39-40). Fired clay (p.39) with interwoven wattle impression from AF1 III 6, 7 and 8 may be from structures associated with this process. This activity continued, possibly intermittently, thoughout the period of accumulation of the secondary silts, until final back-filling of the ditch took place during the early first century BC.

It is not clear how this postulated 'industrial' activity related to the settlement. However, it is evident that the early constructional phase of the LPRIA enclosure respected the sub-rectangular enclosure (Fig. 29, c), which suggests that the latter was still in use. This use may have included specialised activities, such as glass or metal-working, which were best carried out at some distance from the main living area. The wisdom of this precaution may even be reflected by the final fill of AF1. This contained a burnt deposit with a considerable concentration of wattle-impressed daub such as might arise from a structure destroyed by fire. Such an event could have initiated a final clearance of all structural remains, with their contents, and a levelling of the denuded enclosure bank prior to reversion to agriculture.

There were no other features in the cropmark complex securely linked by excavation evidence to the sub-rectangular enclosure, but the curving ditch to the west may have been an outwork (Figs 2 and 29, b).

IV The Late Pre-Roman Iron Age/Romano-British Rectangular Enclosure

During the LPRIA the sub-rectangular enclosure was superseded by a much larger rectangular enclosure which, prior to its abandonment in the first century AD, underwent several constructional phases (Fig. 29, c-e).

The ditches (Figs 3, 8, 9 and 10)
Of the ditches visible on the air photographs, five lengths attributed to the LPRIA were excavated, designated AF2, AF3, CF100, CF101, and CF102 (Fig. 3).

Ditch AF2 (Figs 3 and 8): Varied from 1.50m to 2.00m in width and 0.60 m to 0.80m in depth.

Fills (section H-H)
3 Brown loam with only a light pebble content; 7.5YR 3/2 (wet), 10YR 5/3 (dry).
4 Brown loam with a heavy pebble and gravel content; 7.5YR 3/2 (wet), 10YR 5/4 (dry).
4a Loam, pebble-free; 10YR 4/3 (wet), 10YR 6/3 (dry).
5 Pebbles with loose sand and silt; 10YR 3/3 (wet), 10YR 6/3 (dry).

Geology (section H-H)
a Dirty sand with gravel; 10YR 5/4 (wet), 7.5YR 5/4 (dry).
c As layer (a) but iron-stained immediately below the bottom of the ditch; 10YR 3/4 (wet), 10YR 6/4 (dry).
AF50, 3 Clayey brown loam; 7.5YR 4/6 (wet), 7.5YR 5/6 (dry).

Ditch AF3 (Figs 3 and 9): Varied from 2.00m to 3.00m in width and 0.80 m to 1.00m in depth.

Fills (Section M-M)
3 Brown loam with pebbles and pea-grit; 10YR 3/4 (wet), 10YR 5/3 (dry).
4 Brown loam with less pebbles than fill 3; 10YR 3/4 (wet), 10YR 4/3 (dry).
5 Pebbles with some soil, very loose; 7.5YR 4/4 (wet), 10YR 6/4 (dry).
6 Brown loam with a scatter of pebbles; 10YR 3/4 (wet), 10YR 6/4 (dry).

Geology (Section M-M)
a Mixed gravel and dirty loam; 7.5YR 3/4 (wet), 10YR 4/6 (dry).
b Light orange-brown sand with pebbles; 7.5YR 4/6 (wet), 7.5YR 5/6 (dry).
c Mixed gravel, pea-grit and irregular bands of bright orange-brown gravel; 7.5YR 4/6 (wet), 7.5YR 5/6 (dry).
d Bright orange-brown banded sand and gravel with a marked sticky clay content; 7.5YR 4/6 (wet), 7.5YR 5/6 (dry).

Ditch CF100 (Figs 3 and 10): *c.* 2.50m in width and 1.10m deep.

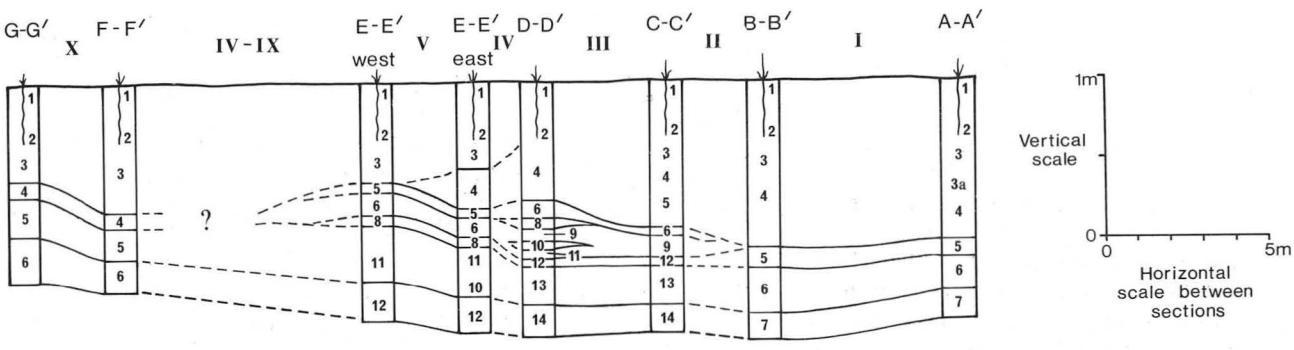

Fig. 7 Suggested correlations of layers within ditch AF1. Width of section columns exaggerated

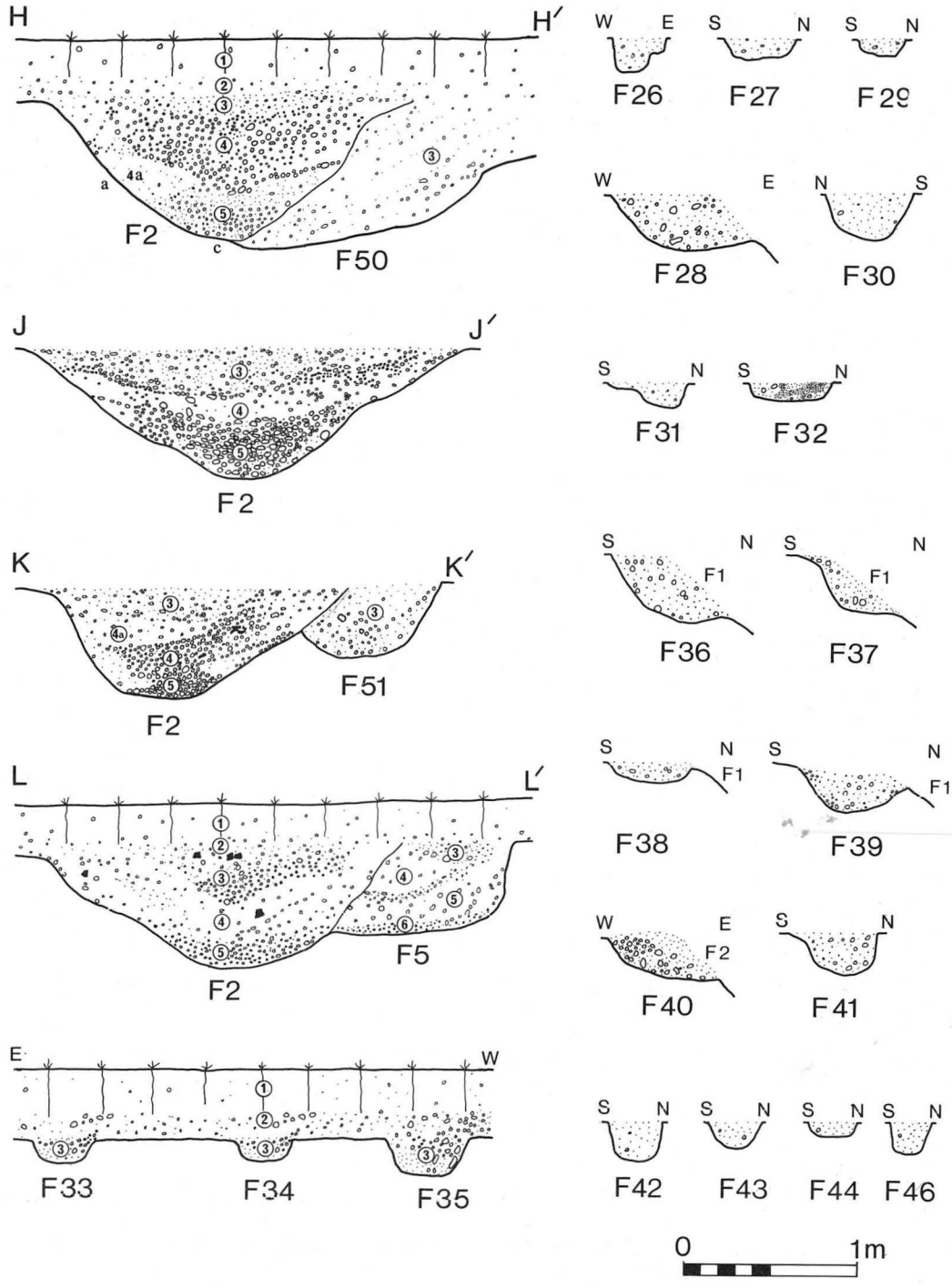

Fig. 8 Trench A: Sections. Scale 1:40

Fills (Section AA-AA)

3 Brown loam with gravel; 10YR 3/4 (wet). 10YR 6/3 (dry).
4 Brown loam, less gravel than fill 3; 10YR 3/4 (wet), 10YR 6/3 (dry).
5 Silt with pebbles; 10YR 3/4 (wet), 10YR 6/4 (dry).
6 Pebbles with silt, the larger pebbles concentrating to the western edge; 10YR 3/3 (wet), 10YR 6/4 (dry).
7 Silt with few pebbles; 10 YR 4/4 (wet), 10YR 6/4 (dry).

Ditch CF101 (Figs 3 and 10): *c.* 2.50m wide and 0.90m deep.

Fills (Section DD-DD)

3 Sandy loam with gravel and distinct gravel line at base; 10YR 3/3 (wet), 10YR 6/3 (dry).
4 Sandy gravel with much pea-grit; 10YR 3/4 (wet), 10YR 6/3 (dry).
5 Brown loam with pebbles, charcoal and much pottery; 10YR 3/4 (wet), 10YR 6/4 (dry).
6 Sandy silt, relatively pebble-free; 10YR 4/3 (wet), 10YR 6/4 (dry).
7 Pebble layer (not in this section; see CC-CC).

Ditch CF102 (Figs 3 and 10): *c.* 2.75m wide and 0.85m deep.

Fills (Section AA-AA)

3 Brown loam with pebbles; 10YR 3/4 (wet), 10YR 5/3 (dry).
4 Brown silt, relatively pebble-free; 10YR 3/4 (wet), 10YR 6/4 (dry).
5 Gravel with silt; 10YR 4/4 (wet), 10YR 6/4 (dry).

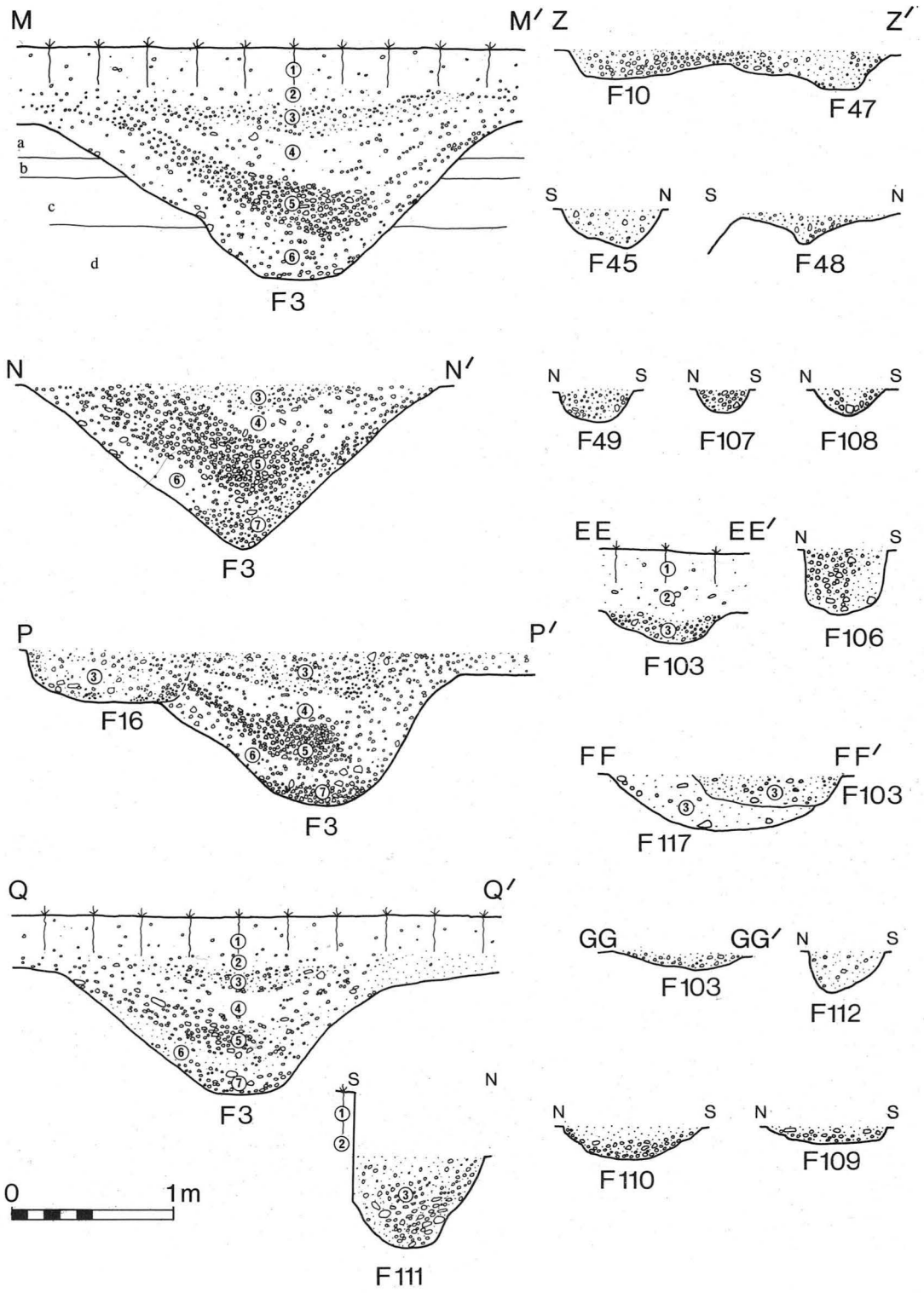

Fig. 9 Trenches A and C: Sections. Scale 1:40

Associated features

Only a small part of the rectangular enclosure interior was excavated on its western and eastern sides. A scatter of features was revealed, the majority interpreted as the shallow remains of once more substantial post-holes. All had brown sandy fills with varying proportions of pebbles. The only coherent group occurred on either side of ditch AF3, comprising two slots (AF21 and AF23), each linked to a series of post-holes (AF12, 15, 16, and 18; and AF9, 13, 14, 17, and 19/22). This group may have formed the foundation for a structure related to the ditch, perhaps a timber bridge, but the evidence available permits no further interpretation.

Enclosure phases

Pottery provides the only significant dating evidence from the excavated sections of enclosure ditches AF2, AF3, CF100, CF101, and CF102. It is acknowledged that the full sequence of events will only be elucidated by further excavation, but nevertheless the pottery evidence can be

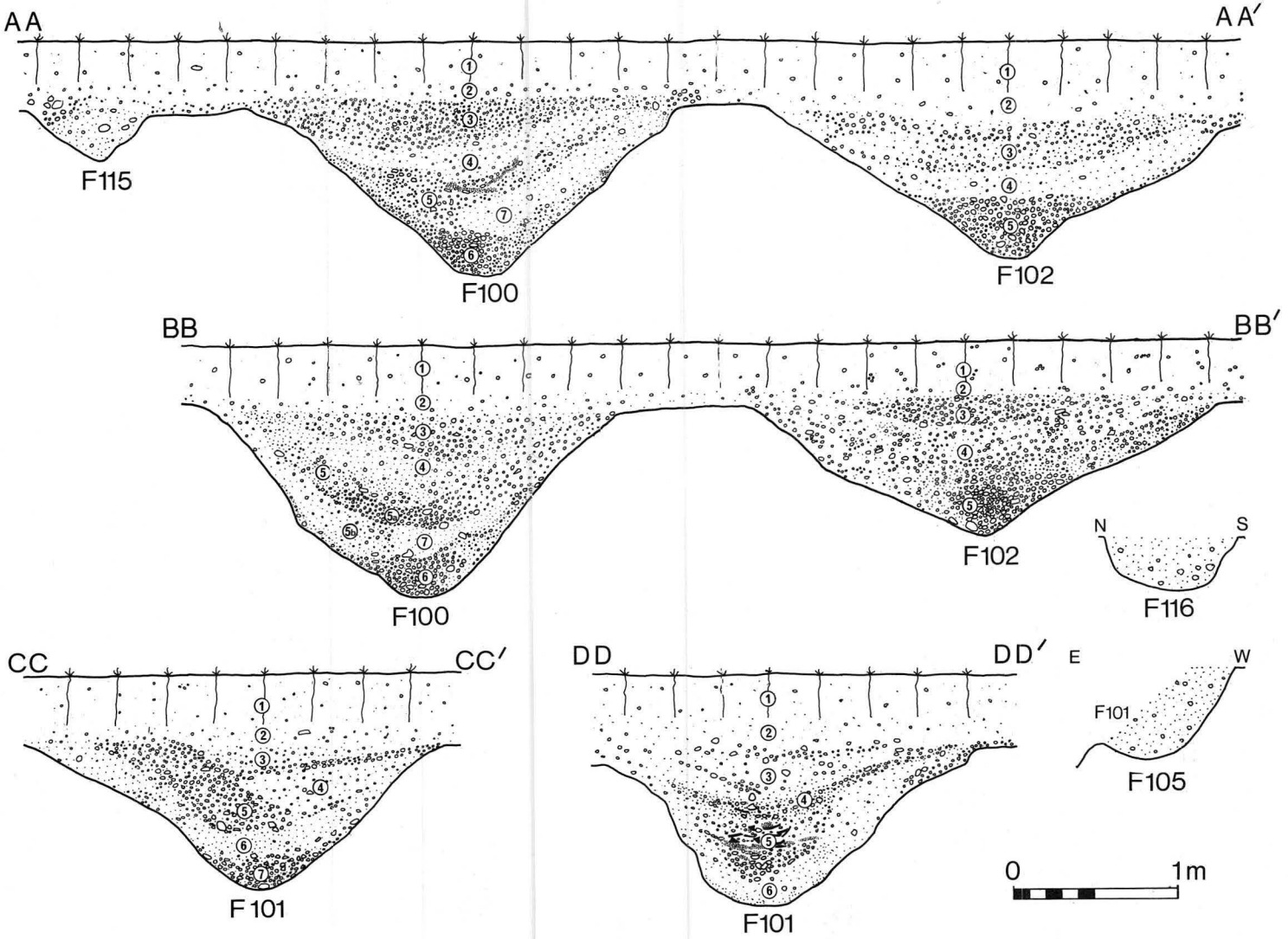

Fig. 10 Trench C: Sections. Scale 1:40

related to the cropmark plan to produce a tentative series of phase plans for the development of the rectangular enclosure (Fig. 29, c-e). In considering this enclosure, the possibility of ditches enclosing the northern side, subsequently eroded by a shift in the course of the River Chelmer, should not be forgotten.

LPRIA Phase I (Fig. 29, c)
The first constructional phase in the LPRIA ditched enclosure sequence can only be postulated by interpretation of the air photographs, as this phase was not tested by excavation. An area at least 120 m^2 was enclosed immediately to the west of enclosure '1' (Fig. 1) with an 'annexe' to the east which respected '1'; the implication being that this earlier enclosure continued in use during the LPRIA. The new enclosure had an inturned entrance on the south side and probably incorporated within its internal bank two earlier barrows at the south-western corner.

LPRIA Phase II (Fig. 29, d)
Following the postulated destruction of buildings within the MPRIA enclosure and the final site clearance and backfilling of the ditch (AF1), the eastern 'annexe' of the LPRIA Phase I enclosure was no longer needed. A new enclosure was constructed inside the Phase I ditch with its southern entrance on the same alignment, the eastern ditch represented by AF3 and the west by CF100/102. It seems likely that this enclosure was maintained in use by the re-defining and re-cutting of its ditches. Ditch CF102 may represent the earliest phase of this work. The quantity of pottery from CF102 is very small, but notable in that none of it need be later than the mid-first century BC. All other ditches sampled at Woodham Walter produced Roman material from their upper fills and its absence from CF102 can be accounted for by the subsequent cutting of ditch CF100 and the internal earthen bank so formed sealing CF102. The Phase II rectangular enclosure can therefore be seen to have a construction date before the mid-first century BC.

It is suggested that this enclosure was re-defined on the western side by the cutting of CF100 and re-cut on the eastern side along the same alignment as ditch AF3. The cropmarks of the south ditch on either side of the entrance also indicate a possible re-alignment and re-cutting of the earthworks. CF100 contained LPRIA and Belgo-Roman pottery as did ditch AF3, hinting that they were still open during the immediate post-conquest period and possibly as late as the mid-first century AD. Evidence for an internal bank and its eventual collapse is implied by the gravel fill of layer 5 (Fig. 9) slumping into the ditch (AF3) from its inner edge.

LPRIA Phase III (Fig. 29, e)
This phase indicates a need to re-strengthen the enclosure earthworks yet again after something like a century of erosion and accumulation of ditch silts had weakened the 'defence' presumably beyond repair. The new ditch was dug between the Phase I and Phase II ditches and apparently closed the southern entrance. The excavated sections of the enclosure ditch are represented by CF101 to the west and AF2 on the east. CF101 produced about eighty Belgo-Roman vessels (Figs 22-6) from 6m of excavated ditch. The sherds were mainly large and unabraded and represent a manufacture date of *c.* AD 40-60. They were clearly deposited in the ditch not long after this date, and Rodwell (p. 38-9) suggests that the unusually large number of freshly broken vessels may represent a calamity rather than simple casual breakages of a normal domestic rubbish deposit.

Ditch AF2 also produced large fragments of Belgo-Roman pottery although not in the same quantity as CF101. Residual sherds (10) of EPRIA and MPRIA (6) were also present. The upper fills (layer 3) of the ditch contained mainly sherds of late second to early third-century AD date and suggest that the site was finally ceasing to function as a ditched enclosure around this date.

V Romano-British Occupation

Following abandonment of the rectangular enclosure system in the late second century AD, the area passed to agriculture for the remainder of the Roman period. A number of field ditches were identified (Fig. 29, f):

Ditch AF4 (Figs 5 and 6): *c.* 1.20m wide and 0.50m deep.

Fills (Section E-E-E)
3 Dark loam with pebbles; 10YR 3/4 (wet), 10YR 5/4 (dry).
4 Light brown loam, relatively pebble free.

Enclosure ditches BF200 and BF210 (Fig. 11): *c.* 1.00m wide and 0.35 m deep where the profile was clearly defined below layer 3.

Fills (Section HH-HH)
4 Pale brown sandy loam with occasional pebbles. Indistinguishable from layer 3 above; 10YR 3/4 (wet), 10YR 5/6 (dry).

A number of features within Trench B, all with fills similar to layer 4 of ditches BF200 and BF210, may also be of Roman date.

Romano-British occupation within the western part of the rectangular enclosure during the pre-Flavian period is indicated by the large deposit of pottery within the upper level of CF101, while later activity is attested by the pottery from the upper levels of all the enclosure ditches with the exception of CF102. Ditch AF4 may be late first century in date, and relates to the rectangular field system which apparently overlay the MPRIA sub-rectangular enclosure on the evidence of the air photographs. The linked series of enclosures represented by BF200 and BF210 in Trench B (Figs 4, 11 and 29, f), although not dated with certainty, may be third century or later on the basis of a single sherd of pottery (No. 212). In view of the shallow nature of the features, it is possible that these were palisaded stock enclosures rather than small ditched field enclosures, but no post-pipes were identified.

One may conjecture that the LPRIA rectangular enclosure was finally abandoned as a settlement site in the late second century AD. The large number of freshly broken vessels in CF101 points to a sudden if not violent period in this occupation, and it is probable that the main period of settlement ended at this time in the mid-first century AD, although the ditches remained open until the late second-early third century AD. There is nothing from the excavation to suggest domestic occupation of the site after this time, and it is likely that the area was given over to agriculture. The Roman pottery from the upper ditch silts and the thin scatter of abraded debris of late Roman date is consistent with agricultural activity close to a

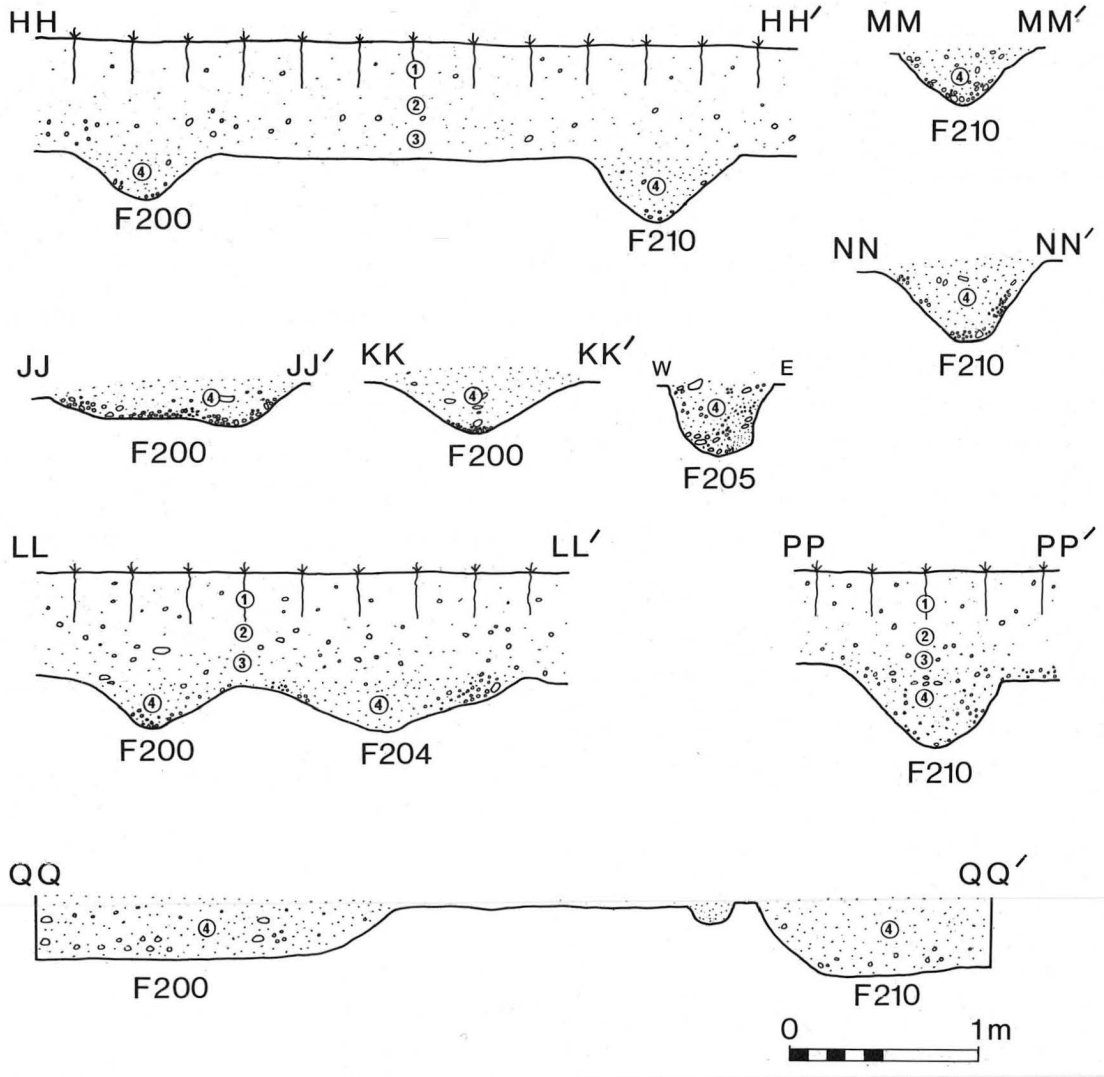

Fig. 11 Trench B: Sections. Scale 1:40

settlement. It is possible that the nucleus of Roman settlement was immediately east of the brook which divides the cropmark site from the old quarry (Fig. 1). It was here that Roman occupation debris was found in 1934, but unfortunately only a few of the best pieces were saved and nothing is known of features or structures (Rodwell 1976a, 243).

VI The Post-Roman Period

The area appears to have remained in agricultural use until the present day. On the tithe map of 1845 (Essex Record Office no. D/Ct 411) Brook Field is sub-divided into a number of fields, which accounts for the straight east-west ditch which delimits the southern edge of the cropmark, and possibly also for the north-south ditch which intersects the group of small, linked enclosures. Other tithe map boundaries do not appear to have survived as cropmarks. Of the excavated features, ditch CF103 is of recent date. Pieces of coal from the base of the ploughsoil attest to steam ploughing which, in the Plough Damage Report submitted to the Department of the Environment (Essex County Council 1978), was judged to have been more destructive of the cropmarks than shallower modern ploughing.

Part 3
The Artefacts

The finds are deposited with the Chelmsford and Essex Museum (Accn No. 76/201). Full details of all finds contexts are deposited with the site record at the Essex Sites and Monuments Record (No. TL 80/43). The context number is given after each object description, followed by the context date (except flint and pottery).

I Objects of Stone

Dressed stone came from a number of contexts; none merits illustration.

Saddle querns

a. Two fragments derived from a quartzite boulder; 112 g. *CF101 I 3; LPRIA/RB*

b. Fragments of puddingstone; maximum thickness 50 mm; 750 g. *CF101 II 5; LPRIA/RB*

c. Twelve fragments of burnt, medium-grained, rather pebbly calcareous and glauconitic sandstone, probably from the Hythe Beds or Folkestone Beds of the Lower Greensand of the Weald (identification by Martyn Owen). Badly decomposed but probably from a shattered saddle quern; 535 g. *AF11 3; undated*

d. Three fragments derived from an irregular slab of burnt fine-grained quartzose sandstone, probably utilised as a saddle quern; maximum thickness 40 mm; 280 g. *AF11 3; undated*

e. One fragment of lava from an indeterminate quern form; 20 g. *AF3 IV 3; LPRIA/RB*

Essex quernstones have been little studied. The Woodham Walter saddle querns all came from LPRIA/Romano-British contexts where dated. By this period saddle querns had been largely superseded by rotary querns, and the fragmentary nature of the stone suggests residual deposition, or, in the case of AF11, deliberate collection of earlier saddle quern pieces. The occurrence of a Greensand saddle quern, possibly derived from Kent, indicates the need to import milling stone to an area with no suitable hard rock outcrops. More distant trade contacts are shown by the presence of a fragment of lava. This is almost certainly from the Mayen in the Eifel, Germany, where lava has been exploited continuously for quern making since the Neolithic (Crawford and Röder 1955). Fragments of lava querns have been found on many Roman sites in Britain.

Other stone objects

Contexts AF1, AF2, AF11 and CF101 all produced sandstone and quartzite pebbles with exceptionally smooth surfaces, which may have been utilised as whetstones or rubbers. In addition to the two fragmentary saddle querns, AF11 contained a collection of sixteen complete and incomplete burnt pebbles; all were less than 80 mm diameter, a number were possibly being utilised as whetstones and/or rubbers.

II The Lithic Assemblage (Figs 12-14)

by Elizabeth Healey

The lithic material was found both during field-walking and in excavated contexts, including pre-Iron Age features. However, none appeared to be *in situ*. In all, 512 pieces of struck flint were recovered. Typologically, individual artefacts range in date from Mesolithic to later Neolithic, but the industries could not be distinguished stratigraphically.

All the flaked lithic material is flint. The raw material appears to have come from at least two sources, and may be described as follows:

a) good quality black flint with a fresh cortex, probably extracted from the boulder clay;
b) flint ranging in colour from grey-brown to pale grey and occasionally opaque white, but with rolled cortex and iron staining as if from river gravels.

It is not possible to quantify accurately the amount of flint used from each source, nor to suggest that either type was preferred for any particular industry, but it is clear that the flint from river gravels was most frequently used.

The composition of the industries in terms of major types and their site context is summarised (Table 1); sub-types and their possible chronology are then briefly described; and finally the industries are summarised and discussed, pending further research (Healey in prep.), in terms of other Essex flintwork.

	Excavation Area					
	A	B	C	D	Field Surface	Total
Cores and struck nodules	3	9[a]	12	—	3	27
Flakes and blades	90[b]	67	285[b]	—	5	447[c]
Scrapers	3	6	—	1	2	12
Notched flakes	1	1	6	1	—	9
Piercers	2	—	3	—	—	5
Serrated flakes and saws	—	—	4	—	—	4
Microliths	—	—	3	—	—	3
Micro-burins	—	1	—	—	—	1
Truncated blades	1	—	—	—	—	1
Arrowheads	—	—	1	—	—	1
Axes	—	—	—	—	1	1
Laurel leaves	—	—	—	—	1	1
TOTAL	100	84	314	2	12	512

Notes:
a Core reused as a hammerstone
b includes 2 flakes probably detached from hammerstones
c includes 21 core-rejuvenation pieces

Table 1 Incidence of flint types

Technology

The majority of flakes were apparently detached from their parent nodule by a hammerstone or hard hammer (for a description of knapping tools see, for example, Newcomer 1971, 85), and three hammerstones were recovered: a re-used core and two fragments. An examination of the cores and the butts of the flakes and blades indicates that striking platforms were plain, indeed in some instances flakes were struck directly from the outer surface of nodule. 'Punch-striking' was only rarely practiced. The flintwork falls into two groups: debitage and retouched flint.

Debitage

Cores (Fig. 12, 1-4)

The cores have been classified in terms of the types of their residual flake beds rather than in terms of their platform geometry (Green 1974, 84), and the following sub-types are present:

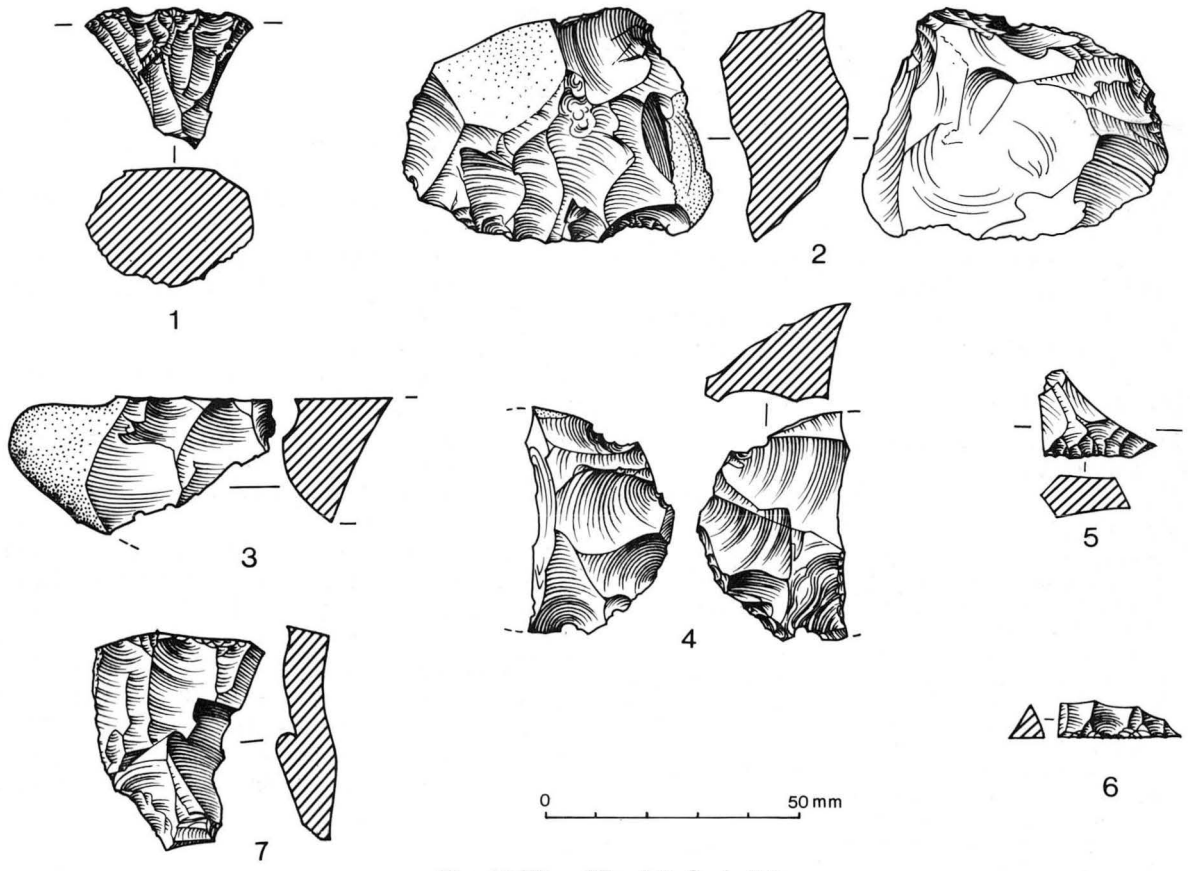

Fig. 12 Flint: Nos 1-7. Scale 2:3

blade cores	5 (Fig. 12, 1)
flake and blade cores	9
flake cores	5 (Fig. 12, 2)
unclassifiable fragments, 3 of which are sub-discoidal	5 (Fig. 12, 3 and 4)

There are also three nodules bearing a scar of a single flake, which had probably been struck accidentally.

The cores are small and undistinguished except for the blade cores which may be Mesolithic in date, and three with keeled platforms. One flake core (not illustrated) is comparable with the so-called choppers from Durrington Walls (Wainwright with Longworth 1971, fig. 78, F88) and could therefore be later Neolithic.

Core-rejuvenation and trimming flakes (Fig. 12, 5-7)
Twenty-one core-rejuvenation flakes, which either remove part of the striking platform (Nos 5 and 6) or renew the face of core (No. 7), were present. It is likely that the latter type is an accident of debitage (Tixier 1974, 19) rather than the result of a deliberate technique. Five of the rejuvenation flakes had been struck from blade cores, and it is probable that they are Mesolithic in date.

Flakes and blades (Not illustrated)
The 425 unretouched flakes and blades have been measured by Miss A. Clydesdale, and her results are deposited with the archive. Forty-four blades were present, of which twenty-one were broken. Some of the waste material may have been utilised, but because of post-depositional damage to the assemblage it has not been possible to distinguish accidental damage from that occasioned in use or even from deliberate retouch.

The retouched flintwork
Although only relatively small numbers were present, a wide range of tool types is represented.

Scrapers (Fig. 13, 8-16)
All the better scrapers have been illustrated (details of dimensions, etc., have been deposited with the archive), and it is immediately apparent that a number of sub-types are present. The straighter and less lavishly retouched examples, like Nos 9 and 12, may be of Mesolithic type (cf. scrapers from Wawcott III; Froom 1976, 136, figs 73-4), whereas examples with extensive retouch, like Nos 18 and 25, appear to be more at home in later Neolithic industries (cf. Wainwright with Longworth 1971, figs 69 and 70).

Notched flakes (Fig. 13, 17-19)
These are flakes and blades of various sizes with abrupt retouch forming a concave area. This varies from relatively wide shallow examples as No. 17, to smaller semi-circular notches like No. 18. Some of these may be unfinished microliths (see below), but in general they are not a closely datable type.

Piercers (Fig. 13, 20-23)
Four of these are on naturally pointed flakes, the distal ends of which have been lightly retouched, though this is not always distinguishable from accidental damage as in the case of No. 20. The fifth (No. 21) has a more heavily retouched point. Lightly retouched piercers are found in Mesolithic industries (e.g. Thatcham; Wymer 1962, 348) and earlier Neolithic industries (e.g. Windmill Hill; Smith 1965, 93).

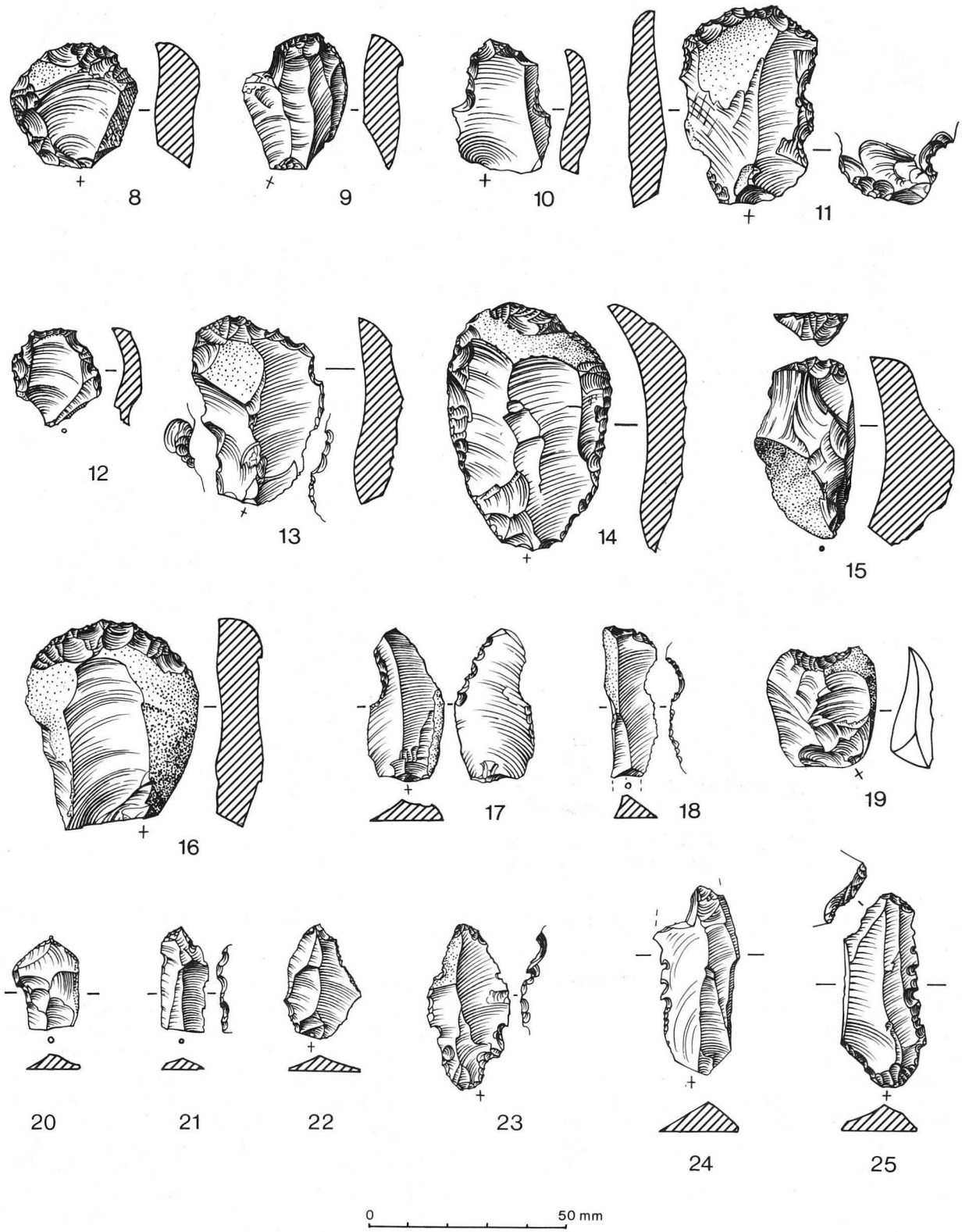

Fig. 13 Flint: Nos 8-25. Scale 2:3

Serrated flakes and saws (Fig. 13, 24 and 25)
There are two finely serrated flakes and two more coarsely-toothed saws; one (No. 24) on a core-rejuvenation flake, and one (No. 25) with an obliquely retouched end. They are not closely datable, though could be Late Neolithic.

Microliths (Fig. 14, 26-28)
Three microliths were found. They are all fragments of Jacobi's type 7a or $7a^2$ (Jacobi 1978, fig. 6), and are of later Mesolithic date (Jacobi 1978, 19 and references therein).

Micro-burin (Fig. 14, 29)
One probable micro-burin was present; a laterally-notched blade which has snapped immediately above the notch. Four of the notched blades are perhaps best considered as unfinished microliths in the course of manufacture by the

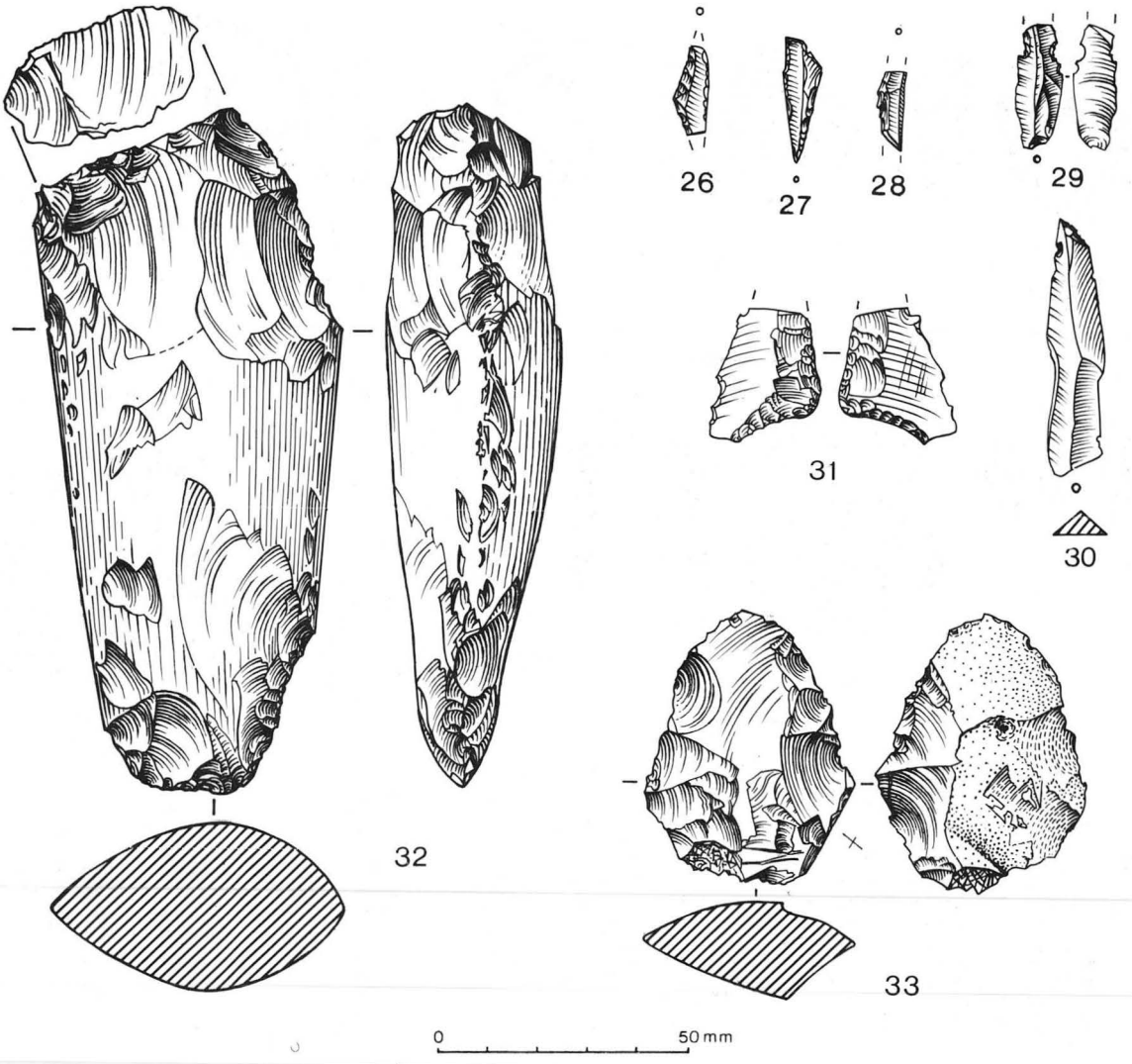

Fig. 14 Flint: Nos 26-33. Scale 2:3

micro-burin technique. A Mesolithic date is likely.

Truncated blade (Fig. 14, 30)
A single obliquely truncated blade is present; it is probably of Mesolithic date.

Arrowhead (Fig. 14, 31)
This is of oblique type (Green 1980), and was found in the topsoil stripping of Trench C. Such arrowheads are characteristic of industries associated with Grooved Ware pottery (cf. Durrington Walls; Wainwright with Longworth 1971, 171 and 257-9) but occur also in southern Beaker settlement contexts.

Axe (Fig. 14, 32)
A large fragment of a ground and polished flint axe was found by a farm worker, Mr A. Saunders, on the ploughed surface of Brook Field (TL 81100780). It has an oval cross-section with more or less straight sides tapering towards the butt. It has been re-flaked as a core. It is probably of Neolithic date.

Laurel-leaf (Fig. 14, 33)
A crudely flaked, bifacial object was found in Little Acre Bit Field. It is probably a laurel-leaf rough-out and as such is likely to be of earlier Neolithic date (cf. Clark *et al.* 1960, 226: Smith 1965, 100).

Summary and discussion
The flintwork shows a wide typological range. It was found over a wide area (at least 300 by 200 m), both in excavated contexts and by field-walking (Table 2). The flints are numerically too small to produce a meaningful distribution pattern, but subsequent excavation may prove the two apparent concentrations in Trenches A and C to be significant. Stratigraphically, flint occurred mainly in the ploughsoil and in the Late Iron Age and Roman ditches, except for Trench C where it concentrated in three pits: CF 105 (61 flakes and a microlith); CF 111 (42 flakes); and CF115 (16 flakes and a microlith).

Although the lithic content of the pits in Trench C (including CF117 which produced a microlith) shows a clear Mesolithic element, the occurrence of a Grooved Ware sherd in CF105 suggests that the flintwork may be residual.

A Mesolithic presence is indicated by the blade cores, the blades, core-rejuvenation flakes, the microliths and the micro-burin. There was no particular concentration, and it could be that we are here dealing with the palimpsest of what was once a multiple-focus Late Mesolithic site

(Mellars 1976, 379), most of which has been destroyed by later Neolithic, Iron Age and Roman activity, and of which too little remains even to hazard a guess at the purpose or activities of the earlier period.

Area	Surface	IA/RB Ditches	Other Features	Total
A	20	71	9	100
B	68	16	—	84
C	64	119	131	314
D	2	—	—	2
Field-walking	12	—	—	12
TOTAL	166	206	140	512

Table 2 Site distribution of the flint

Earlier Neolithic activity may be evidenced by the laurel-leaf rough-out and probably by the axe (both recovered in field-walking), and perhaps some other types, but at this juncture the nature and extent of that activity cannot be determined. Late Neolithic occupation is more clearly shown by the Grooved Ware sherd in CF105 and by the oblique arrowhead, though they can only be linked typologically. Other probably contemporary flintwork includes the chopper core and some of the scrapers, but again the precise nature of the activity is elusive.

The occurrence of flintwork of several traditions at a single site is not unfamiliar in Essex; there are major collections of examples from Hullbridge, Walton and Clacton, and from more recently excavated sites (where the post-glacial flintwork is peripheral to the main period of occupation), such as Little Waltham (Healey 1978, 110), Saffron Walden (Healey 1982) and Chelmsford (Healey in prep.). Detailed discussion of Essex post-glacial flintwork in the light of the Woodham Walter material is premature, but a summary of the Mesolithic and Neolithic periods in Essex is given by Jacobi (1980) and Hedges (1980) respectively, and a detailed documentation and discussion of flintwork from central Essex is being compiled by Healey (in prep.).

This report was completed in 1980.

III The Pottery and its Implications

by Warwick J. Rodwell

Woodham Walter is of considerable interest for later Iron Age studies in Essex, in that this is one of the few sites so far excavated which has yielded substantial groups of apparently contemporary pottery. To date, only *Camulodunum* has produced larger groups, although the study of other recently excavated material, notably from Mucking, Kelvedon and Wickford, will further augment the basic data.

The pottery from Woodham Walter basically comprises five well-defined groups, each containing between fourteen and sixty-three illustrable vessels. In date, these span the period from the end of the Middle Iron Age to the Claudian conquest. A small group of Neolithic material and a few relatively insignificant collections of sherds of Iron Age and Roman date constitute the remainder of the pottery from the site; less than 10% of the total.

The pottery is considered here in stratified groups roughly in chronological order. The few fragments of brick and briquetage which were found are also included in this section. Apart from the flints found in association with the Neolithic sherds in pit CF105, and part of an iron brooch from feature AF1, there were no other non-ceramic finds of relevance; thus each group of vessels has to be considered solely as a collection of pottery.

The following abbreviations have been used: Early, Middle and Late pre-Roman Iron Age — EPRIA, MPRIA, LPRIA; hand – made – H/M; wheel – thrown – W/T; wheel-finished – W/F.

The last category is used for those vessels which show evidence of having been turned slowly, perhaps on a tournette, usually for the purpose of finishing the rim and shoulder only. The interiors and lower parts of such vessels generally give the appearance of being hand-made.

Fabrics

The bulk of the pottery can be assigned to a readily identifiable series of fabric groups, here lettered A to H. There are occasional hybrids between these groups and a few fabrics fall entirely outside the range; these are described individually.

Fabric A

A medium fine ware with a 'sandwich' feature: reddish-brown with a grey core and dark grey surfaces. There is usually a small quantity of very fine sand in the paste, and occasionally a few lumps of red or grey grog. The exteriors of vessels in this fabric are well burnished and sometimes show slight traces of mica on the surfaces. A common Belgo-Roman fabric.

Fabric B

A slightly coarser fabric; with a reddish-brown core and dark grey to brown surfaces, burnished in part. Tempered with fine sand and grey grog. A common Belgo-Roman fabric.

Fabric C

Very coarse fabric: with a reddish-brown or grey core and dark grey surfaces. The paste is grog-tempered and fires with characteristically pimply surfaces; these are not normally burnished. The lower parts of jars are almost invariably covered with pronounced knife-trimming and vegetable markings. A common Belgo-Roman fabric.

Fabric D

Medium grey fabric, tempered with a generous quantity of finely crushed, dark grey grog. Very small lacunae are also present in some vessels, indicating that finely crushed shell has dissolved out. Sometimes this fabric is hard fired, but more often it has a crumbly texture. A common LPRIA fabric.

Fabric E

Dense, black fabric, generally soft, and well tempered with fine sand. The surfaces are often brown, but not burnished. Generally equivalent to Little Waltham fabric H (Drury 1978a, 58). The commonest MPRIA fabric.

Fabric F

A harder fabric than E, with a brown or grey core and brown surfaces which are not burnished; distinctly sandy. Rare at Woodham Walter, but a common Thames-side fabric.

Fabric G

A fairly soft fabric with a brown core tempered with grey grog and crushed shell; grey to black surfaces. Apart from

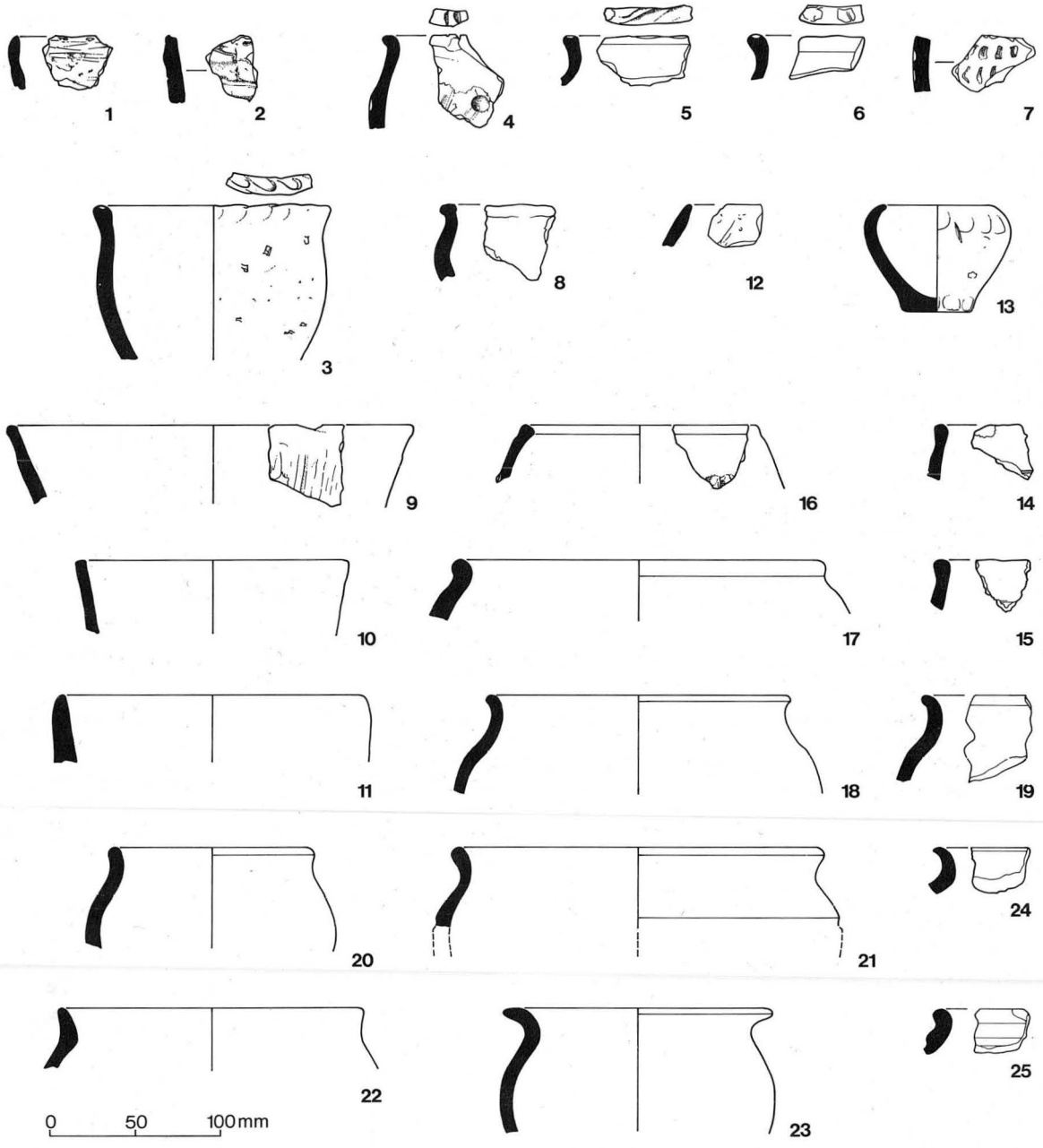

Fig. 15 Pottery: Nos 1-25. Scale 1:4

colour, this fabric is generally similar to Fabric D. Equivalent to Little Waltham fabric E (Drury 1978a, 58). A common LPRIA fabric.

Fabric H
Fine medium grey fabric, tempered with a large quantity of coarsely crushed shell; brown surfaces. The shell has usually dissolved out, leaving a coarse vesiculated appearance (see Jones 1972). Rare at Woodham Walter, but common in southern Essex.

Description

Within each major stratified deposit the pottery is grouped and described by period and fabric, beginning with the commoner fabric types. The segment and layer number (e.g. *III 4*) of the fill appears after each entry (see p. 5). A typology of forms has not been attempted, but where possible, equivalents in the *Camulodunum* type-series (Hawkes and Hull 1947) and Little Waltham series (Drury 1978a, 52-6) have been noted. It is evident that a particular range of forms is associated with each fabric type and thus sorting into the various vessel types and forms has largely been an automatic process.

Pit CF105

Neolithic pottery (Fig. 15)

1 Simple pointed rim, more or less upright. Hand-made, soft, brown fabric containing grey grog and a little sand; vegetable impressions on surfaces and a few lacunae resulting from leached out shell tempering (very finely crushed shell). Some simple scratches on the exterior of the rim are probably decorative and serve to relate this vessel to the Late Neolithic Grooved Ware tradition. The rim form is probably to be equated with Longworth's 'upright asymmetrically pointed' type (Longworth 1971, 56, form 7). The diameter of the vessel was *c.* 16 to 18 cm. *Layer 3*

2 Body sherd of a vessel of generally similar fabric to No. 1, but the grog tempering is red and occurs in larger lumps. Shallow

horizontal grooves on the exterior. This would appear to be a sherd of Grooved Ware. *Layer 3*

Not illustrated: Another six small sherds in similar fabrics; some may be part of No. 1.

Ditch AF1

Neolithic pottery

Two small sherds, probably from one vessel. Soft, black fabric; light brown interior; totally excoriated exterior. Very few sand grains, but many small lacunae resulting from vegetable inclusions, and possibly the leaching out of shell. There may be other Neolithic sherds amongst the unidentifiable fragments. *I 3*

Early and Middle pre-Roman Iron Age pottery

Many small sherds of MPRIA sandy wares (mainly in Fabric E) and a few flint-gritted sherds which may be EPRIA were found in addition to those illustrated below. *Layers 3 and 4* in all segments, and *layer 5* in segment I

Middle and Late pre-Roman Iron Age pottery

Although the ditch was sectioned in four places, all in close proximity to one another, practically all the pottery came from segments I and III. Furthermore, 90% of the finds were derived from *layers 3 and 4*, with individual vessels often represented by sherds from both layers. Thus for all practical purposes the bulk of the material from AF1 can be treated as one group, with just a few additional sherds from diverse locations. Fabrics E, D and G, respectively, accounted for the majority of the pottery; no more than one or two sherds in each of several other fabrics were found.

Fabric E (Fig. 15)

3 H/M Cabled finger-tip decoration on rim. Burnt and soot encrusted. Similar to a vessel from Witham (Davison, Petchey and Rodwell in prep.). *I 4*

4 H/M Rough surfaces with finger-tip impressions on shoulder and deep slashes, probably in groups, on the rim, which is distinctly beaded. Cf. Ardleigh (Erith and Holbert 1970, fig. 13.1). *I 3*

5 H/M Cabled rim. Little Waltham form 3. *I 4*

6 H/M Finger-tip impressions on rim; cf. No. 5. *I 3*

7 H/M Body sherd with two rows of finger-nail impressions. There is insufficient evidence to tell whether there were only two rows originally, or whether the vessel had all-over rustication. Either is unusual after the EPRIA, but the vessel is not in a fabric generally associated with wares of that period. *I 4*

8 H/M Shouldered jar with T-shaped rim. Somewhat lumpy surface, with black burnished exterior. Cf. Witham (Davison, Petchey and Rodwell in prep.). *III 3*

9 H/M Fabric contains a little vegetable material; rough vertical striations on exterior. Little Waltham form 17B (cf. Drury 1978a, fig. 46.131). *X 3*

10 H/M Conical bowl with square rim. Little Waltham form 15B (cf. Drury 1978a, fig. 46.147). *V 4*

11 H/M Simple pointed rim. Lumpy surface; could originally have been burnished, now burnt. Little Waltham form 15 (cf. Drury 1978a, fig. 53.319). *V 5*

12 H/M Simple pointed rim, inward-leaning. Very little sand content. Little Waltham form 15A. *I 3*

13 H/M Small, thick-walled vessel. Medium brown fabric tempered with much fine sand. Dark grey surfaces, lumpy, and with occasional vegetable markings. Slight signs of finger-marking on shoulder and around base, but clearly not intended as decoration. Shoulder soot-encrusted. A miniature vessel of Little Waltham form 15A, used as a crucible (see p.39-40). *III 6*

14 ?W/F Brown sandy fabric. Rim black burnished externally; traces of combing below. *III 3*

15 W/F Similar to No. 14. *III 3*

16 W/F, but probably not W/T. Clubbed-rim jar. Black burnished exterior down to row of stabbing on shoulder. A small version of No. 27. *V 5*

17 W/F Large jar with beaded rim. Brown-grey surfaces, unburnished. Progenitor of *Cam* form 258C. *V 5*

18 H/M Slack-S-profile jar. Fabric contains small white grits, probably flint, possibly relating it to Little Waltham fabric J. Little Waltham form 11 (cf. Drury 1978a, fig. 50.244: Erith and Holbert 1970, fig. 14.20). *I 4*

19 H/M As No. 18, except in the usual Fabric E. *I 4*

20 H/M Traces of black burnshing on exterior. Little Waltham form 11 (cf. Drury 1978a, fig. 52.307: Erith and Holbert 1970, fig. 14.29). *V 5*

21 W/F Dark brown surfaces, with slight traces of a black slip coating inside rim. Soot-encrusted externally; no burnishing survives. Cf. Little Waltham form 11; also well attested at Witham (Davison, Petchey and Rodwell in prep.) although unfortunately the fabric of these vessels was not recorded before their loss. *I 3*

22 W/F Everted rim with internal thickening; black burnished externally. A semi-fine ware closely related to vessels from Witham (Davison, Petchey and Rodwell in prep.). Probably derived from Little Waltham form 13. *III 3*

23 H/M Bowl with pronounced S-profile. Little Waltham form 14. Originally black burnished externally and just inside lip. Slightly lumpy surfaces, now largely burnt brown. *I 3*

24 W/F Cavetto rim, probably of a similar vessel to No. 23. Brown surfaces. *I 3*

25 ?W/T Beaded rim of a jar, probably with multiple cordons on shoulder. Presumably once burnished, but now burnt light brown. *I 3*

Fabric G (Fig. 16)

26 H/M A transitional fabric between E and G; this vessel is tempered with much fine sand, but very little grog. Crude, irregular manufacture; row of finger-tip and nail impressions on shoulder; rim crudely smoothed but not burnished; no treatment of the body. Very little pottery of this type has been published from Essex, although it is by no means rare. Cf. Kelvedon (K. A. Rodwell forthcoming). One of the variants of *Cam* form 263. *I 3 and 4*

27 W/F Jar with internally thickened rim in the same transitional fabric as No. 26. Finger-tip and nail impressions on shoulder and, below, shallow finger wiping. Dark grey surfaces with black burnished rim and neck. Like No. 26, this type has received little attention, although it is a standard coarse ware form found at Kelvedon, Wickford, etc. *Cam* form 254. *I 3 and 4*

28 H/M Smaller version of No. 27. Row of finger-nail impressions and traces of combing below. Occasional vegetable marks on interior. *I 3*

29 W/T Same general form as No. 27, but with square-cut rim. The fabric was also tempered with a small quantity of finely crushed shell, but is now vesiculated. *V 5*

30 W/T Similar form to No. 29; apparently once burnished externally. *III 4*

31 H/M Very crude and lumpy; black burnished surfaces with traces of crude burnishing internally and combing externally. Cf. Little Waltham form 15. *III 5*

32 H/M Example of a body sherd from the lower part of a vessel such as No. 27, showing the point where the wiping or combing runs out towards the base. *I 4*

33 W/T Body sherd with fairly regular horizontal striations. Closely similar to No. 46, but from a larger vessel. *I 4*

34 H/M T-shaped rim. Dark brown lumpy surfaces. Either this is from a situlate vessel with an angular shoulder or, perhaps, from a bucket. Cf. Van Es (1967, fig. 156.944). *III 7*

35 Similar to No. 34. *III 3*

36 W/F Everted rim. Black burnished externally, rather lumpy. This is from a wide-mouthed vessel, probably related to a jar type found at Little Waltham (Drury 1978a, fig. 52.286) and further discussed by Drury (1978b, 63, fig. 13.1). *III 3*

37 W/F Everted rim of a large jar, black burnished externally and inside neck; now burnt. *I 3*

38 W/F Simple jar, burnt brown and flaked; burnished externally. *III 3*

39 ?H/M Simple shouldered jar. Black burnished externally. *III 3*

40-1 W/T Jar, with slightly ribbed shoulder and a broad, sagging-based pedestal. Traces of burnishing on shoulder and light combing (not illustrated) on the body below. It is likely, but not certain, that these two sherds are from the same vessel. Incipient cordoning is seen on pedestal urns, particularly from Kent (e.g. Swarling; Birchall 1965, fig. 5.38), while the flat or slightly sagging pedestal base is seen both in Essex and Kent (e.g. Shoebury; Birchall 1965, fig. 20.175). The dangerously thin wall of the vessel near the foot, and the thinness of the floor of the pedestal can be paralleled and seem to be the result of a deliberate cutting out and finishing process. This must have taken place after the vessel had dried out to a considerable degree. Cf. an example from Braintree (Birchall 1965, fig. 21.183). *I 3 and 4*

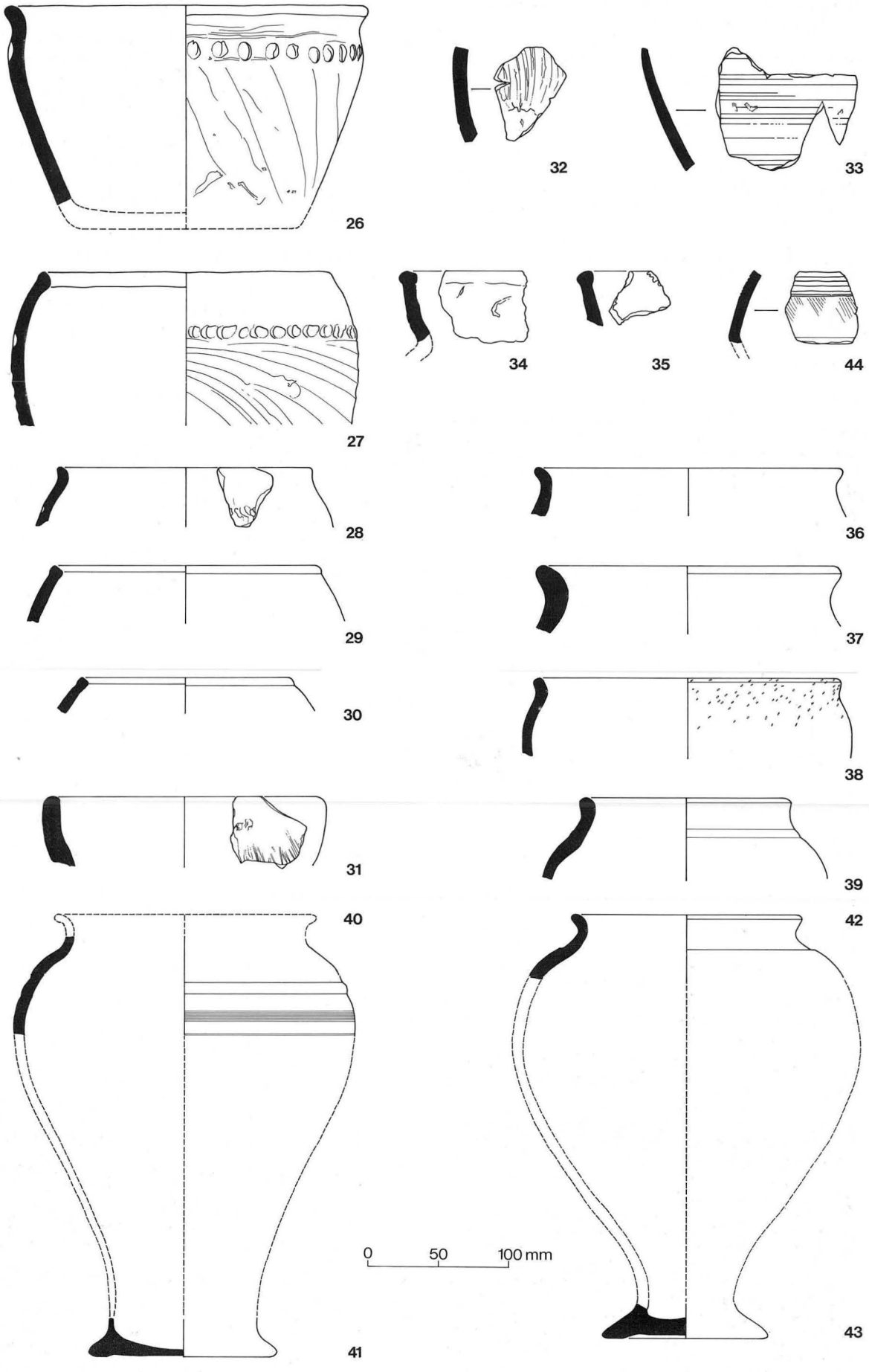

Fig. 16 Pottery: Nos 26-44. Scale 1:4

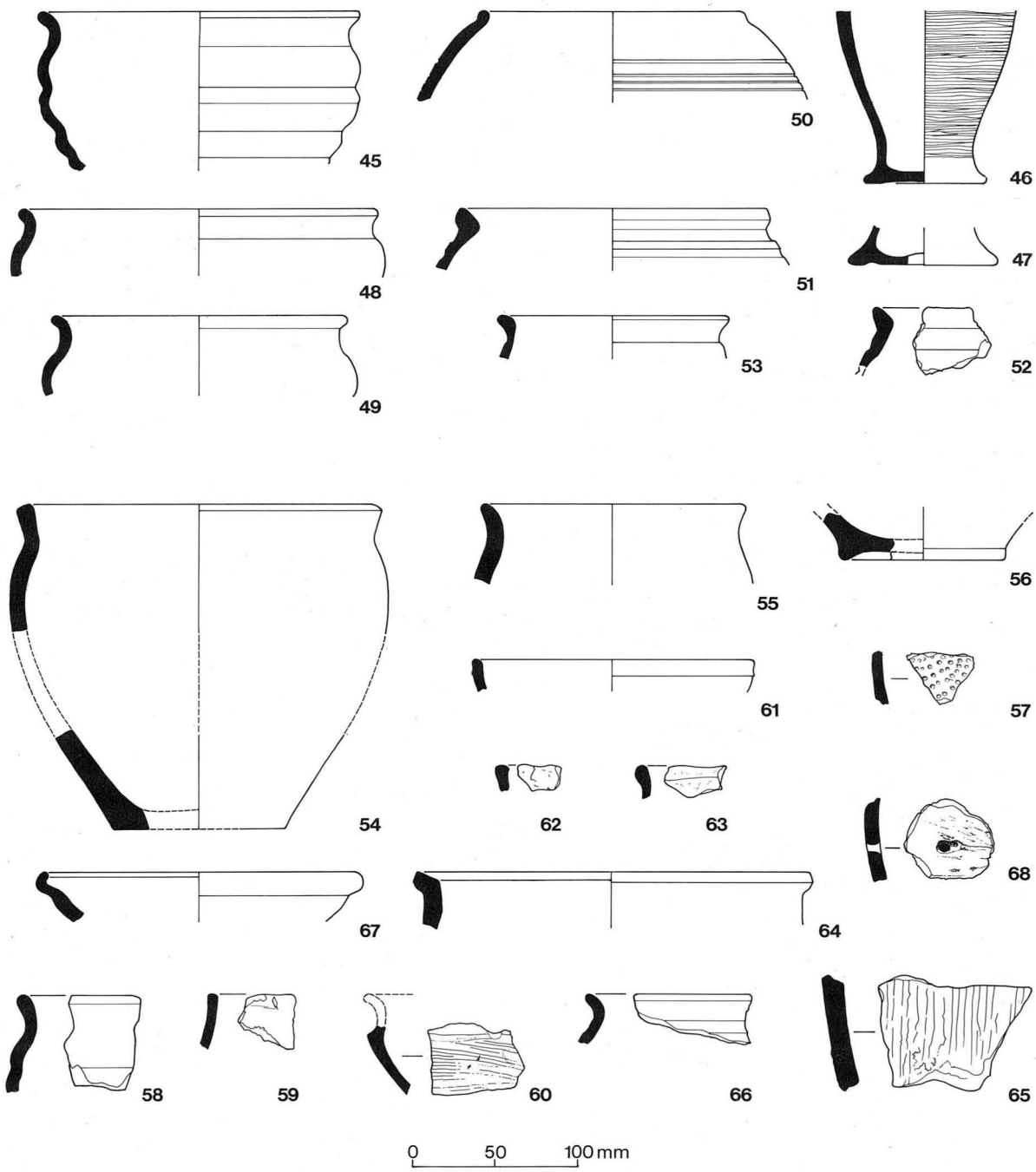

Fig. 17 Pottery: Nos 45-68. Scale 1:4

42-3 W/T Pear-shaped pedestal jar. Medium brown exterior with traces of burnishing. A common type; cf. Lexden (Birchall 1965, fig. 21.184); and Ardleigh (Hull, Erith and Rodwell in prep.). *III 3 and 4*

44 W/T Shoulder of carinated jar or bowl. Pimply brown surfaces, burnished on the carination only. Decorated with a series of shallow grooves and lightly combed lozenges or squares on the shoulder. *I 4*

Fabric D (Fig. 17)

45 ?W/T Upper part of a corrugated urn in a variant of Fabric D, being a darker grey than usual, and having only a little grog temper added. Dark grey surfaces, presumably originally burnished externally. The corrugated urn is Birchall's type III in the Aylesford-Swarling series; it is well known in Kent but does not occur amongst grave finds from Essex. The prediction that it would, however, be found on settlements (Rodwell 1976b, 219) seems to be valid. Closely similar vessels have been found at Great Chesterford (unpublished) and Ardleigh (Hull, Erith and Rodwell in prep.). There is as yet no evidence from Essex for the distinctive omphalos base of the Kentish vessels; at Ardleigh there is possible evidence to suggest an altogether different sort of base. See also No. 58. *I 3*

46 W/T Quasi-pedestal of a tall, narrow vessel with shallow rilling over the lower part of the body; this appears to have been formed by holding a comb against the body and turning the pot slowly. Black burnished surfaces, burnt in patches; traces of burnishing around the base. Close-set, all-over rilling is a feature of some pedestal urns in Kent (cf. Birchall 1965, figs 37.308; 38.326, 334 335; 42.373). Vessel No. 76 is of identical fabric and decoration, while No. 33 is also generally similar. *I 3*

47 W/T Pedestal base of the 'sagging variety' (cf. No. 41). A hole 12 mm in diameter has been neatly drilled through the base, off centre. *I 4*

48 W/T Wide-mouthed bowl. Black burnished exterior. *I 3*

49 W/T Similar to No. 48. *V 5*

50 W/F Beaded rim; externally burnished down to a series of shallow grooves on the shoulder. It is uncertain whether this piece should be related to a decorated bowl such as that from Creeksea (Birchall 1965, fig. 24.205) or to a plain globular vessel. Examples of the latter, without grooves, are seen at Colchester (*Cam* form 249F), Southminster (Birchall 1965, fig.

17.145), Southend (unpublished) and Ardleigh (Hull, Erith and Rodwell in prep.). See also Little Waltham form 15C. *I 3*

51 W/T Clubbed rim of a cordoned jar. Black burnished externally and inside lip. *III 4*

52 Similar to No. 51. *III 3*

53 W/T Similar to No. 51. Burnt. *III 3*

Miscellaneous fabrics (Fig. 17)

54 H/M Variant of Fabric E, hard and dark grey; fine sand tempering similar to Little Waltham fabric G. Upper part of exterior burnished black; burnt and flaked. The near-upright squarish rim on this vessel is generally related to Little Waltham form 4 (cf. Drury 1978a, fig. 47.180). It is closely similar to an ungrouped vessel at Aylesford, probably the earliest in the cemetery (Birchall 1965, 304, fig. 11.85: Rodwell 1976b, 221). *III 8*

55 H/M Dark brown fabric, slightly sandy, and containing a few small white particles, probably of flint (cf. Little Waltham fabric J). Black burnished externally, and well down the inside too. This is probably an imitation of a footring bowl of Little Waltham form 13. Similar examples from Witham (Davison, Petchey and Rodwell in prep.). *V 11*

56 H/M Base of a footring bowl in black fabric, with much fine sand tempering (cf. Fabric E); was burnished externally, now burnt. This was a particularly good copy of the finest of the footring bowls (Little Waltham fabric A, form 13), manufactured on Thames-side. Cf. Witham (Davison, Petchey and Rodwell in prep.). *I 3 and III 4*

57 H/M Body sherd in a fine, dense black fabric with no visible signs of tempering; only very small sand grains can be seen under the hand lens. Reddish-brown exterior, well burnished, and covered with small rounded dimples, 2.5mm in diameter. This is an unusual piece, of which there is nothing similar from Woodham Walter. It belongs to a group of vessels of uncertain form, decorated with curvilinear and dimpled motifs, from Mucking (Elsdon 1975, fig. 14.3, 9 17, pl. IVb and Va). *I 4*

58 H/M Dark brown fabric containing a little fine sand and grog. Black surfaces, burnished externally and sooted internally. This could well be another corrugated urn; see No. 45. *I 4*

59 H/M Simple squared rim in dense black fabric with occasional inclusions of white flint, cf. Little Waltham fabric C. This is also similar to a bowl rim with curvilinear decoration from Witham (Davison, Petchey and Rodwell in prep.). *V 11*

60 ?W/F Dark grey sandy fabric. A sharply carinated bowl, probably *Cam* form 224 with a brown burnished surface above the carination and combing below. A very uncommon form in Essex, but well known in Gaul in the later La Tène period (cf. Birchall 1965, figs 31.260, 261; 38.328, 331; 39.343). *I 3*

61 W/T Rim of a bowl or dish of uncertain form, in a dark grey fabric tempered with fine sand. *I 3*

62 H/M Flat-topped rim, possibly decorated with shallow finger impressions. Black fabric, tempered with a small amount of finely crushed shell. Roughly burnished exterior. *I 3*

63 H/M Irregularly made rim in reddish-brown fabric, tempered with a little very finely crushed shell. Roughly burnished exterior. *I 3*

64 ?W/T Rim, probably of a bucket, in grey fabric tempered with much crushed shell, now largely vesiculated; lumpy brown surfaces. Fabric H. *III 6*

65 ?H/M Sherd of a large storage jar in grey fabric, tempered with coarse shell and grog. Brown surfaces with coarse vertical combing. *I 4*

66 W/T Brown fabric tempered with a moderate amount of fine sand and a little grog. Burnished externally; superficially similar to Fabric B. *I 3*

67 W/T Platter of native form, with an unusual internally hooked rim; cf. Hawkes and Hull (1947, fig. 48.10). This is burnt and flaked but appears to be in a fabric similar to Fabric A. *I 3*

Roman pottery

Some fifteen sherds of a lid-seated jar in Fabric H (shell tempered), as No. 182. Mid-first century AD. *I 3*

Also ten sherds of grey sandy wares from *V 3*, and one from *I 3*

Samian

Crumbs of decorated South Gaulish ware. First century AD. *V 3*

Other finds (Fig. 17)

68 Spindle-whorl. Body sherd of a pot, cut roughly into a circle and having a hole drilled through the centre. Coarse, dark brown, sand and grog-tempered fabric; vegetable impressions on exterior. *I 4*

Ditch AF3

Although some 12.5m of this ditch was emptied, the pottery recovered is both small in quantity and mixed in date.

Neolithic/Bronze Age pottery (Fig. 18)

69 Flat-topped rim with a thin, projecting beaded lip, from a bowl of uncertain date. Irregularly made, in a fairly hard, grey fabric containing both fine and coarse flint gritting; rough surfaces, with traces of horizontal furrowing on exterior. The dating of this unusual piece is far from certain. It could be as late as the EPRIA, but it does not accord with any locally known types. A date somewhere in the Neolithic or Bronze Age is perhaps more likely, but there is very little local material with which to compare it. The rim form does not occur amongst the Grooved Ware types from Essex. *I 3*

Early pre-Roman Iron Age pottery (Fig. 18)

Some seventeen small sherds of flint-gritted pottery were found scattered through *layers 3 and 4*; some may be MPRIA.

70 Shoulder of a situlate jar, decorated with finger-tip impressions. Hard, dark grey fabric with a generous quantity of coarsely crushed flint. Insufficient remains to reconstruct the rim of this vessel, but it is likely to belong to the coarse wares of the period sixth to fourth century BC. *IV 3*

Middle pre-Roman Iron Age pottery (Fig. 18)

Eight small sherds in sand-tempered fabrics, and one vegetable tempered, were recovered from *layers 3,4 and 6*.

71 H/M Everted rim in black sandy fabric with a reddish-brown interior. Finger-nail impressions around top of rim. *IV 3*

72 H/M Base angle of a jar in hard, brown fabric tempered with medium crushed flint grit; black interior, brown exterior with slight finger marking near base. *IV 6*

Late pre-Roman Iron Age pottery (Fig. 18)

Many small undistinguished sherds were found in *layers 3, 4, 5, and 6*. The following are the only pieces worthy of illustration.

Fabric D

73 W/T Large jar with rolled rim; dark grey burnished exterior. Faint, obliquely burnished lines on reserved cordon. *Cam* form 232C. *IV 5*

74 ?H/M Multiple-cordoned jar with mildly everted rim, probably once burnished externally. *Cam* form 229A, a common LPRIA type. *IV 3*

75 W/T An unusual vessel for which no parallel has been noted, other than No. 46 which seems to be identical. The two pieces do not conjoin and there seems little doubt that they are from separate vessels. Taken together, they suggest a reconstruction as a pedestal jar, finely rilled over most of the body, with a small beaded rim and a constriction at the girth. For this rim type on a pedestal urn see Ardleigh (Erith and Holbert 1974, fig. 6.25). *I 3*

Fabric A

76 W/T Platter, two-thirds complete. Black burnished internally and on exterior of wall only; unstamped; two groups of shallow concentric grooves inside base. *Cam* form 16, Belgo-Roman. *IV 5*

77 W/T Jar: Belgo-Roman. *IV 5*

78 W/T Small bead-rim bowl with rounded profile, in a hybrid Fabric A/B. Probably related to *Cam* form 249B; bowls of this type are known from late La Tène graves in Gaul (Birchall 1965, figs. 39.336 and 40.345). LPRIA or Belgo-Roman. *IV 5*

Fabric B

79 W/T Small bowl with medium grey surfaces, burnished all over; slightly inturned rim. The type is not closely paralleled at *Camulodunum*, but has been found at Wickford (unpublished, Southend Museum); it is also known on the continent (e.g. Birchall 1965, fig. 33.290). *II/III 5*

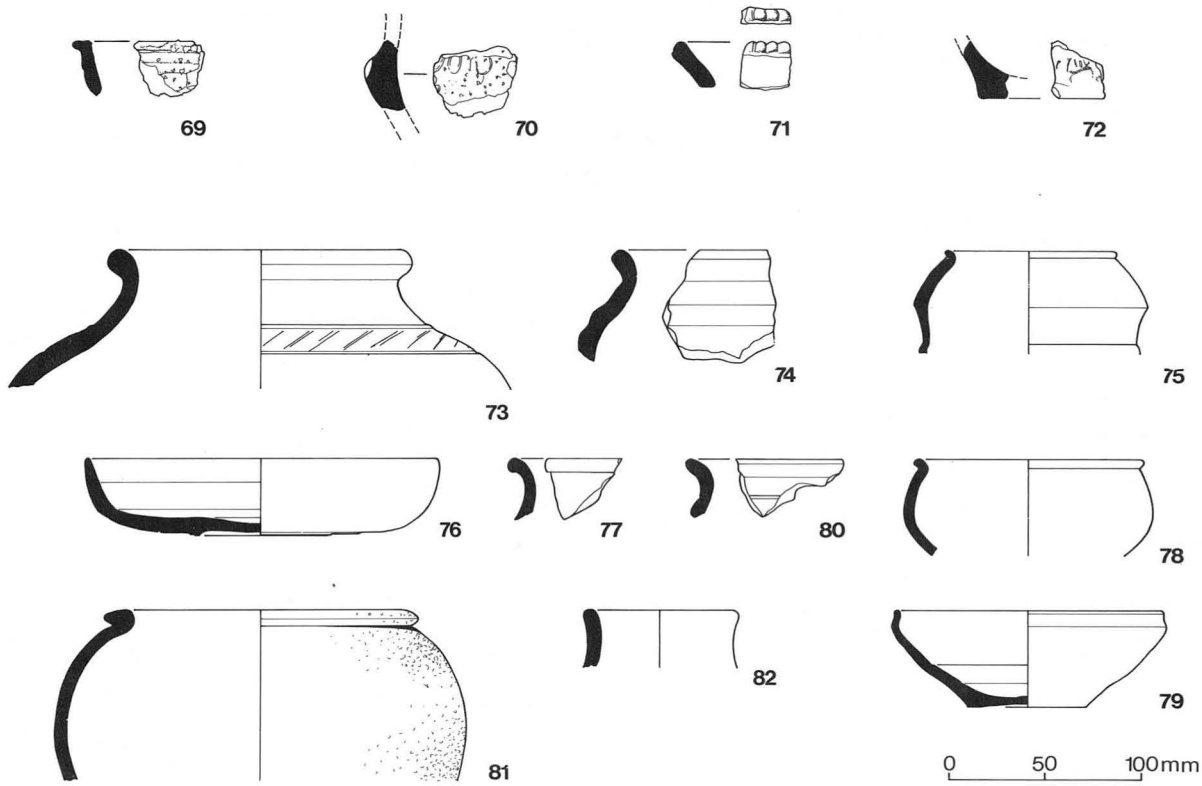

Fig. 18 Pottery: Nos 69-82. Scale 1:4

80 W/T Cordoned jar with mildly everted rim. Probably LPRIA. *IV 5*

Fabric C

81 W/T Simple jar related to Nos 94 and 155. One of the very few large sherds from this feature. Belgo-Roman. *IV 5*

Fabric G (?)

82 W/F Small jar; burnt red. *I 3*

Roman

At least twenty small and abraded sherds of Romano-British wares were found in *layer 3*. None is closely datable.

Samian

There were also about twenty sherds of samian pottery in *layer 3*; all very small and abraded beyond recognition. Most, if not all, are of South Gaulish fabric and hence of first-century date.

Ditch AF2

This ditch has also yielded a range of pottery which spans the Iron Age and much of the Roman period.

Early pre-Roman Iron Age pottery

About ten small sherds of flint-gritted pottery were found in *layers 3, 4 and 5*.

Middle pre-Roman Iron Age pottery (Fig. 19)

Five sherds of sand-tempered pottery were found in *layers 4 and 5*.

83 H/M Pointed rim of a crudely made bowl. Soft black fabric containing fine sand and a little vegetable material. Rim plain and roughly smoothed; vertical combing below. Little Waltham form 15A. *II/III 4*

Late pre-Roman Iron Age pottery (Fig. 19)

Probably wheel-thrown unless otherwise stated.

Fabric D

84 Jar. *Cam* form 221. Belgo-Roman. *II/III 4*

85 Jar rim. *Cam* form 221B. LPRIA or Belgo-Roman. *I 5*

86 Complete cup, with constricted wall and domed foot. Hard-fired and externally fully burnished, except perhaps under base; footring well worn. *Cam* form 214. For examples from grave groups at Swarling and Deal, Kent (but without the domed base) see Birchall (1965, figs 3.26 and 12.96). Probably LPRIA rather than later. *II/III 4*

87 Pedestal base, probably hand-made. Not burnished. Variant of *Cam* form 203. *I 3*

Fabric E

88 Pedestal base. Variant of *Cam* form 204. LPRIA. *IV 4*

89 Pointed rim, possibly of a jar of *Cam* form 256A. Although this has the appearance of a pedestal fragment, it cannot be so on account of its diameter, *c.* 20 cm. *IV 5*

90 H/M Rim of a cup of uncertain form; possibly a plain pedestalled or carinated cup. Hard-fired, brown surfaces; no surviving evidence of burnishing. LPRIA. *I 5*

Fabric B

91 Cordoned jar. *Cam* form 218. Burnished externally and inside mouth; faint obliquely burnished lines on reserved cordon. Belgo-Roman. *II/III 4*

92 Wide-mouthed bowl. *Cam* form 230. Black burnished exterior. Belgo-Roman. *II/III, IV 4 and 5*

93 Lid, exterior was apparently roughly burnished. Belgo-Roman. *II/III 4*

Fabric C

94 Jar, used as a cooking pot; cf. Nos 124-8. This vessel has also had a hole *c.* 3 cm in diameter knocked through the base. Belgo-Roman. *II/III, IV 4 and 5*

Fabric A

95 Shouldered jar; black burnished externally and inside lip. Decorated with a row of stab-marks on the shoulder. This is a distinctive Belgo-Roman type which occurs at Kelvedon, Rivenhall and elsewhere in Essex. *Cam* form 109 is probably a slightly later version. *I 3*

Miscellaneous fabric

96 Rim of bowl or jar of uncertain fabric; badly burnt; tempered with coarse sand. ?LPRIA. *I 4*

Terra Rubra

97 Butt-beaker in soft, dark brown fabric, containing a little grog tempering. Reddish-brown surfaces, highly burnished externally except for the reserved zones between cordons which are decorated with lightly combed zig-zag lines; interior left as

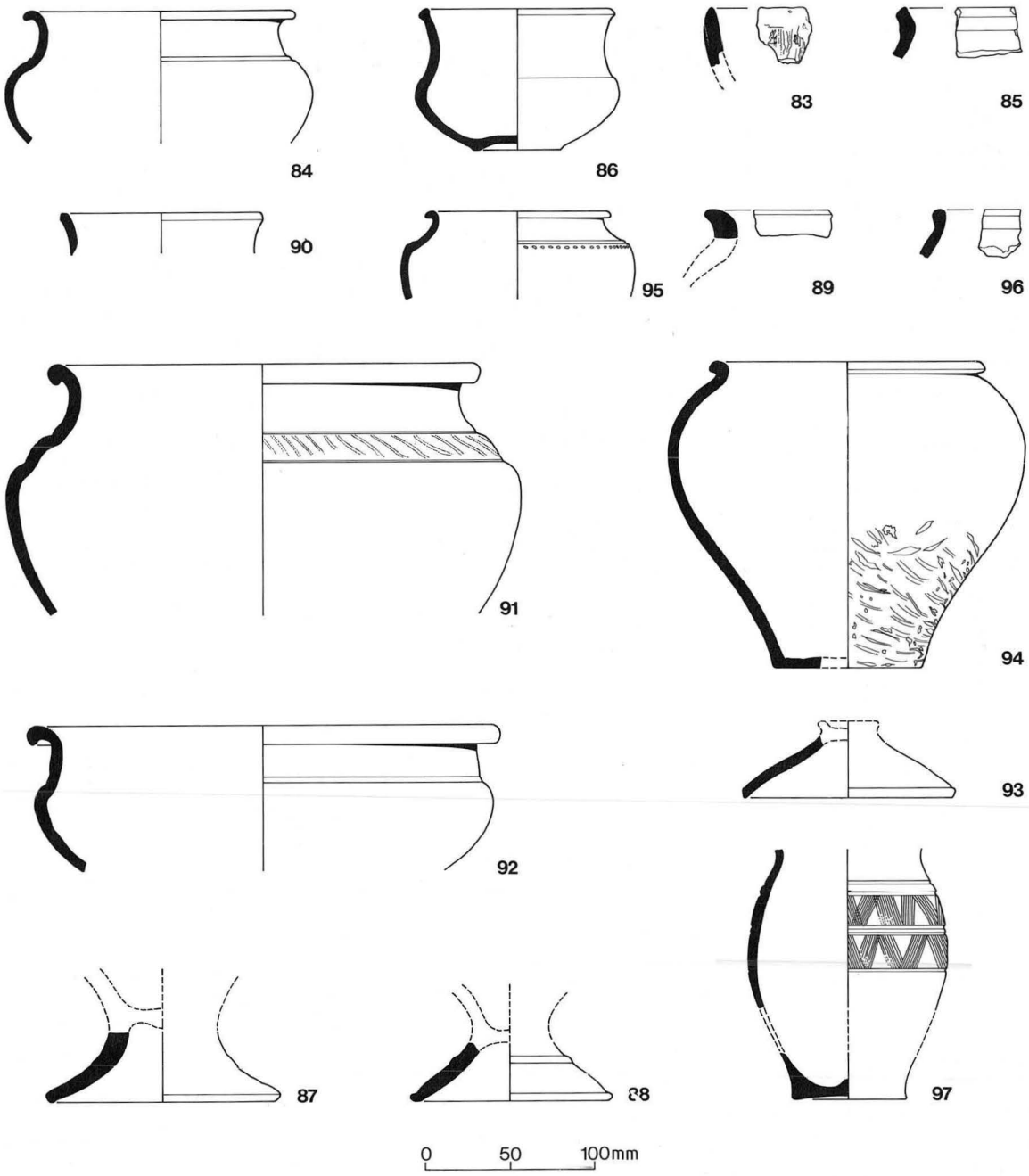

Fig. 19 Pottery: Nos 83-97. Scale 1:4

wheel-thrown (cf. No. 176). *II/III 3*

Another sherd in poor condition, which would appear to be from the same vessel, was found in *ditch CF100, layer 5*. The vessel is reconstructed here with a base found in *ditch BF210, layer 4*.

Although these sherds come from widely separated locations, they are the only three on the site in this fabric and must either all be from the same beaker or, coincidentally, from two or three identical beakers.

Roman pottery (Fig. 20)

All this pottery was found in *layer 3*, with the exception of No. 98, from *layer 5*.

98 Large, coarse storage jar, in hard, medium grey fabric, with brown-grey surfaces. Externally burnt. This vessel is more likely to be of late Roman date and may be intrusive in *layer 5*.

99 Cavetto-rim jar in fine, medium grey fabric with a brown core. Burnished externally, with a lightly burnished wavy line on a reserved cordon. A common jar form of Mucking type K (cf. Jones and Rodwell 1973, fig. 7.58). Probably late second century.

100-1 Two further examples similar to No. 99. No. 101 shows a slip coating and was distorted in firing.

102 Cavetto-rim jar with combed wavy line on shoulder. Dark grey fabric containing much fine sand. Late second or third century.

103 Ledged-rim jar. Medium grey sand-tempered fabric with traces of grey slip coating. This rim form and fabric are typical of the later second century: cf. Mucking type F (Jones and Rodwell 1973, 22-4).

104 Jar rim in a fairly fine, medium grey fabric; probably not burnished. Early Romano-British.

105 Small bowl or cup with a wide mouth and flared rim. Medium grey fabric tempered with much fine sand; burnished externally. This form is not closely datable at present, but is assignable to the third and fourth centuries. For a similar example from the Colchester *Mithraeum* see Hull (1958, fig. 66.76).

106 Bead-rim pie dish. Fine, dark grey fabric with well burnished surfaces. Late second or third century (see also No. 188).

107 Hammerhead mortarium. Brown sandy fabric with a grey core; surfaces fired dark grey and slightly rough; trituration grits of rounded and angular quartz and flint. The spout is of very simple

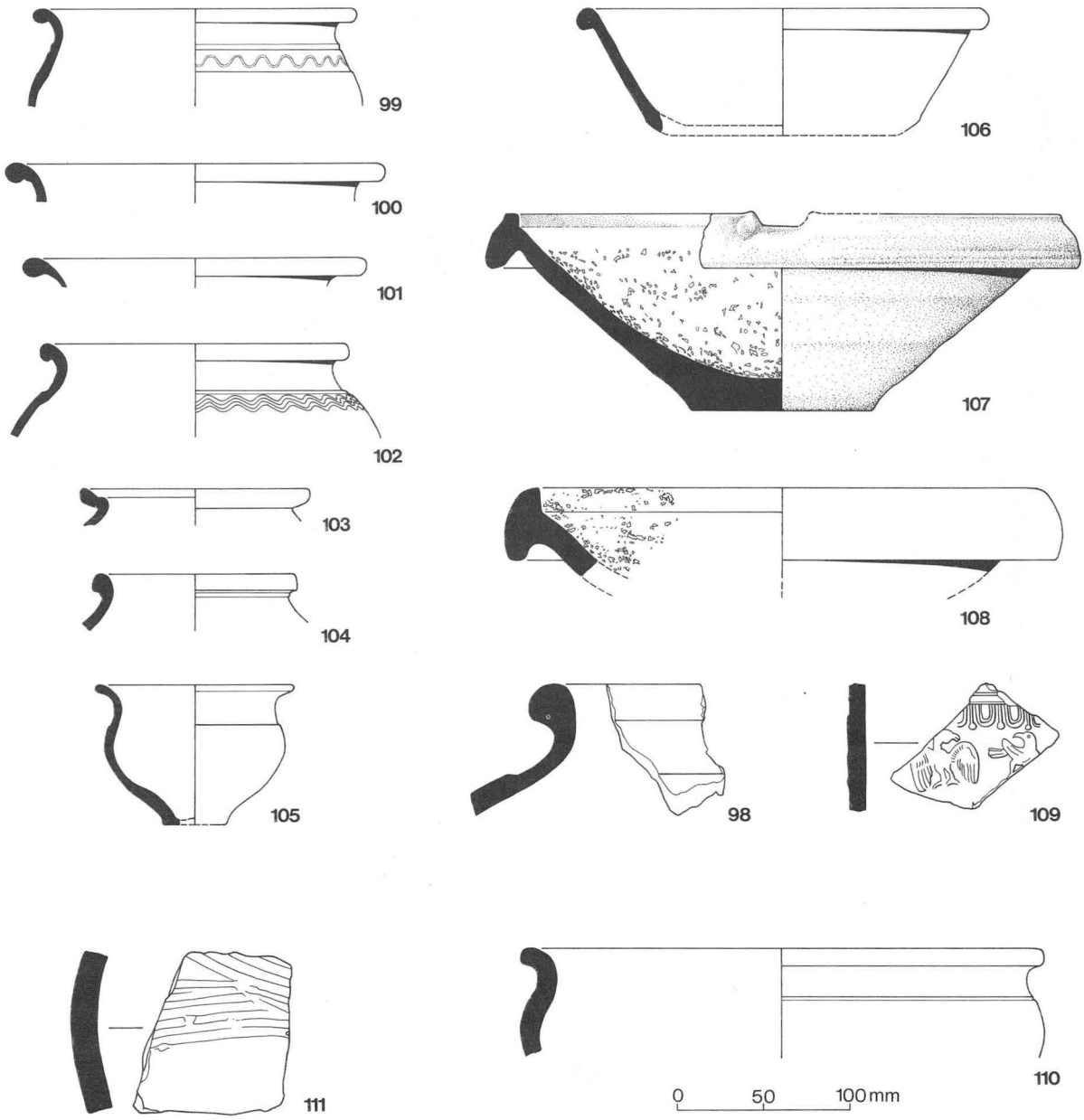

Fig. 20 Pottery: Nos 98-111. Scale 1:4

form. Although this follows *Cam* form 498 in form (cf. Colchester kiln 24; Hull 1963, fig. 87), it is not a known Colchester fabric. It is presumably a local (i.e. Essex) copy. Probably early third century.

108 Rim of a hammerhead mortarium in buff fabric, with flint trituration grits. A Colchester product; *Cam* form 498. Late second or early third century.

Not illustrated: Sherds from *layer 3* include small fragments of Colchester colour-coated ware of later second-century date.

Samian

109 Decorated sherd, Drag. form 30, from La Graufesenque; excoriated by soil action. Double-bordered ovolo with plain tongue; eagle 0.2175; small bird 0.2246 (Oswald 1936-7). Pre-Flavian, and probably late Claudian. *I 3*

Also from *layer 3* are sherds of form 18, which are South Gaulish and pre-Flavian. From *layer 4* there are about twenty-five sherds, all very small and abraded beyond recognition, except for a rim, form 18, and the footring of a platter; both probably pre-Flavian.

Ditch CF102

This is the innermost of the enclosure ditches sectioned in Trench C which, by contrast with the other two (CF100 and CF101), yielded only a minute quantity of finds.

Early and Middle pre-Roman Iron Age pottery

Layers 3 and 4 yielded seven sherds of flint-gritted pottery of undiagnostic form and date, and three sherds of black sand and flint-tempered pottery. One of the latter is a rim with finger-tip impressions on the top.

Late pre-Roman Iron Age pottery (Fig. 20)

110 Very large bowl, or wide-mouthed jar, in Fabric B. Burnished externally, slightly lumpy; ?W/T or W/F. *I 5*

111 Body sherd of a large storage jar in a coarse variety of Fabric D. Brown surfaces; heavily combed exterior. *I 5*

Ditch CF100

Finds were recovered from all layers in this ditch.

Early and Middle pre-Roman Iron Age pottery

Six undiagnostic body sherds in flint-gritted fabrics were found in *layers 3, 4 and 7*, together with a single burnished sherd of fine ware, also in a flint-tempered fabric. One sand-tempered sherd was found in *layer 4*.

Late pre-Roman Iron Age and Belgo-Roman pottery (Fig. 21)

This pottery was spread through *layers 4 to 7*. It is all W/T unless otherwise stated. For a fragment of terra rubra see No. 97.

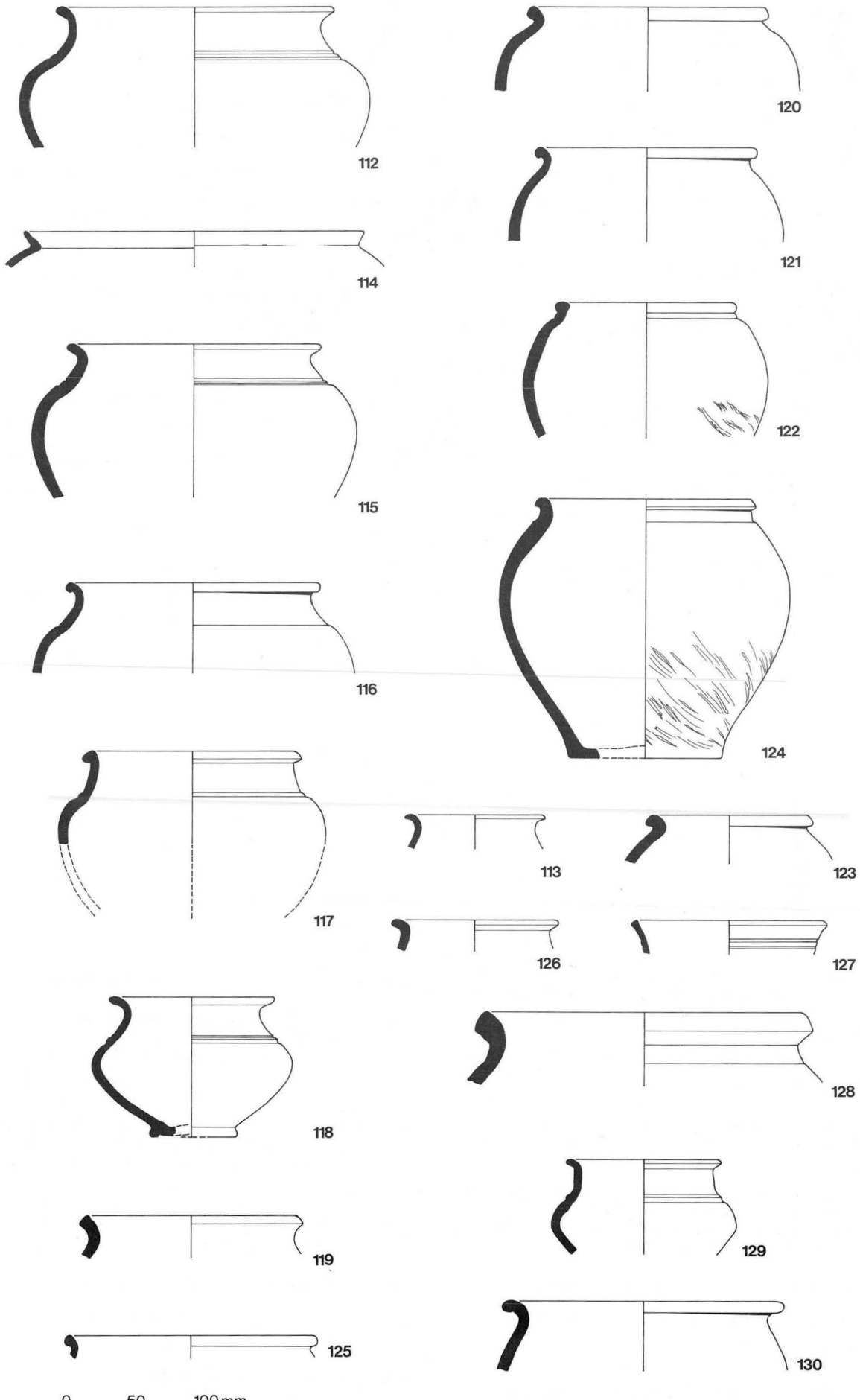

Fig. 21 Pottery: Nos 112-130. Scale 1:4

Fabric A

112 Round-shouldered jar, well burnished to girth level (cf. Nos 115-7). *II 4, 5 and 7*

113 Rim of a small jar or beaker. *III 3*

114 Everted and pointed rim of an ovoid or globular beaker, seemingly of exceptionally large diameter; but the sherd is small and could mislead. Burnished externally and inside lip. *I 4*

Fabric B

115 W/F or W/T jar, generally similar to No. 112. LPRIA. *II 4, 5 and 7*

116 W/F or W/T jar, generally similar to No. 112. LPRIA. *I 4*

117 W/F or W/T jar, generally similar to No. 112. LPRIA. *I 7*

118 Squat, round-shouldered jar, three-quarters complete; burnished to just below girth. *I and II, 4 and 5*

119 Jar rim with an angular lip. *I 4*

Fabric C

120 W/F Simple burnished jar, generally similar to Nos 155-8; used as a cooking pot. *II 4*

121 W/F Simple burnished jar, generally similar to Nos 155-8; used as a cooking pot. *I 4*

122 W/F Simple burnished jar, generally similar to Nos 155-8; used as a cooking pot. *II 7*

123 W/F Simple burnished jar, generally similar to Nos 155-8; used as a cooking pot. This is unique in the series insofar as it clearly displays a line on the inner edge of the lip where an external dark grey slip-coating terminates. There is no sign of burnishing over the slip. *I 4*

Fabric D

A few fragments of butt-beaker

Fabric E

124 W/F Jar with out-turned and pointed lip. The upper part of the body is wheel-finished, while the lower is knife trimmed and shows vegetable impressions in exactly the same way as is normally associated with Fabric C. Burnt and soot encrusted. *I and II, 4 and 5*

125 Rim of bowl or jar. *I 3*

Fabric G

126 Rim, probably of a butt-beaker. Body sherds in a similar fabric belong to a butt-beaker decorated with finely burnished lines in horizontal bands. *I 6*

127 Angular rim, with grooves below, from a pedestal beaker of Gallo-Belgic form (cf. Hawkes and Hull 1947, fig. 49, nos 3 and 7). *I 3*

Miscellaneous fabric

128 Storage jar in grey grog-tempered fabric; brown surfaces. *II 3*

Lids

Three body sherds from large grog-tempered storage jars appear to have been trimmed to make lids. Two are cut into roughly sub-circular form, *c.* 14 cm in diameter, and the third is sub-rectangular, *c.* 13 by 12 cm.

Roman pottery (Fig. 21)

129 Round-shouldered bowl, almost identical to No. 118, but in a fine, hard medium grey fabric containing only the occasional speck of grog. Although no trace of burnishing now survives it is likely that this vessel was once burnished. *II 7*

130 Everted-rim jar in reddish-brown fabric tempered with a small quantity of coarse angular sand. Dark grey surfaces. *III 3*

Flagon

Four fragments in creamy-white fabric, containing a few large flecks of pink grog; cream exterior, lightly burnished. Probably Colchester ware. *Layers 5 and 7*

A fragment of a grey-ware jar is probably fourth century. *Layer 3*

Briquetage

A single fragment of a briquetage vessel of the type made and used on 'red hills' was found in *layer 3*. The sherd measures 7 by 5 cm, by 1 cm thick; no finished edges. Usual vegetable-tempered fabric; pinkish-purple in section; pink-cream surfaces. For briquetage found on inland sites see Rodwell (1976b, 300).

Post-medieval pottery

A single sherd of black-glazed ware of seventeenth-eighteenth century date. *Layer 3*

Ditch CF101

From a 6 m length excavated on this modestly proportioned ditch came a suprisingly large collection of Belgo-Roman pottery. It contrasts markedly with the modest volume of pottery recovered from the adjacent 6 m lengths of ditches CF100 and CF102. The pottery comprises a large number of conjoining sherds which enable the reconstruction of substantial portions of more than fifty vessels. The full range of pottery found in this important group is illustrated here; the maximum number of vessels present was in the order of eighty. The pottery was all found in *layers 3, 4 and 5*, with a preponderance in *layer 5*. Sherds of any one vessel were commonly recovered from all three layers. It therefore seems reasonable to accept this material as a single, homogeneous group.

Early and Middle pre-Roman Iron Age pottery

Six small sherds in flint-gritted fabrics and one in a sand-tempered fabric were found. One of the sherds is from the shoulder of an EPRIA situlate jar.

Belgo-Roman pottery (Figs 22-6)

Fabric A (Fig. 22)

131-40: Round-shouldered jars. These are characterised by having a tightly rounded shoulder, a well-defined neck and out-turned lip. There is sometimes a rib or narrow cordon at the junction of the neck and shoulder. A very common type, *Cam* form 222.

131 Near complete upper part of body and rim burnished externally; turning striations below. Base and rim worn and chipped; pot-lid fractures all over the body; used as a cooking pot. *III 5*

132 Three-quarters complete; condition as No. 131. Where not damaged by burning, the burnished exterior is a rich glossy black, which was undoubtedly the intended finish for these vessels. *III 5*

133 Near complete; condition as No. 132, except for lack of sooting. Circular hole, 4 cm in diameter, in the centre of the base is probably an ancient feature. *III 5*

134 Rim and shoulder well burnished; traces of rough burnishing on lower parts. Badly flaked surface. *III 3*

135 Small surface lacunae; tiny fragments of shell visible in section show that a small amount of finely crushed shell was added as temper. *III 5*

136 Very finely crushed shell and grog tempering. *III 3*

137 Two sherds, probably of this form. *I 3*

138 As No. 137. *I 4*

139 This jar has been neatly cut off around the shoulder, presumably for re-use after the rim had been damaged. Badly burnt and discoloured. *III 5*

140 A well made miniature vessel; burnished externally to a point just below the girth. *III 3-5*

141-5: Thin-walled jars with out-curved rims, belonging to the series *Cam* form 218. The lip is often undercut; shoulder mildly emphasised by one or two wide but shallow cordons, which may be further enriched by burnished decoration.

141 Two-thirds complete. Very hard fired; rim and shoulder burnished, with a reserved zone on the cordon; decorated with burnished lines set in groups of three, in zig-zag formation. Turning striations visible on the lower part of the body. An oval hole *c.* 3.5 by 2.5 cm has been broken through the base in antiquity, using a pointed instrument. *III 5*

142 Generally similar to No. 141, but lacks base. Single burnished zig-zag line on reserved cordon. Badly burnt, discoloured and crazed. *III 4*

143 The decoration here is carried on a flattened area of the shoulder, above the cordon, and comprises a grid of burnished lines on a reserved band. *III 5*

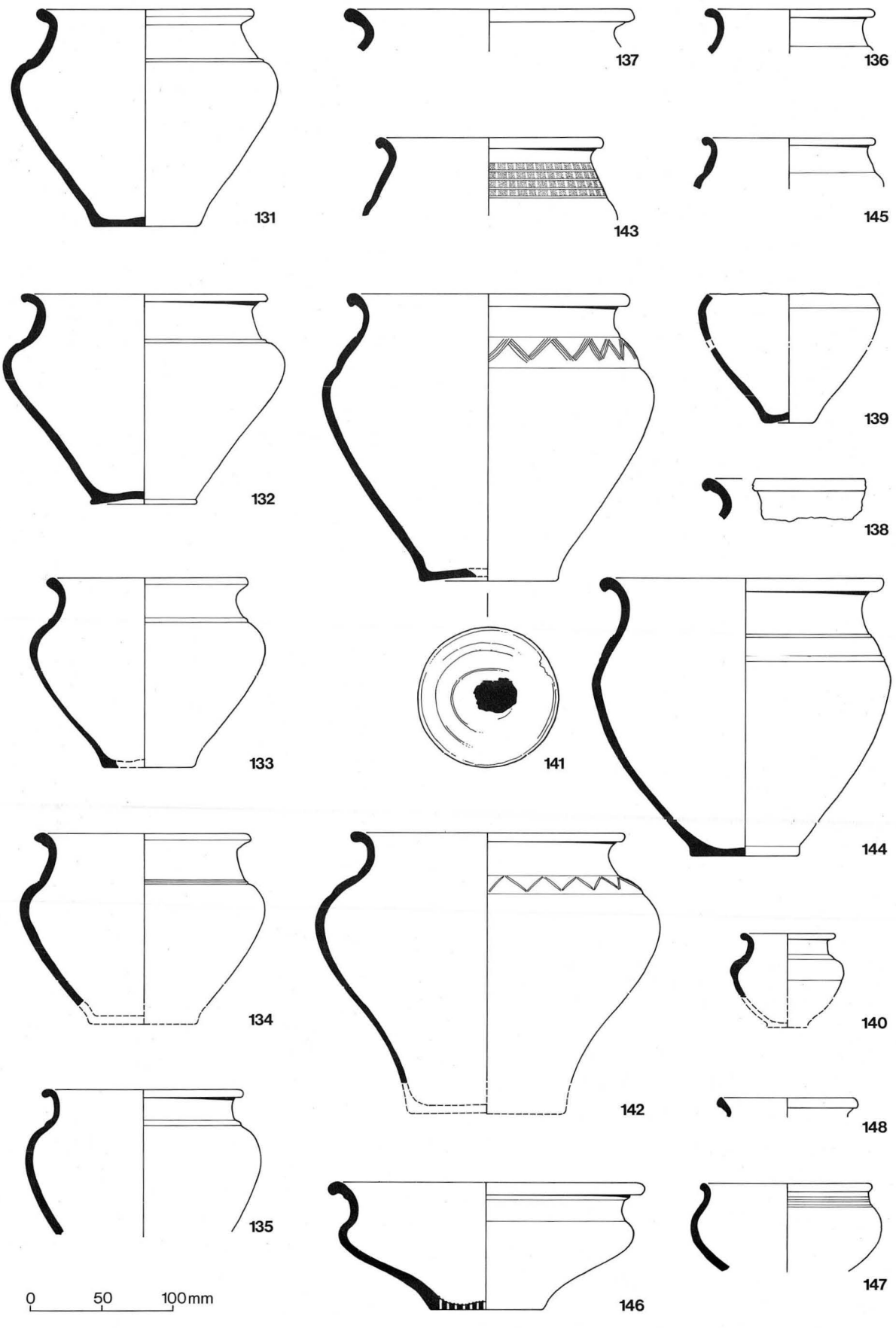

Fig. 22 Pottery: Nos 131-148. Scale 1:4

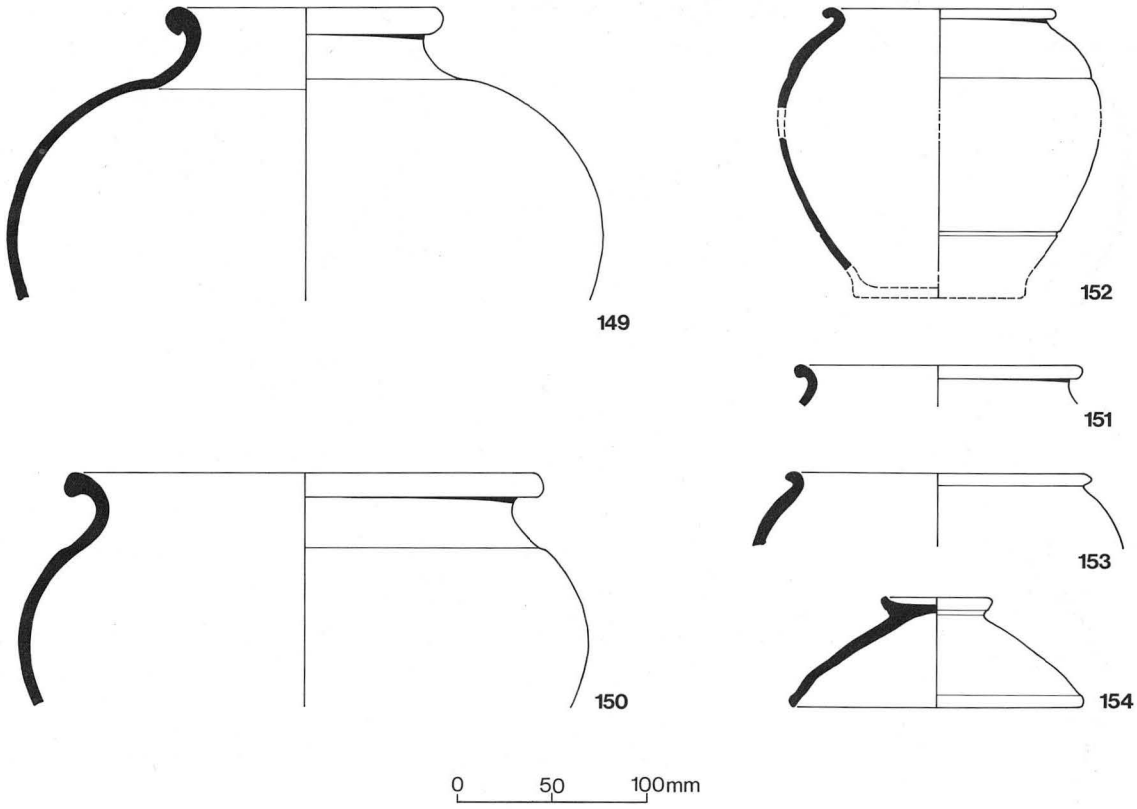

Fig. 23 Pottery: Nos 149-154. Scale 1:4

144 In addition to burnishing on the rim and shoulder, this vessel also has a band of burnishing near the base. Partly burnt. *III 3*

145 Rim of a small jar. *III 5*

146 Colander bowl. Half complete. Cavetto rim, wide mouth and tightly rounded shoulder; burnished to just below girth. Many holes 2 mm in diameter pushed through the base before firing, leaving rough burrs on the interior. *Cam* form 230. *III 5*

147 Small round-bodied bowl; lines scored around the shoulder; burnished to just below the girth. *Cam* form 48. *III 5*

148 Internally flattened rim of a beaker, probably a small butt-beaker. *I 3*

Fabric B (Fig. 23)

149 Narrow-necked jar with bulbous body. Rim and neck burnished down to shoulder groove; pimply below. Traces of surface vegetable matter on the lower surviving part (cf. Fabric C). A plain version of *Cam* form 231. *III 5*

150 Large jar with cavetto rim, burnished down to shoulder groove. Occasional flint grits and angular sand grains in fabric. *III 5*

Cam form 221

151 Rim of small jar; unburnished. Burnt. *II 4*

152 Jar with tightly out-turned rim; burnished over a slightly lumpy body. Many pot-lid fractures on surface. *III 5*

Cam form 259

153 Similar to No. 152. *III 5*

154 Lid. High domed; black burnished externally. Interior left as wheel-thrown. Much grey grog in fabric. Cf. Hawkes and Hull (1947, pl. LXXXV, nos 3 and 4). *III 5*

Fabric C (Fig. 24)

155 Half complete jar with simple out-curved rim. Upper half of vessel wheel-finished; dark grey pimply surface; lower part knife trimmed, with striations running in different directions. The surface here appears to have been wiped with, or wrapped around by, grass; the striated markings on the surfaces of individual blades can clearly be seen. Marks on the base of the pot show that it stood on a bed of vegetable matter whilst drying. Exterior is soot-encrusted and has pot-lid fractures. *II 4 and 5*

Cam form 260

156 Upper half of jar similar to No. 155. *II and III, 3-5*

157 Half complete jar with everted rim and beaded lip. Fabric exceptionally coarse and the lower part is covered with markings of deeply impressed vegetable matter; partly burnt. Variant of *Cam* form 260. *III 5*

158 A smaller version of No. 157. Wheel-finished on rim and shoulder; clear signs of knife trimming and vegetable impressions on lower part of body. *III 5*

159-61 Rim fragments of large jars; two burnt. *III 5; I 3; I 3*

162 Three-quarters complete. Jar with beaded rim and body decorated with shallow rilling produced by a four-toothed comb. Simple cross scored on base before firing. Upper part wheel finished; lower part knife trimmed and marked with vegetable impressions. *Cam* form 260A. *III 3-5*

163 Jar with beaded and undercut lip. *III 3 and 4*

164 Rim of a large shouldered jar with extremely thickened lip. Distorted in firing; ?W/F. *III 5*

165 Necked jar with hooked rim. Wheel thrown, but with clear marks of vegetable wiping on lower part of body. Patchily burnt. *Cam* form 266A. *II and III, 3-5*

166 Small jar with hooked rim. Variant of *Cam* form 259. *III 5*

167 Rim of shouldered jar; burnt and abraded. *I 4*

168 Small jar or beaker with slack profile. Few small surface lacunae; pimply surfaces. *Cam* form 256. *I 3*

Fabric D (Fig. 25)

169 Jar of similar form to No. 144. Hard-fired fabric; originally dark grey and burnished externally, now burnt red in part. *III 5*

170 Platter with residual footring, derived from late Gallo-Belgic forms; unstamped. Small surface lacunae indicate a former tempering of crushed shell; burnished medium grey all over. *Cam* form 26A. *III 5*

171 Small ovoid beaker with slack profile. Black, highly burnished exterior. *Cam* form 256B. *III 5*

Variants of Fabric D imitating Gallo-Belgic wares

172 Two-handled flagon; neat triangular rim. Surfaces both fired reddish-brown; exterior coated with cream slip and finely burnished; now badly abraded. This is a good British copy of the white Gallo-Belgic flagon *Cam* form 161 (see also Hawkes

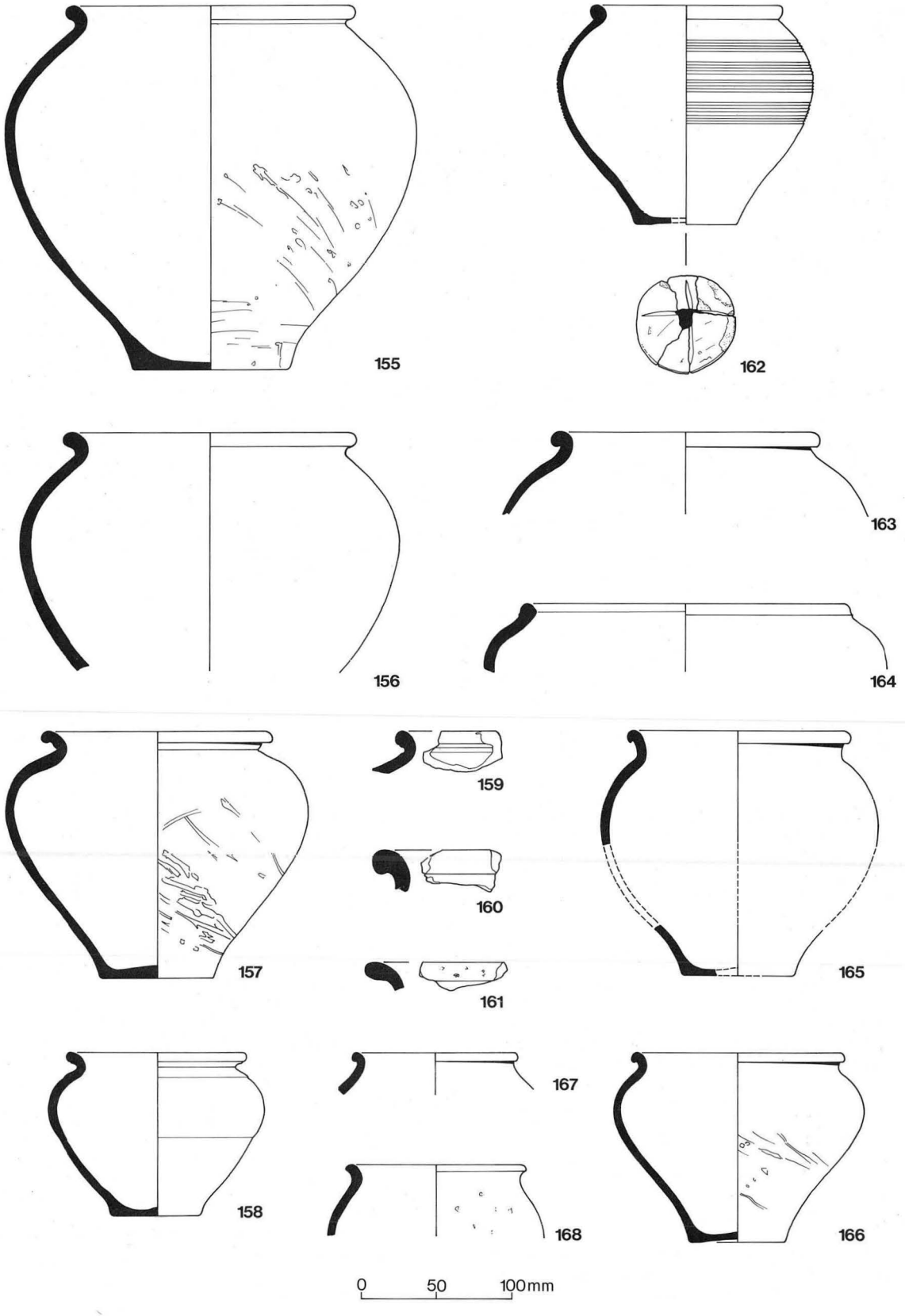

Fig. 24 Pottery: Nos 155-168. Scale 1:4

and Hull 1947, 248, form 165). *II 5*

173 Squat, two-handled flagon with triangular rim. Surfaces fired reddish-brown, and showing very fine shell lacunae; exterior lightly burnished. The burnishing lines are very pronounced and run horizontally around the body and vertically on the handles. A British version of terra rubra (TR 4); the type is related to *Cam* form 167, but the body of our example is unusually small. *III 5*

174 Wide-mouthed beaker. Dark grey fabric containing only a little grey grog and fine sand. Surfaces fired reddish-brown, interior left as wheel thrown; exterior and rim very highly burnished. A British version of terra rubra (TR 4). The form indicates a large bipartite pedestal beaker related to the range *Cam* form 75 to 77. The hammerhead-like rim is a distinctive feature of some of these vessels; e.g. cf. Hawkes and Hull (1947, fig. 49.5). *II 4 and 5*

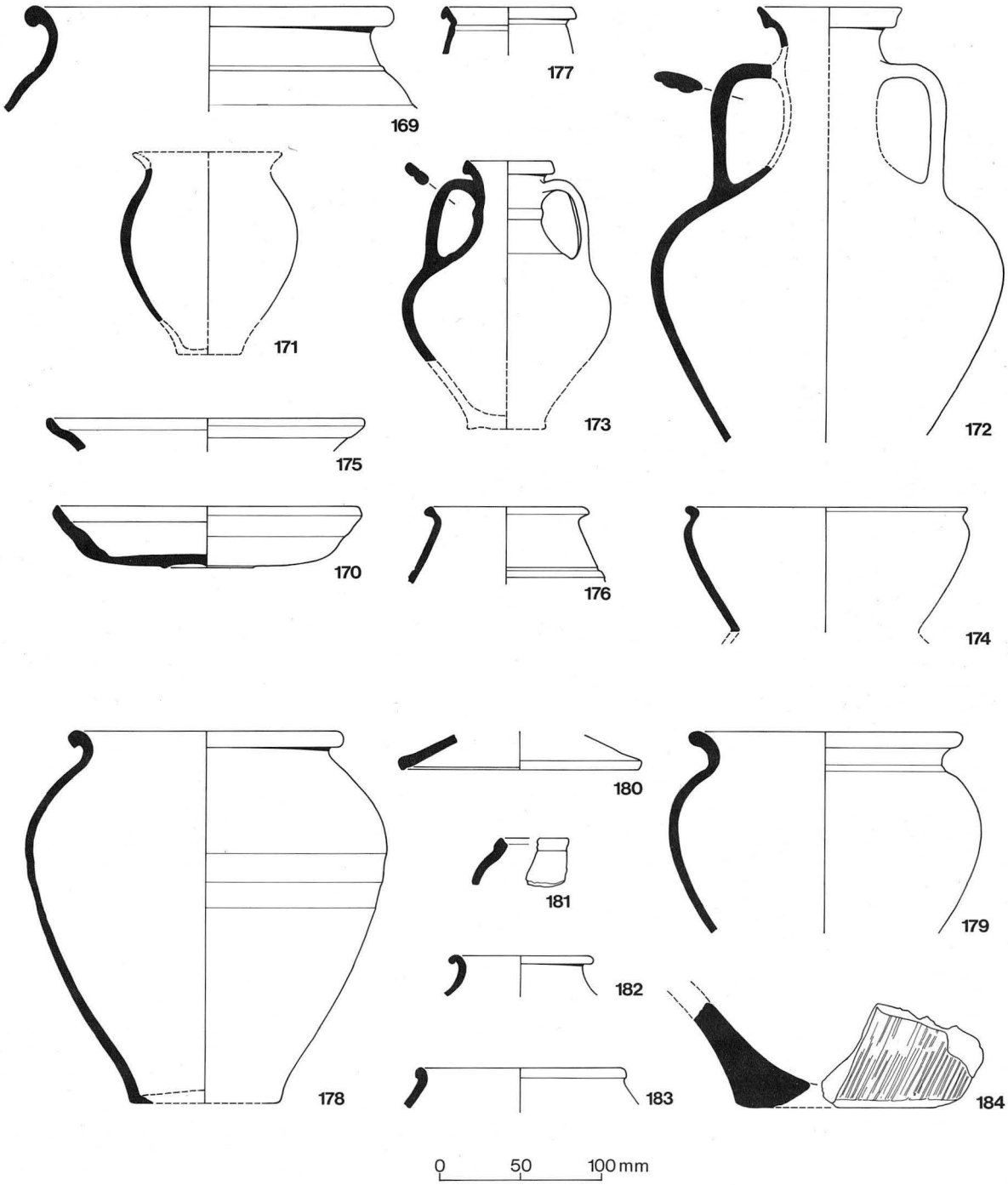

Fig. 25 Pottery: Nos 169-184. Scale 1:4

175 Rim of platter in soft grey fabric, without grog-tempering. Orange-brown surfaces; possibly roughly burnished internally. British copy of terra rubra (TR 4). *Cam* form 27. *II 5*

176 Rim of butt beaker. Reddish-brown surfaces; highly burnished externally and inside lip. British copy of terra rubra (TR 4). *Cam* form 115. *III 5*

Terra rubra

177 Rim of butt-beaker. Very fine reddish-brown fabric, with grey core; finely burnished externally; traces of cream slip on interior. TR 3 fabric; probably *Cam* form 112. *II and III, 3-5*

Fabric E

178 Hooked-rim jar; brown-grey surfaces, sooted. Cf. *Cam* forms 259-260. *II 5*

179 Cavetto-rim jar. Dark grey surfaces, sooted. *Cam* form 221. *II 5*

Fabric F

180 Lid. Surfaces hard, pimply and unburnished. *I 3*

Fabric H

181 Lid-seated jar. Black crumbly fabric, once shell-tempered but now vesiculated. *III 5*

Miscellaneous fabrics

182 Small jar with undercut rim. Light brown fabric with fine sand-tempering and occasional large grits. Traces of former burnishing. *III 3*

183 Jar rim. Reddish-brown sandy fabric with pimply surfaces. *III 4*

184 Base angle of large storage jar with rough external combing. Dark grey fabric with some sand and much grog. Patchy black-brown surfaces. *III 5*

Roman pottery (Fig. 26)

185 Narrow-necked jar with a very slight shoulder cordon; hard, grey sandy fabric. Dark grey surfaces with burnished zones on the rim, neck and shoulder, and near the base; burnish lines very pronounced. Probably third century. *II and III, 5*

186 Large storage jar in hard, reddish-brown fabric, tempered with

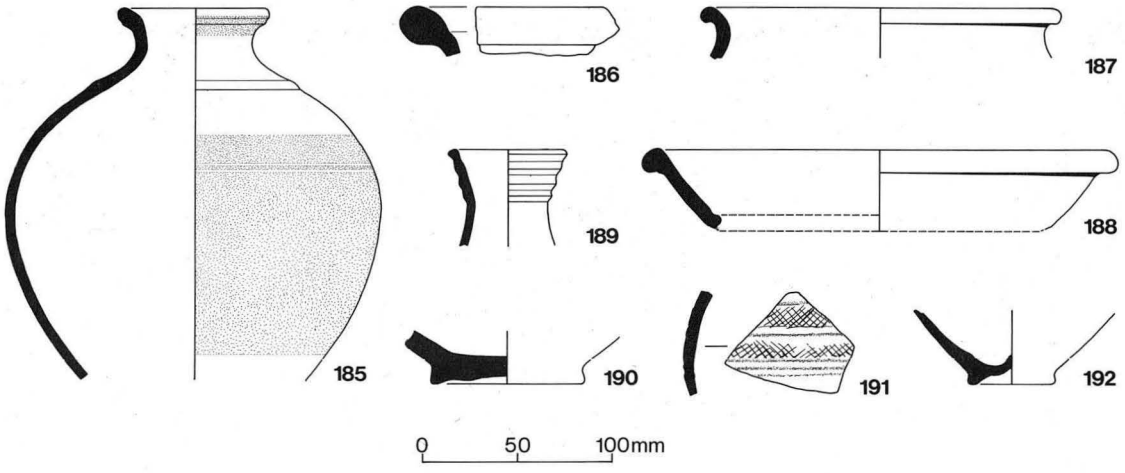

Fig. 26 Pottery: Nos 185-192. Scale 1:4

much fine sand. Dark grey surfaces with slight traces of burnishing on top of rim. *III 4*

187 Cavetto rim in hard, grey sandy fabric. *II 3*

188 Small sherd of bead-rim pie dish. Hard brown-grey fabric containing some fine sand. Black burnished surfaces. Late second or third century; Mucking type B (Jones and Rodwell 1973). *I 4*

189 Ring-neck flagon. Fine cream-buff fabric; burnt, crazed and sooted. Colchester ware; *Cam* form 154. *I 3*

190 Flagon base. Although rather thick, it could belong to No. 189; identical condition. *II 5*

191 Sherd in soft cream fabric with pink-orange core; decorated with two bands of crude diamond rouletting. Identical condition to Nos 189-190, but presumably from the shoulder of a jar of 'honey pot' type; e.g. cf. *Cam* form 175. Colchester ware. *III 4*

192 Flagon base in cream-buff fabric with pinkish core; surfaces were possibly cream slipped; badly flaked by weathering. Although a somewhat unusual vessel with a markedly dimpled base, there is no reason to suppose that it is other than a Colchester flagon. *III 5*

Not illustrated: Several sherds of Romano-British grey sandy wares; sherd of a grey rouletted beaker of the second or third century; two sherds of flint-tempered grey ware of 'Rettendon type', late third to fourth century (Drury 1976b).

Amphorae
Six sherds of one or more amphorae of South Spanish fabric, probably Dressel form 20). *Layers 3 and 4*

Samian
Rim, form 15/17, South Gaulish, high gloss. Pre-Flavian, and probably Neronian. *Layer 3*

Roman brick
Several fragments of red brick. *Layer 3*

Ditch AF4

This ditch is stratigraphically later than AF1 and contained material which was obviously derived from the earlier ditch.

Early and Middle pre-Roman Iron Age pottery
One flint and three sand-tempered sherds. Layer 3

Late pre-Roman Iron Age and Belgo-Roman pottery (Fig. 27)
With the single exception of No. 201, the illustrated material was all recovered from *layer 3* in segments I and IV. The same layer contained Roman and post-medieval material. A few crumbs of LPRIA pottery were also found in segment III, *layers 3 and 4*.

Fabric A

193 W/T Jar, dark grey surfaces, burnished on upper part. Similar to Nos 131-4. A hole has been drilled through the centre of the base. *IV 3*

194 As No. 193.

195 As No. 193.

196 W/T Simple carinated cup; worn. This type with the outward leaning wall does not appear to be represented at *Camulodunum*, but, like several small vessels noted above (Nos 60 and 78), it features in grave groups in Belgic Gaul (cf. Birchall 1965, figs 30.244 and 34.294). *IV 3*

Fabric A/B

197 Cavetto-rim jar. Dark grey exterior, slipped and burnished on rim; burnished lattice on cordon. *Cam* form 218Ac. Pre-Flavian or early Flavian. *I 3*

Fabric B

198 W/T Jar rim. No evidence of burnishing. *I 3*

Fabric C

199 W/T Very large bowl. *Cam* form 230. *IV 3*

Fabric D

200 W/T Dark grey surfaces; burnished internally; exterior left rough and wipe-marked; worn footring. *Cam* form 28. Another sherd was also found in ditch AF1, V 3. *I 3*

Fabric E

201 H/M Black and crudely burnished exterior. LPRIA. *III 4*

Fabric F

202 W/T Plain jar in variant of Fabric F; burnt and in a poor state; vegetable impressions on lower part of body (cf. Fabric C). *I 3*

203 W/T Lid. Reddish-brown surfaces, somewhat excoriated. *I 3*

Miscellaneous fabrics

204 W/T Jar rim in dark grey, grog-tempered fabric; brown-grey surfaces; burnished externally. LPRIA. *IV 3*

205 W/T Very large storage jar. Hard, brown grog-tempered fabric; brown surfaces, burnt. *IV 3*

206 Similar to No. 205; coarsely burnished rim. *IV 3*

Roman pottery *(Fig. 27)*
A few undistinguished sandy sherds were found in *layer 3*.

207 Small jar. Dark grey sandy fabric. First century. *I 3*

208 Rim of flask or jar. Dark grey sandy fabric, once slipped and burnished, now abraded. *I 3*

209 Base of jar. Very coarse, grey sandy fabric. Probably late Roman. *IV 3*

Samian
Small decorated fragment of South Gaulish ware, form 29 or 37. Pre-Flavian or early Flavian. *I 3*

Post-medieval pottery and tile
Brown-glazed sherd, seventeenth-eighteenth century. *IV 3*

Other features

The remaining features on the site produced very few finds; they are described briefly below:

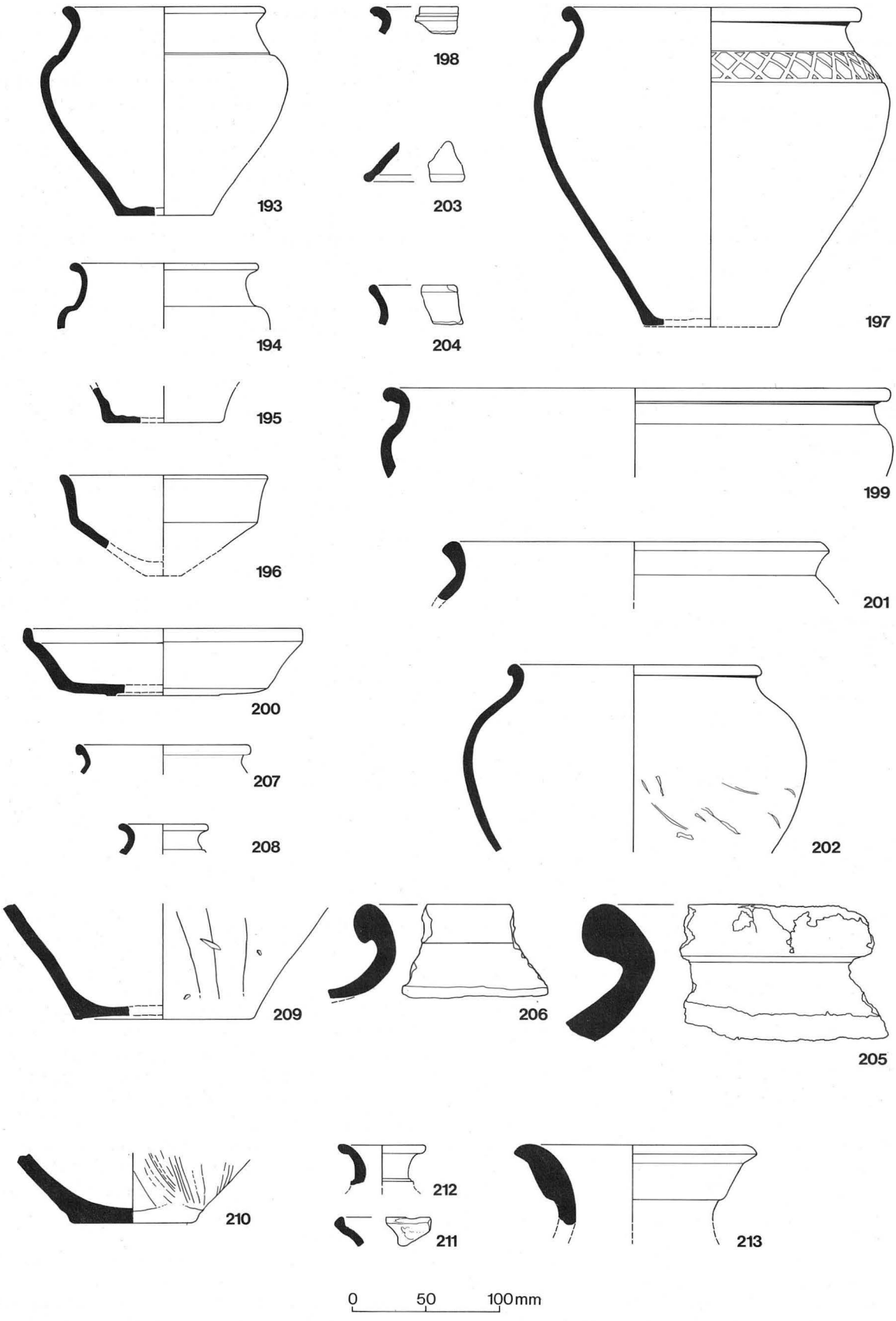

Fig. 27 Pottery: Nos 193-213. Scale 1:4

Gully AF6

Layer 3 yielded one fresh and two abraded sherds of flint-gritted pottery, probably EPRIA, and a few crumbs of LPRIA ware.

Slot AF7

One sherd of flint-gritted ware. *Layer 3*

Slot AF8 (Fig. 27)

210 H/M Base of jar in Fabric E; dark reddish-brown surfaces with wipe-marks. *LPRIA II 3*

Not illustrated: H/M sherd from the lower part of the wall of a barrel-shaped pot, *c.* 20-24 cm diameter. Black ware, reddish-brown surfaces; fairly hard; tempered with a sparse quantity of finely crushed flint grit and a few larger lumps. Date uncertain, possibly pre-Iron Age. *II 3*

Post-hole AF12

One MPRIA sherd.

Post-hole AF14

One LPRIA sherd.

Post-hole AF16

One sherd of EPRIA flint-gritted fine ware.

Post-hole AF17

Three sherds of flint-gritted ware, one fresh the others abraded.

Post-hole AF19

Two flint-gritted sherds, probably MPRIA.

Post-hole AF30 (Fig. 27)

One sherd of EPRIA coarse flint-tempered ware in a reddish-brown fabric; similar to pottery from Rivenhall, assigned to the fourth century BC.

211 W/T Rim of platter in Fabric A. *Cam* form 28. LPRIA.

Post-hole AF38

One flint-gritted sherd.

Ditch BF200 (Fig. 27)

Finds from segments I, II and III comprise a few small sherds of LPRIA wares, and five crumbs of flint-gritted pottery, one of which may be Neolithic or Bronze Age. All are probably residual in their contexts.

212 Neck of Romano-British flask; medium grey sandy fabric, heavily burnt and crazed. Probably late second or third century. *Layer 4*

Gully BF210

Finds from segments I to IV comprise some 30 crumbs of EPRIA and MPRIA wares, and five of the LPRIA. The only sherd of recognisable form is the base of a butt-beaker in 1 R 4 fabric, which has been reconstructed as part of vessel No. 97. *III 4*

Ditch CF103

A few Romano-British sherds, including one of 'Rettendon' type ware, and some eighteenth-nineteenth century sherds were found in *layer 3*. A slither of pale green glass from the same context could be Roman.

Post-hole CF116

One burnished, flint-gritted sherd: EPRIA fine ware.

Topsoil finds (Fig. 27)

A small quantity of material was recovered from the topsoil and subsoil, comprising sherds of Iron Age (all periods), Romano-British (including late colour-coated wares) and post-medieval wares. Only one piece is of intrinsic interest:

213 Rim of amphora. Cream fabric, now burnt and heavily abraded. *Cam* form 186A. This has a long history, from the late first century BC, at least to the middle of the first century AD. Made in Southern Spain (Peacock 1971, 168-170). *Topsoil, Trench B*

Discussion and dating

Only one feature can be assigned to an early prehistoric date on the basis of the pottery; pit CF105, which is clearly Late Neolithic. A few sherds of similar date, all poorly preserved, were derived from Iron Age features. Scattered throughout most of the excavated area were small sherds of flint-gritted pottery which belong mainly, if not wholly, to the early and middle phases of the Iron Age. None is diagnostically Bronze Age (but cf. No. 69), and only one illustrated piece is characteristic of the EPRIA (No. 70). The remainder is essentially undatable. The flint-gritted sherds are all small and well abraded and, possibly with the exception of finds from one or two post-holes, are most likely to be residual in the contexts in which they were found. The use of coarsely crushed flint as a tempering medium seems to have died out in Essex before the end of the MPRIA.

Sand-tempered wares, which are diagnostic of the MPRIA, and which constitute the great majority of the pottery of that period at sites such as Little Waltham, Ardleigh and Witham, were found in small numbers in several features at Woodham Walter (Fabric E). This pottery (Nos 71, 72, 83, etc.) is evidently residual except in one context, ditch AF1, where it occurred in sufficient quantity to be worthy of consideration as part of a group. Vessel Nos 3 to 25 are all from the later fills of this enclosure ditch; layers 3, 4 and 5, with one vessel, No. 13, from layer 6. About half of the sherds present are small and abraded, and cannot be accepted as contemporary with the bulk of other wares contained in this group. In general terms the collection, which has close affinities with Little Waltham (Drury 1978a) and Ardleigh (Erith and Holbert 1970), may be assigned to the third and second centuries BC. The same layers in AF1, however, which yielded sherds of Fabric E also contained a considerable quantity of grog-tempered wares (Fabrics G and D) and some hybrids. Vessels which are generally closely related to MPRIA wares in form and decoration are found in Fabric G (Nos 26-39), but so too are several jars of markedly different type, principally the pedestal urns (Nos 40-43). Vessels in Fabric D, the finer of the grog-tempered wares, are totally unrelated to Fabric E wares. Vessels of Fabric D are typical of what is usually called 'Belgic' pottery, and display features such as neatly formed rims, pedestal bases, defined shoulders, corrugations, etc. In summary, pottery grouped under Fabric G may be seen as bridging the gap between the common range of MPRIA types and the fully developed LPRIA wares. The 'progression' is demonstrated not only in form, fabric and decoration, but also by techniques of manufacture. All Fabric E wares are hand-made, although a few appear to have been wheel-finished. Fabric G wares include a few wheel-thrown pieces, although many of the hand-made vessels were wheel-finished; finally, all Fabric D wares seem to be wheel-thrown.

The pottery in miscellaneous fabrics (Nos 54-67) comprises a mixture of MPRIA and LPRIA types. Prominent amongst these are the fragment of dimpled (curvilinear) pottery and the burnished footring bowls of Thames-side type. In crude terms, about half of the pottery from feature AF1 finds close parallels in MPRIA groups in Essex, while the remainder has its affinities with LPRIA wares. This is thus a particularly important group for the transitional phase, if we accept that it is essentially one deposit and not a mixture of two. It is reasonable to

propose that this deposit was laid down during the period in which both hand-made and wheel-thrown wares were current. We have already noted that some of the earlier wares are likely to be residual, but even so this leaves a wide range of types in the assemblage, and one may suspect that this deposit contains pottery whose dates of manufacture ranged over one or two generations.

The dating of pottery of the Middle to Late Iron Age is still notably imprecise, but comparison with other local groups is instructive. Most important in this connection is Little Waltham, where vessels in grog-tempered fabrics are very few in number and confined to the later periods in the settlement (essentially period IV; Drury 1978a, table 10). The same mixture of fabrics is present in the latest period at Little Waltham as appears in the earliest Iron Age phase at Woodham Walter. By analogy, a date in the first half of the first century BC is thus indicated. The date of deposition may well be towards the middle of the century, rather than the beginning. The pottery from AF1 appears to be contemporary with that from some of the earliest Iron Age features at Kelvedon (K.A. Rodwell forthcoming), while it is fractionally later than the Witham material (Davison, Petchey and Rodwell in prep.), which, although it is supposed to have had class I potin coins in association, nevertheless is deficient in grog-tempered wares.

There are some significant differences in the composition of the main pottery groups so far assigned to the first century BC in Essex, which may reflect local variations in ceramic production and distribution, or, more likely, chronological differences. Thus, for example, vessels like Nos 26 and 27 occur at Wickford (unpublished), Kelvedon (K.A. Rodwell forthcoming), Great Chesterford (unpublished) and Braughing, Hertfordshire (Partridge 1981), but not at Little Waltham, Witham or Ardleigh. They are rare on the Sheepen site at *Camulodunum* (Hawkes and Hull 1947), and were probably residual in period I contexts (*Cam* form 363). Since the type is generally widespread (Rodwell 1976b, fig. 16, esp. nos 14-21), its absence from a particular group is likely to be a chronological indicator. Another example, taken from the reverse viewpoint, is the absence from Woodham Walter of high pedestal jars (*Cam* form 204: cf. Ardleigh; Birchall 1965, fig. 15.125 and 126), high pedestal bowls (*Cam* form 210: cf. Shoebury; Birchall 1965, fig. 16.136 and 137) and small carinated bowls with concave walls and cordons (*Cam* forms 211 and 212). These vessels are so common in groups assigned to the middle and later phases of the Aylesford-Swarling culture that their absence from Woodham Walter is most striking. It is almost inconceivable that if ditch AF1 were filled during the post-Caesarian period it would fail to yield some of these common vessels. It has been noted that the pottery from feature AF1 is derived almost entirely from layers 3, 4 and, to lesser extent, 5; there is a risk of intrusive material, particularly in layer 3. That this layer does contain intrusive material is amply clear from the occurrence in it of about twenty small, abraded sherds of Roman date. Nor is contamination of this sort confined to ditch AF1; all the other major ditches on the site have yielded similarly intrusive material; some of it is post-Roman. This is a common enough phenomenon in the uppermost layers of large features which are liable to sinkage and which attract worms and burrowing animals to their soft, humic fills. In the context of Woodham Walter the only point of significance to note is that the major pottery groups have this slight element of contamination. Fortunately, it is not difficult to detect and it can be taken fully into consideration.

Returning to the dating of ditch AF1 proper, no pottery was recovered from the lowest layers, and that from the middle of the ditch is exclusively MPRIA (Nos 54, 55 and 59). The three vessels in question are in miscellaneous fabrics, and not in those common to most of the pottery from the upper fills. Nothing in the middle layers of the ditch need post-date the second century BC.

The much larger, multiple-ditched enclosure to the west of feature AF1 was sectioned on two sides, providing several groups of pottery for comparison (i.e. the groups from features AF2, AF3, CF100, CF101 and CF102). The illustrated pottery from the inner ditch AF3, came from layers 3 to 5, which may be assigned a date towards the middle of the first century AD on account of the Belgo-Roman wares. The lower levels of the ditch yielded very little: the MPRIA base (No. 72) and a few crumbs which are probably LPRIA.

The outer ditch on the east side (AF2) yielded LPRIA and Belgo-Roman pottery in all layers, and a date around the time of the Roman conquest is not in doubt.

On the west side of the larger enclosure the innermost of the three ditches which were sectioned (CF102) yielded only a handful of sherds which are impossible to date closely, but none need be later than the mid-first century BC.

The third ditch on the west (CF101), produced finds indicating a date around the middle of the first century AD for layers 3 to 5.

A detail which suggests contrast is in fabric variations: thus most of the Fabric B vessels in CF100 are of forms which are only represented in Fabric A in CF101. Fabric A is the more 'Romanized' of the two and may suggest that the deposit in CF101 is slightly later than the remainder of the debris in the other enclosure ditches.

That deposit is not only a large and intrinsically interesting collection of pottery, but also provides a *terminus ante quem* for the several phases of the larger enclosure. With a few minor exceptions, the pottery from CF101 is an homogeneous group of domestic wares of the mid-first century. The functional composition of the group is as follows: 65% jars of various kinds, 25% table wares, and 10% special purpose wares. Half of the jars show evidence of burning or soot encrustation and were clearly used as cooking pots, although some of the finer examples are unlikely to have been made with that use in view (e.g. No. 142). Of the table wares — platters, beakers and flagons — two-thirds may be described as medium fine, and the remainder as fine. The special purpose vessels comprise two jars, each with a central hole in the base, and of uncertain use (possibly beehives), a miniature jar, a colander, two lids for cooking pots, and an oil amphora.

The amount of wear on the rims and bases of some vessels shows that they are likely to have been in use for a few years, at least. In general, this group may be seen as probably representing a typical collection of domestic kitchen and table wares, with the greatest number of breakages amongst those vessels which received the roughest treatment (but see also below).

Before discussing the date of the group, it is necessary to note that a handful of small, generally abraded, sherds of

Roman grey sandy wares, two 'Rettendon type' sherds, a flask neck (No. 185) and a pie-dish rim (No. 188) must all be rejected as intrusive. None of these is earlier than the late second century, and indeed all may be considerably later.

To support the dating suggested earlier several points require discussion. First it will be noticed that there are no specifically LPRIA vessels in this group. The bulk of the pottery is in what used to be termed 'Romanizing' fabrics and forms, here called Belgo-Roman. The fine wares, which generally lasted longer in use than coarse wares, include a few pieces, notably the terra rubra, which were produced before the conquest. Equally, some of the fine wares are undoubtedly post-conquest, in particular the samian and the cream flagons.

The bulk of the coarse wares find parallels of pre-Flavian date at *Camulodunum* (Hawkes and Hull 1947), and in the military ditch at Kelvedon (Rodwell forthcoming): extensive comparison here would be tedious and unnecessary. Attention may also be drawn to some of the less common sherds. The ledged-rim cooking pot in Fabric H (No. 181) seems, on evidence from other sites in Essex, to have been an introduction of the Claudian period. It is commonly found in southern Essex, particularly on sites in the Thurrock area (Jones 1972); it is moderately frequent in pre-Flavian levels in Chelmsford (P.J. Drury, pers. comm.), and occurs only rarely on sites further north. The two pottery lids in this group are of a type which first appears in the pre-Flavian period. One, No. 180, is in Fabric F, which is not common in central and northern Essex, but is ubiquitous on Thames-side in the pre-Flavian and early Flavian periods (especially on Canvey Island; Southend Museum, unpublished). The colander, No. 146, is a distinctive pre-Flavian bowl form at Colchester (*Cam* form 230).

An upper date limit for the filling of CF101 has, of necessity, to be inferred largely from negative evidence: the small number of specifically Roman forms and fabrics, the scarcity of samian and of lid-seated jars. These and other factors, such as the exclusive use of zig-zag lines for shoulder decoration as opposed to wavy lines (cf. Nos 141-2), all indicate a pre-Flavian date.

In summary, it is suggested that most of the pottery from ditch CF101 was manufactured during the period *c.* AD 40-60 and was deposited by or very soon after the latter date. It may be noted in passing that it is unusual to find such a large number of freshly broken vessels in a domestic rubbish deposit in a ditch. It is worth observing that they might be taken as a calamity rather than simply being casual breakages.

It has already been noted that the rubbish deposits elsewhere in the ditches of the larger enclosure are slightly different: there is a higher proportion of LPRIA to Belgo-Roman wares; there is no samian or other Roman pottery (such as flagons) found in association. It is thus probable that the enclosure ditches were largely filled up — and hence presumably out of use — by *c.* AD 40-50.

The dating of other excavated features can only be tentative, owing to the small quantities of finds which they yielded. Ditch AF4 probably originates in the later first century. The linked series of square enclosures examined in Trench B are datable with least certainty. If one accepts rim No. 212 as relevant, then a mid or late Roman date is implied, all other finds clearly being residual.

This report was written in 1978.

IV Fired Clay

by Hilary Major

Pieces of fired clay came from layers 1 and 2 of Trenches A, B and C, and from the LPRIA/RB ditches AF1, AF2, AF4, CF100 and CF101. The majority of contexts produced only small abraded pieces with the exception of AF1 from segments I, III, V, layers 1 to 12, from which came some 50 kg.

The fabric of most pieces is particularly sandy. Samples from AF1 III 4 and 12, and AF2 IV 4 were analysed by John Evans. He reports that they have a fairly homogeneous appearance and contain no vegetable inclusions. Emission spectroscopy showed the usual range of earth elements but with somewhat stronger lines for sodium, potassium and phosphorous than normally expected.

Quantitative analysis of these three elements gave levels of several percent, which were far higher than expected in Essex clays. Extraction of the daub by solvents of varying polarity yielded a few milligrams of organic material that gave ultra-violet and infra-red spectra similar to those of uric acid. It would appear that the daub was made by mixing the clay with urine or dung. The absence of vegetable matter does not necessarily preclude dung, as daub is not always homogenously mixed.

Many of the larger pieces from AF1 contain wattle impressions. Those from contexts AF1 I 3 and 4 are generally vertical with impressions of interwoven wattle being rare, whereas from contexts AF1 III 6, 7 and 8 traces of interwoven wattling are more common. This may indicate that the daub came from different structures suggesting either a change in wattling technique, different contemporary wattling techniques, or that the fired clay came from different types of structure for which different wattling techniques were used.

It is tempting to see the fired clay deposit from AF1 III 3, 4 and 5 as being derived from the demolition and clearance into the ditch of structures located within the interior of the sub-rectangular enclosure. However, Barton (1977, 351) has noted that to achieve a sufficient temperature to convert clay into a ceramic there should be a fairly continuous period of baking sufficient to make this product into a cohesive lump, this temperature being greater than that likely to be reached by an upright burning hut. He suggests that surviving fired clay is not wattle and daub in the accepted sense, but more likely to be a part of some structure such as an oven or a suspended firehood, or the result of some industrial activity. An alternative suggestion, deriving from the fact that many of the pieces are reduced on the surface, is that the structure collapsed and continued to burn 'bonfire fashion' for a prolonged period thereby achieving the required high temperature. The function of the sub-rectangular enclosure and the possibility of an industrial phase are discussed above.

V Crucible Analysis

by John Evans

Crucible (Fig. 15, No. 13): the vessel is described on p. 22. Samples of the fabric were removed from both the inner and outer surfaces. These were analysed qualitatively by emission spectroscopy. The data obtained indicated that the crucible may have been used for some process

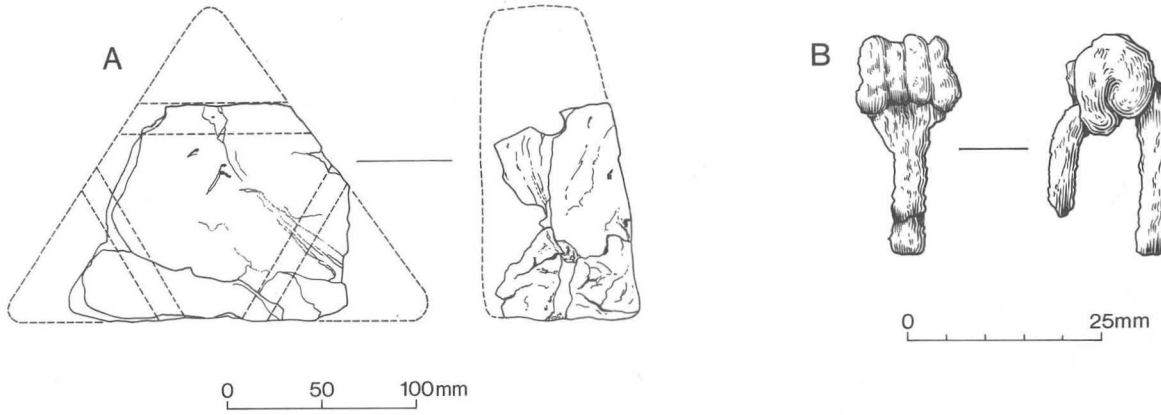

Fig. 28 Triangular loomweight (scale 1:4) and iron brooch (scale 1:1)

involving bronze, but the presence of sodium (and possibly boron) strongly argues that it was more likely used for enamel/glass preparations of some sort. *AF1 III 6; M/LPRIA*

VI Loomweights (Fig. 28)

by Hilary Major

Loomweights have been found on many Iron Age sites and cannot be closely dated. A provisional distribution map of Essex sites which have produced triangular weights has recently been published (Priddy 1982a, 117-122).

Fig. 28.A Triangular loomweight: brown; coarse vegetable-tempered fabric. *AF101 III 5: LPRIA/RB*

Not illustrated: Further fragments of triangular weights from contexts *AF1 I 3* and *III 11*, *AF100 II 4*, and possibly *AF47*.

VII Tile

by Hilary Major

Tile was present in the ploughsoil of both Brook Field and the Little Acre Bit Field in some quantity. A representative selection was collected from Trenches A, B and C. Tile was also present throughout ditch *CF103* and in *layer 3* of LPRIA/RB ditches *AF2*, *AF3*, *AF4*, *CF100* and *CF101*. Except for a single piece of Roman tile from Trench B, all appeared to be late medieval/post-medieval in date and intrusive to the upper fills of earlier features.

VIII Objects of Iron (Fig. 28)

by Hilary Major

Iron objects, principally nails, were collected from layers 1 and 2; these proved to be modern, as did objects from ditch CF103, and merit no further comment. Nail fragments also came from LPRIA/RB contexts *AFI III 3*, *CF1OO II 5* and *CF101 I 4*.

Fig. 28.B Brooch: safety pin type, only part of the spring and bow are present. The late M.R. Hull kindly commented upon this object: 'The fragmentary iron brooch which was found in layer 3 of ditch AF1 is more likely to be associated with the main deposit of pottery than to be a Roman-period intrusion. It is unfortunate that the brooch has the foot missing and that it was such a long-lived type. Some of the closest parallels to the example from AF1 are, however, from the first century BC; for example, Swarling grave 4, which Birchall (1965, 248, fig. 1.8) places in her 'early' group. There is some reason to believe that, in Essex at least, iron brooches of the 'safety pin' type had been superseded by the beginning of the first century AD.' *AF1 III 3; LPRIA*

Part 4
The Environmental Evidence

I The Animal Skeletal Remains

by Michael C. Wadhams

The site produced no identifiable bone from the pre-enclosure contexts. The small amount of bone recovered came mainly from the EPRIA/MPRIA levels of the sub-rectangular enclosure ditch (*AF1*), from one ditch of the LPRIA rectangular enclosure (*CF100, 3 and 7*), and from one feature associated with the system of small linked enclosures (*BF201*).

Generally, the sample is small and unidentifiable due to deterioration. Teeth of cattle (*Bos* sp.) and sheep (*Ovis* sp.) were present, all indicating reasonably mature animals. The quantities of bone were too small to allow analytical study. A record of the precise context of the remains is deposited with the site archive.

II Carbonized Seeds

by Peter Boyd

A small sample (*c.* 80 grains) of carbonized grain was recovered from Neolithic pit *CF105*: this of the bread wheat type *Triticum aestivium agg.* The grains were badly preserved, being 'puffed' by the heat to which they had been subjected, and only a superficial examination was justified. The sample is of interest in that it constitutes the first published instance of wheat grain from an Essex Neolithic context.

III Charcoal

by Caroline Cartwright

Recovery of charcoal was good and samples were identified from the following contexts:

Neolithic	
Pit CF105	Oak (*Quercus* sp.) and hazel (*Corylus* sp.) carbonised nut shell fragments (*CF105 3*).
Late EPRIA/MPRIA	
Enclosure ditch AF1	(*I 4*) ash (*Fraxinus* sp.); (*II 6*) dogwood (*Cornus* sp.); (*III 12*) alder buckthorn (*Frangula alnus*); (*V 5*) ash (*Fraxinus* sp.); (*X 4*) oak (*Quercus* sp.).
LPRIA/Romano-British	
Enclosure ditch CF100	(*II 7*) oak (*Quercus* sp.); hazel (*Corylus* sp.); birch (*Betula* sp.); and hawthorn (*Crataegus* sp.): (*III 4*) oak (*Quercus* sp.), hawthorn (*Crataegus* sp.); and elm (*Ulmus* sp.).
Enclosure ditch BF210	(*I 4*) hazel (*Corylus* sp.) and hawthorn (*Crataegus* sp.).

Features *AF24, 30 and 32*, of probable Iron Age date, all produced oak (*Quercus* sp.), and birch (*Betula* sp.) also came from *AF32*.

IV Carbonized Residue Analysis

by John Evans

A burnt deposit was found adhering to a sherd from *CF101 III 5*. The sample was initially examined microscopically but no recognisable structures were seen. It was then investigated by infra-red spectroscopy. The resulting spectra suggested the presence of starch. Wet chemical analysis indicated the presence of 2% (by weight) of starch (or starch degradation products).

Extraction of the sample with various solvents yielded no further information, and emission spectroscopy only revealed the usual soil elements. It would seem, therefore, that the residue most likely had a cereal origin.

Part 5
Discussion

The limited excavations at Woodham Walter achieved the stated objectives: establishing that preservation of the principal features was good, whilst the originally shallow-cut features barely survived. An Iron Age/Romano-British date for the majority of cropmark features was confirmed; evidence for earlier activity was also recorded, and a tentative series of phase plans for the main features postulated (Fig. 29).

With the exception of pottery, the quantity of finds from the excavations was small. The pottery includes five well-defined groups, spanning the MPRIA to the Claudian conquest, which are of considerable value not only for the determination of the site phasing presented above (Part 2) but also for regional pottery studies. The implications are considered in the pottery discussion by Rodwell (p. 37) Bone survival from the site was extremely poor, while the limited resources and expertise available at the time of excavation meant that no systematic sampling for other environmental evidence was organised.

The results of the Woodham Walter and other excavations, combined with the continuing study of the cropmark evidence (Priddy and Buckley, this volume) enable the site to be considered within its wider context in the Chelmer-Blackwater Valley. Site names followed by numbers in brackets refer to the gazetteer in the following paper (Priddy and Buckley).

The Chelmer and Blackwater rivers and their tributaries rise on the boulder clay plateau to the north of the county, converging in the south to form an extensive estuary. Varied glacial deposits include sands, gravels, brickearths (loess), head (solifluction deposits), and alluvium, with localised calcareous tufa and peat, the gravels being terraced in the lower reaches (Allen and Sturdy 1980). The well-drained deposits above the level of the flood-plain appear to have been favoured for settlement, and accumulating cropmark evidence supports this (Fig. 30), although it must be remembered that these are substantially the cropmark-producing soils. Interpretation of the settlement pattern is necessarily tentative, being derived from a small number of excavations and surface finds. However, the evidence at Woodham Walter shows that successive occupation on the site should be viewed as only a small element of extensive multi-period terrace settlement in the lower valley. Although few earlier prehistoric sites have been located, an increasing level of occupation can be assumed. By the later Iron Age and Roman periods this process must have culminated in an increasingly populated and organised landscape.

Earlier prehistoric activity

The small amount of Mesolithic flintwork from Woodham Walter lacked any meaningful distribution, thus frustrating interpretation of the nature of activity. Environmental considerations prior to clearance and cultivation would have made the area attractive to a hunting and gathering population, and Jacobi (1980, 24), in a review of the Essex Mesolithic, has stressed the importance of the river estuaries. Finds at a number of locations, particularly on the brickearth deposits adjacent to rivers (Drury 1978a, 118), emphasise the extent of occupation in the region. Most of this material awaits publication (but see Healey 1978), although a detailed study of central Essex flintwork by Elizabeth Healey (in prep.) should place the Mesolithic occupation at Woodham Walter in its wider setting.

Woodham Walter is one of a small number of Essex sites to have produced pottery of Neolithic date (Hedges 1980, fig. 12). Earlier Neolithic sites within the area have been identified at Little Waltham, Braintree, Sandon and Chelmsford, with later Neolithic occupation recorded at Rivenhall, Chignall St James, Danbury and Woodham Walter. Although most of this evidence was recovered from multi-period sites, attention has been drawn to certain categories of cropmark (Hedges 1980) including a cursus at Springfield. Excavation of this monument confirmed it to be a Late Neolithic cursus (Hedges and Buckley 1981), and its identification enhances the picture of Neolithic occupation in central Essex presented by Drury (1978a, 118), as do a number of potential oval barrows or mortuary enclosures concentrated in the Chelmer-Blackwater Valley at Springfield (now destroyed), Rivenhall, Great Braxted, Feering, and Tollesbury (Lawson *et al.* 1981, 90). The presence of such monuments indicates the existence of a large and organised population which, unless nomadic, can be expected to have had established settlements in the vicinity. More recently, Neolithic finds have been made at Heybridge (Eddy 1980a, 43: Brown *et al.* 1984-5) and Springfield Lyons (Buckley and Hedges in prep.). Further work in the area is certain to augment our knowledge of the distribution of later Neolithic settlement.

Excavated evidence for settlement in the Bronze Age at Woodham Walter was lacking. A single sherd (Fig. 18, No. 69), together with a number of undiagnostic residual sherds, may tentatively be assigned to this period and, in the absence of settlement, may derive from agricultural activity in the area. The Bronze Age environment in central Essex is little understood, with the exception of evidence from the old river channel at Little Waltham which suggested a pastoral landscape for at least a part of this period (Drury 1978a, 146). Couchman (1980, figs 15-17) emphasised the concentration of sites and finds in the coastal and riverine areas. In the Chelmer-Blackwater region the evidence is mostly dependent on stray finds.

However, supplementing the scant regional picture is the air photographic evidence of numerous ring-ditches, most of which are best interpreted as Bronze Age barrows, many apparently forming both dispersed and nucleated cemeteries (Lawson *et al.* 1981, fig. 35). Nine ring-ditches of varying sizes have been recorded in the immediate vicinity of the enclosure at Woodham Walter (Fig. 29, a). A number of these may be ploughed-out barrows; one is respected by an LPRIA enclosure ditch, suggesting that it may then have existed as an extant ditched mound (Fig. 29, d). Two ring-ditches recently excavated at Lofts Farm, Heybridge (56) proved to be Bronze Age barrows (Fig. 30; and Brown in prep.) and recent excavations have for the first time disclosed evidence for enclosed settlement in the area. At Springfield Lyons (5) a circular, ditched enclosure has been shown, through extensive excavation, to represent

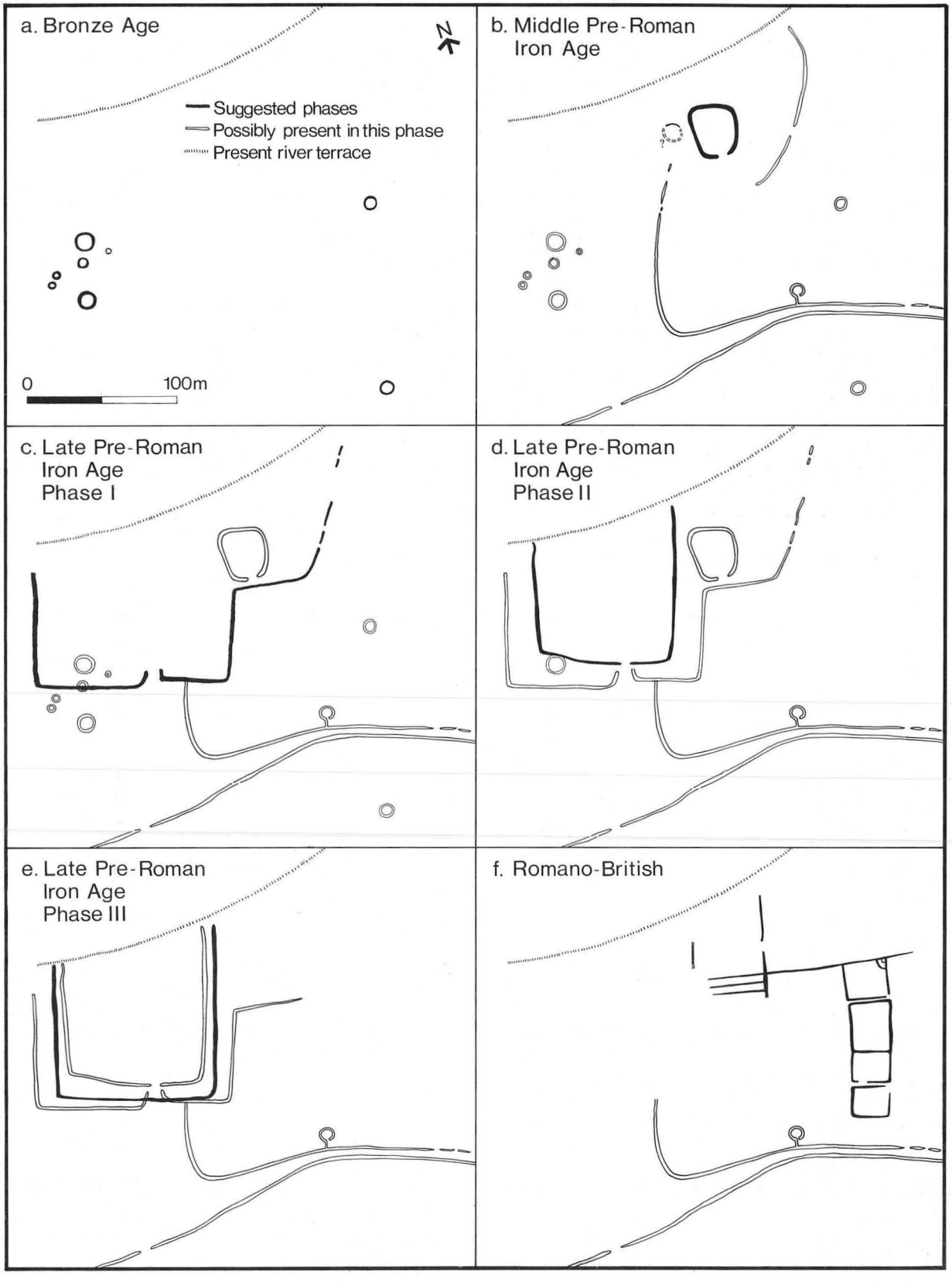

Fig. 29 Comparative phase plans. Scale 1:4000

a settlement with considerable regard for defence, both in terms of its siting and construction, and arguably of some status. That this enclosure type has been recognised elsewhere (Priddy and Buckley, this volume, p. 72), both within the Chelmer-Blackwater Valley and in other parts of Essex and south-east England, is a significant step towards recognising settlements of at least one stratum of Bronze Age society. Equally important has been the excavation of a small double-ditched rectangular enclosure at Lofts Farm (56; Brown 1985), providing impetus for renewed consideration of other rectilinear enclosures as being of potentially pre-Iron Age date.

Later prehistoric and Roman occupation

Activity during this period consisted of an open settlement during the EPRIA. Construction of the sub-rectangular enclosure in the later MPRIA/LPRIA (Fig. 29, b) was followed by the LPRIA/Romano-British rectangular enclosure, which subsequently underwent a series of enlargements prior to its abandonment in the late first century AD. At this point a shift in the settlement focus is postulate (p. 15). This sequence accords with the general settlement pattern for the county presented in recent reviews of the evidenence (Drury 1978b: Drury 1980: Drury and Rodwell 1980).

The development of enclosed occupation at Woodham Walter, in the MPRIA, followed an earlier open settlement. This accords with the apparent absence of enclosures during the earlier Iron Age noted by Drury (1980, 50). Also consistent with the cropmark evidence from the county (Priddy and Buckley, this volume) are the relatively early dates assigned to smaller sub-rectangular enclosures. The function of the later MPRIA sub-rectangular enclosure at Woodham Walter was not apparent from the limited excavation; both domestic and agricultural functions would be plausible. In area (0.08 ha) it is comparable to enclosures at Danbury (46), Hatfield Peverel (47) and Danbury (51). Only at the latter, where there were two large 'pits', were any internal features visible from the air. At Little Waltham (20) two circular huts were excavated within the period III enclosure (Drury 1978a). Elsewhere in Essex, houses within small individual enclosures have been excavated at Ardleigh (35), dated to the third century BC; at Mucking (34), assigned to the MPRIA; and at Orsett (61), dated to the first century BC. Although cropmark enclosures without distinguishable internal features may be interpreted as stock enclosures, the absence of features may equally be due to ploughing or to constructional techniques leaving no identifiable cropmark. At Woodham Walter the possible house gully (AF6) adjacent to the sub-rectangular enclosure produced no such cropmark. A penannular gully lies a short distance to the north of the enclosure at Danbury (46), whilst the enclosures at Hatfield Peverel (47) are situated to the south of a larger sub-rectangular enclosure, a large number of 'pits' and one small ring-ditch, the whole being delineated, if not enclosed, by a number of substantial linear features.

It would appear that within the cropmark complexes of the Chelmer-Blackwater valleys there are a number of enclosures under 0.25 ha, and with associated features, which might tentatively be considered as representing MPRIA settlement. In a number of cases, as at Woodham Walter, these are in proximity to rectilinear enclosures. In the past the rectilinear enclosures have been generally attributed to the Roman period but, following the excavations at Woodham Walter and the comparable enclosures at Orsett 'Cock' (61) and Rainham (57), the probability of an LPRIA date has been demonstrated. It is also evident that multiple ditches do not necessarily represent an increased defensive or military function, but may simply result from subsequent alteration and enlargement as at Woodham Walter, where the multiple ditches were attributable to at least three phases (Fig. 29, c-e).

The scale of excavation at Woodham Walter was too small to demonstrate the existence of structures, and only at Orsett has extensive excavation of the enclosure interior confirmed the presence of substantial structures, including circular houses. However, large LPRIA/Romano-British rectilinear enclosures of this type clearly form the foci of substantial farmsteads located within extensive field systems. In the Chelmer-Blackwater area similar cropmark complexes exist at Springfield (Hedges and Buckley 1981), Ulting (75) and Langford (Eddy 1980b, 76-82). These are mostly multiple-ditched enclosures, and they appear to be related to other inter-connecting enclosures and/or field systems, suggesting a wide and changing range of agricultural functions. Also visible are indications of internal sub-division and annexing of a type which is absent at Woodham Walter. At Ulting (75), sub-division or enlargement is internal to the 'ditched trackways', whilst at Langford there appears to have been a systematic layout of a series of small rectangular paddocks external to the main enclosure. The extent and character of these cropmarks may indicate an important and substantial development of the farmstead during the Roman period (Eddy 1980b, 76-82). At Chignall St James (86: Clarke in prep.) excavation has confirmed a complex sequence of development focussed on a substantial Roman courtyard building. Unfortunately at Woodham Walter the site of a postulated 'villa' phase located to the east of the LPRIA/early Romano-British enclosure was destroyed by gravel working in the 1930s (Rodwell 1976a, 243). Further rectilinear enclosures of approximately 1 ha have been recorded on the coastal plain of the Blackwater Estuary at Great Totham (79) and Goldhanger (74). The small, almost square, linked Romano-British enclosures at Woodham Walter (0.04-0.06 ha) are not easily paralleled in Essex. The small paddocks (0.12 ha) of the Langford complex have been noted. They may have been stockyards as suggested for those at Ruckstalls Hill, Hampshire (Oliver and Applin 1978) and at Lynch Farm, Peterborough (R. Jones 1975).

The cropmark evidence may be seen alongside the extensive areas of LPRIA field system surviving within the landscape of the Chelmer-Blackwater region postulated by Drury and Rodwell (Drury 1978a, 134-6, fig. 74: Drury and Rodwell 1980, 59-64, figs 22-3: Rodwell 1978, fig. 11.2, 5, 6, 7). Their extensive nature indicates highly organised and prosperous agricultural communities managing a landscape which was established in most of its basic details by the Roman conquest. The latter event superimposed a road system linking towns such as those at Chelmsford (Drury and Rodwell 1980, 65-7), Braintree (Drury 1976a) and Kelvedon (Rodwell and Rodwell 1975). Heybridge continued to function as a port linked to its hinterland by an improved road network and the rivers Chelmer and Blackwater which were almost certainly navigable at this time. In the countryside, however, although there was some shifting from established sites as at Woodham Walter, there was no radical change, and in many cases, such as Chignall St James, major enclosed farm units continued to operate from the same location with the surrounding field systems continuing largely unaltered.

This cursory examination of the Chelmer-Blackwater Valley area in the light of the excavations at Woodham Walter illustrates the considerable amount of information available for landscape studies, the interpretation of which is very much at a preliminary stage. Continued air reconnaissance and its detailed analysis will, it is hoped, add to the database from which priorities in future studies in LPRIA and Romano-British rural settlement can be established and implemented.

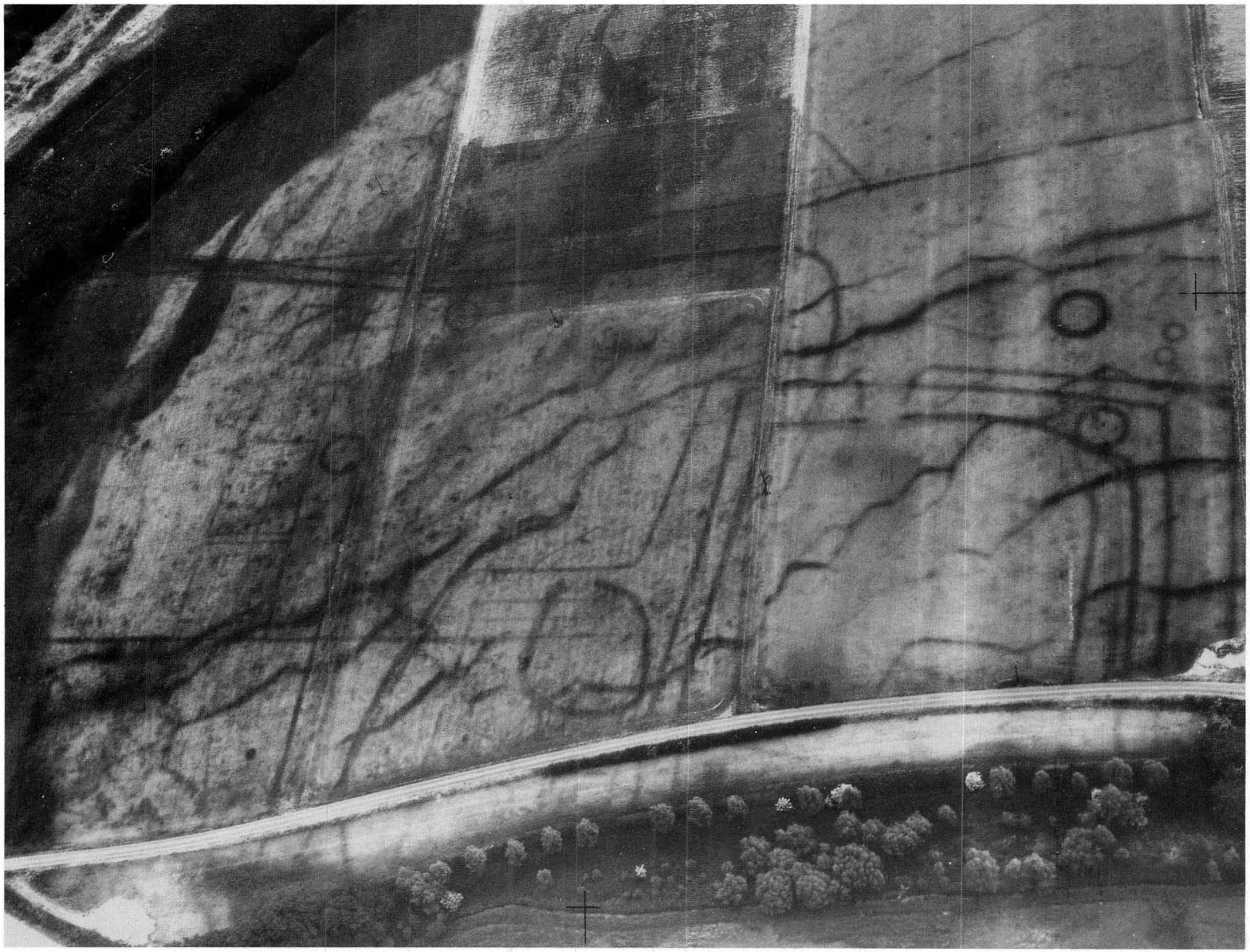

Plate I Aerial view of the Woodham Walter cropmark complex from the north (Cambridge Univ. Collect. No. BB7 65: *Copyright reserved*)

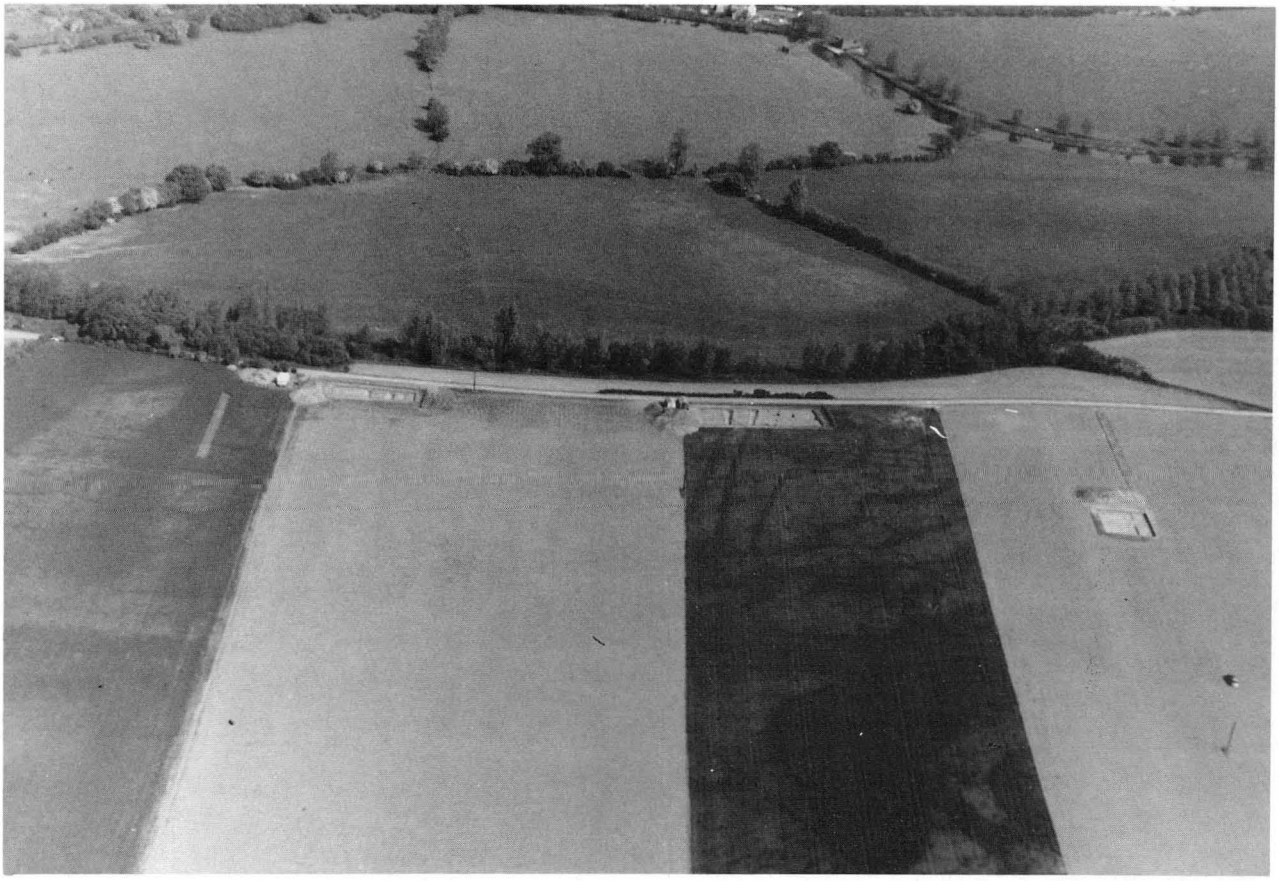

Plate II Aerial view from the south during excavation, with cropmarks showing in part of the field. (JDH)

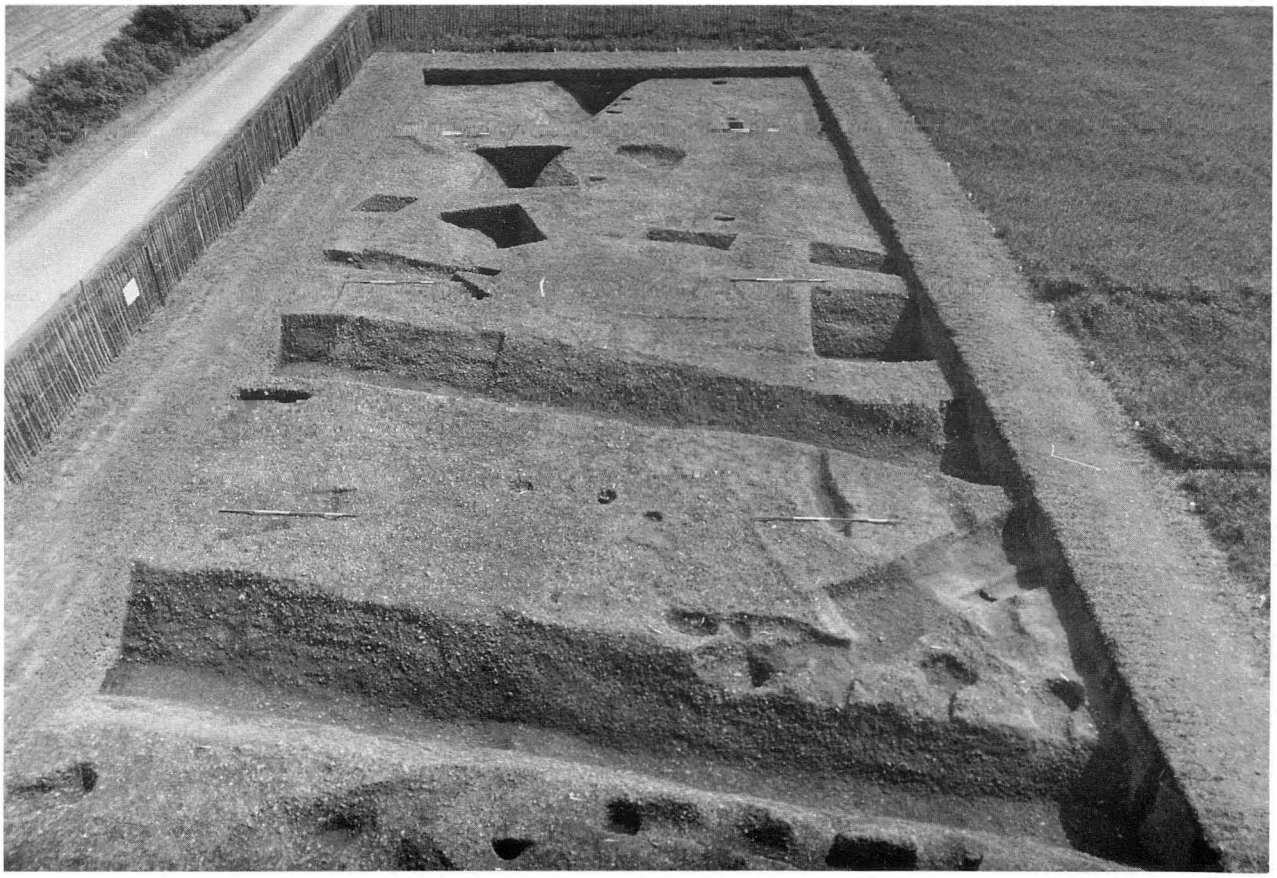

Plate III General view of Trench A from the west. (JDH)

Plate IV Ditch AF1, segments I, III and V. (JDH)

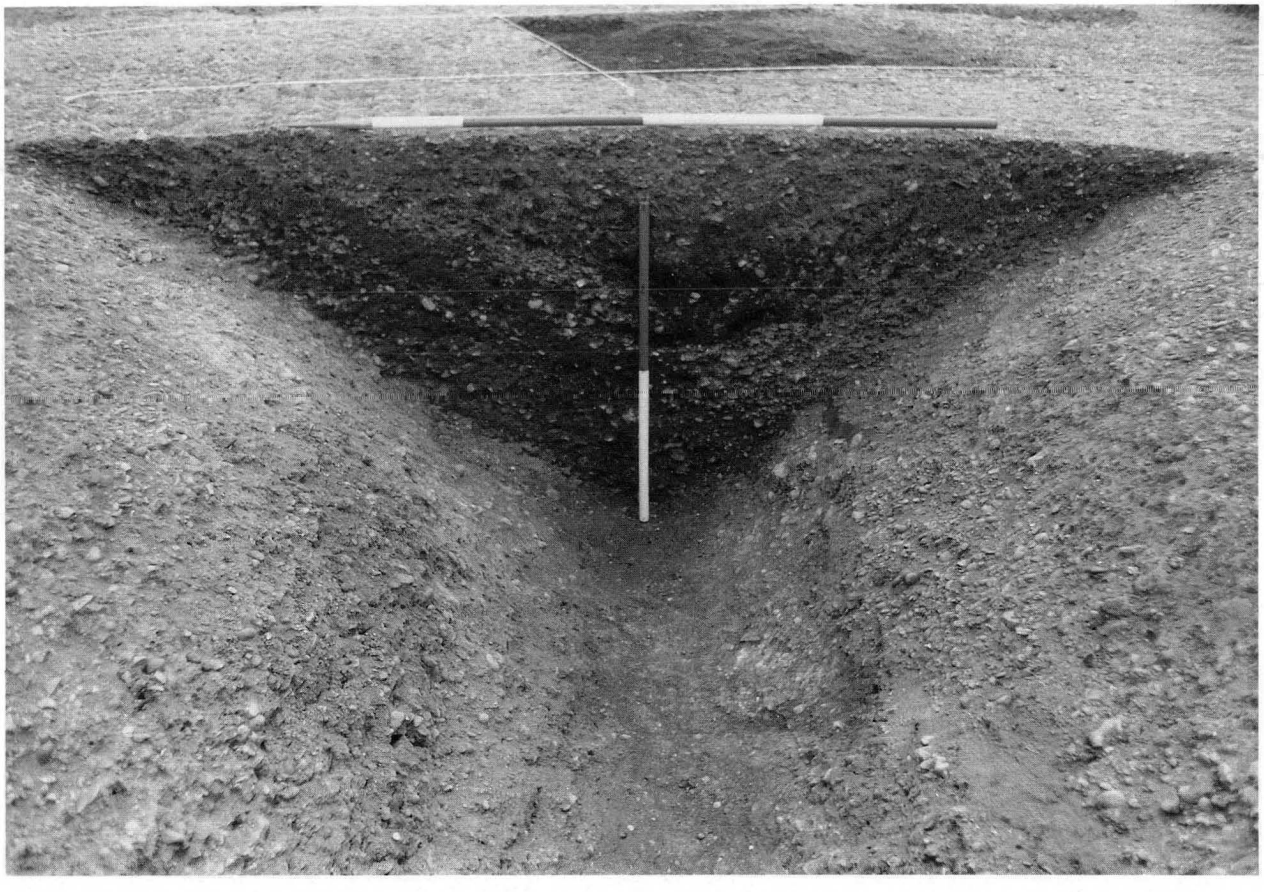

Plate V Ditch AF1, section B-B^{1}. (JDH)

Plate VI General view of Trench B from the north. (JDH)

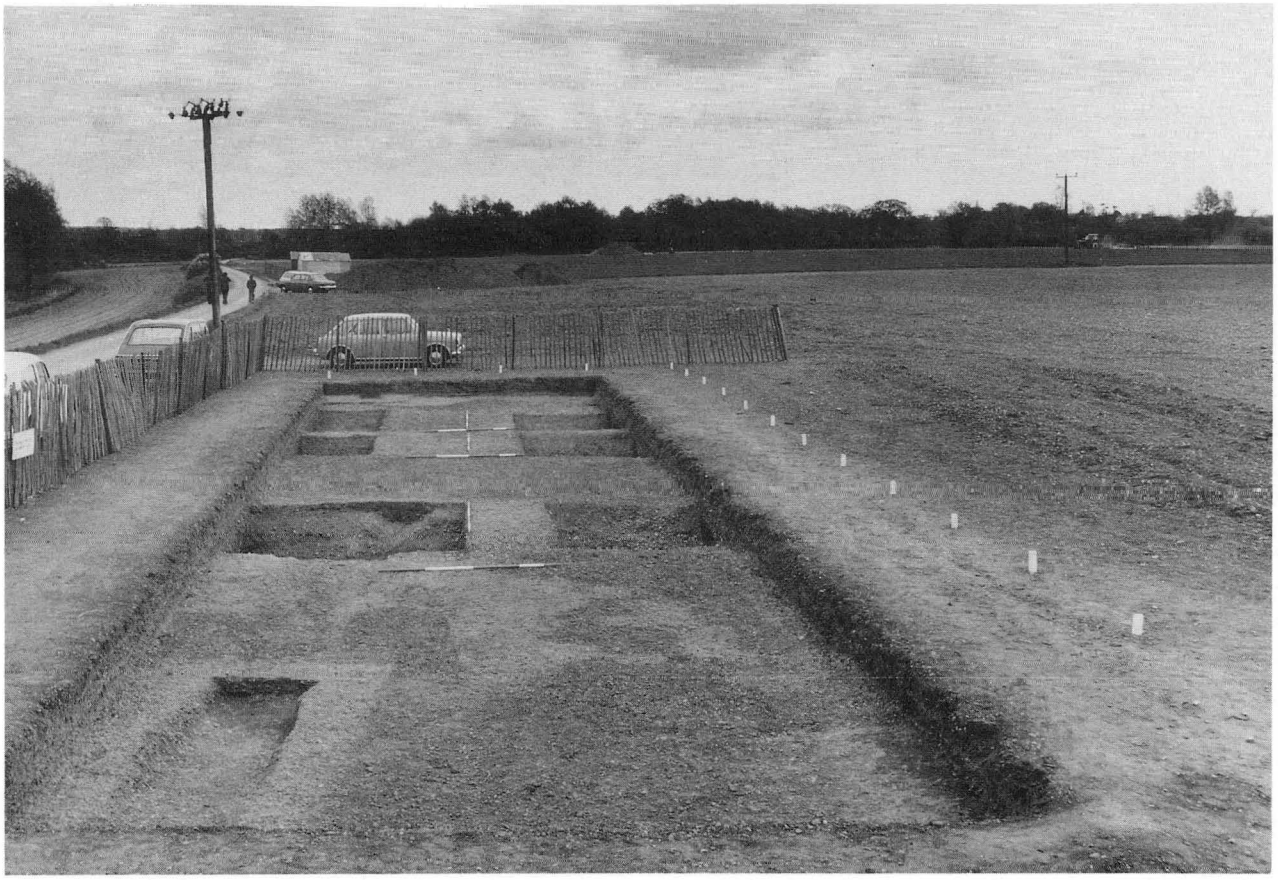

Plate VII General view of Trench C from the west. (JDH)

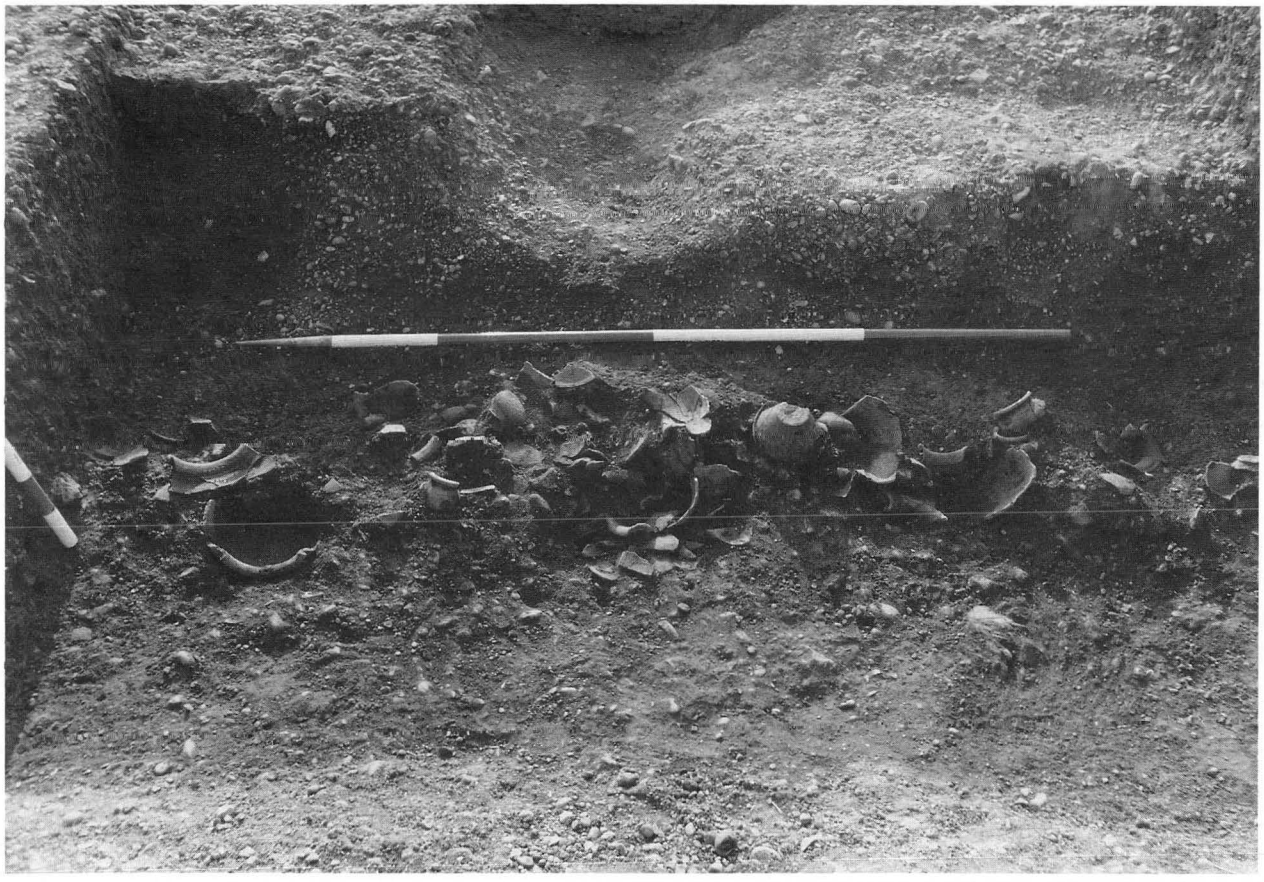

Plate VIII Spread of pottery within Ditch CF101. (JDH)

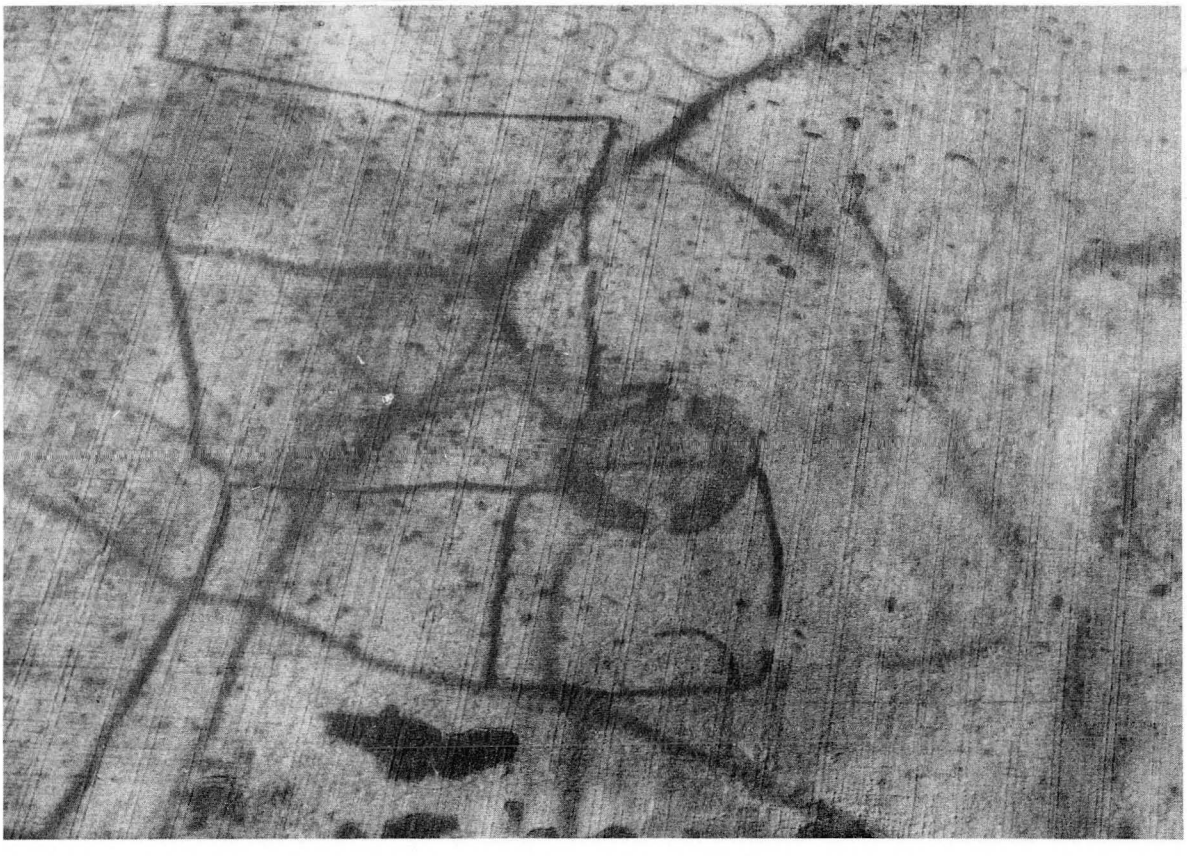

Plate IX Little Bromley (9) (Cambridge Univ. Collect. No. BXJ 30: *Copyright reserved*)

Plate X Belchamp St Paul (19) (Cambridge Univ. Collect. No. BYC 61: *Copyright reserved*)

Plate XI Wendens Ambo (24) (Cambridge Univ. Collect. No. BJJ 75: *Copyright reserved*)

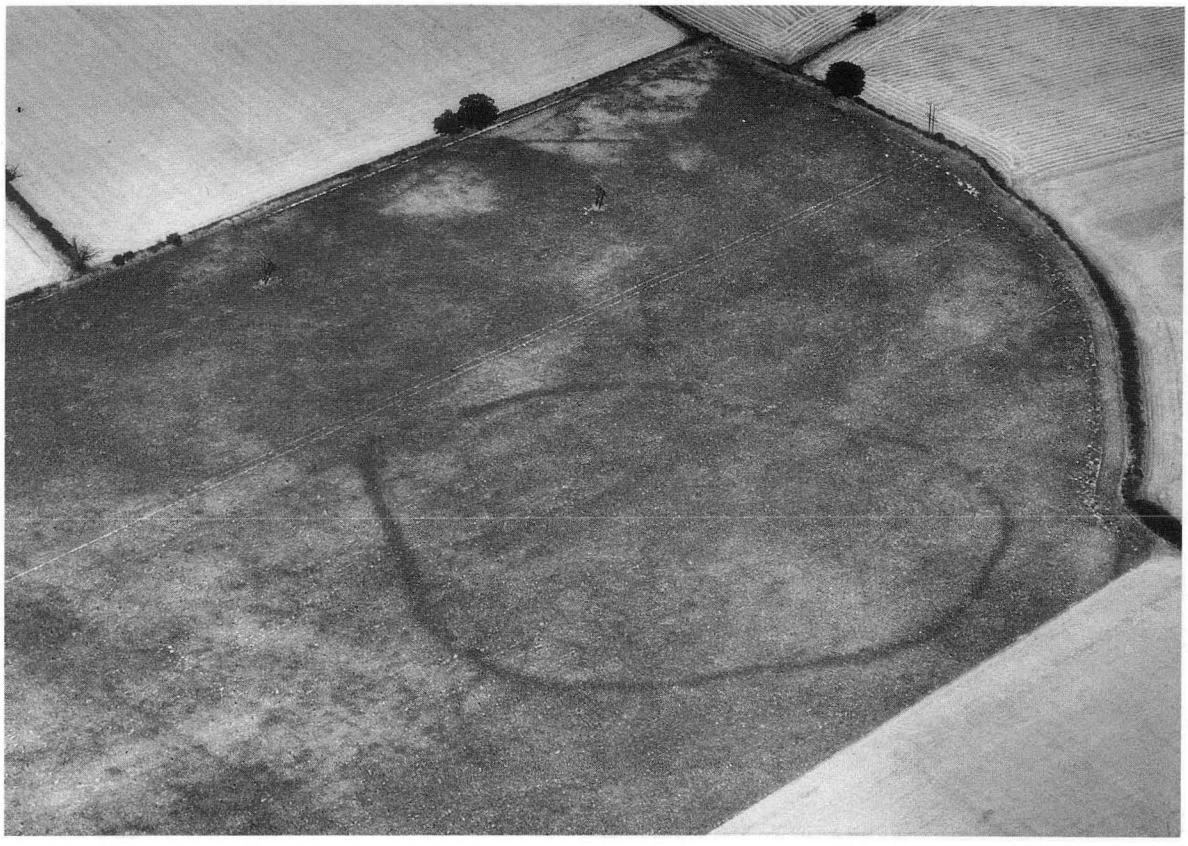

Plate XII Bradfield (25) (Cambridge Univ. Collect. No. BHE 68: *Copyright reserved*)

Plate XIII St Osyth (83) (NMR No. TM 1315/3/13: *Copyright reserved*)

Plate XIV Bradfield (26) (Cambridge Univ. Collect. No. AUQ 82: *Copyright reserved*)

Plate XV Dedham (27) (Cambridge Univ. Collect. No. BCT 10: *Copyright reserved*)

Plate XVI East Donyland (49) (NMR No. TM 0121/4/315: *Copyright reserved*)

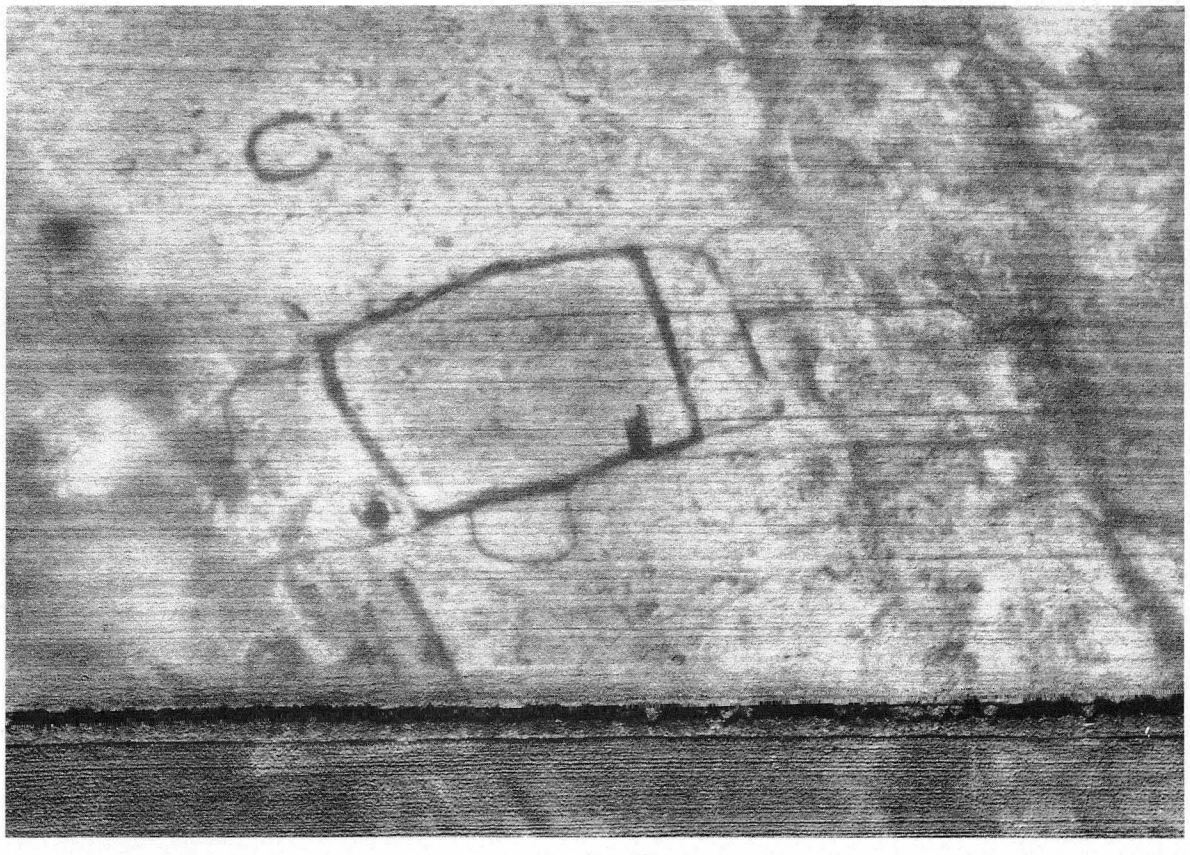

Plate XVII Great Bromley (53) (Cambridge Univ. Collect. No. BXJ 34: *Copyright reserved*)

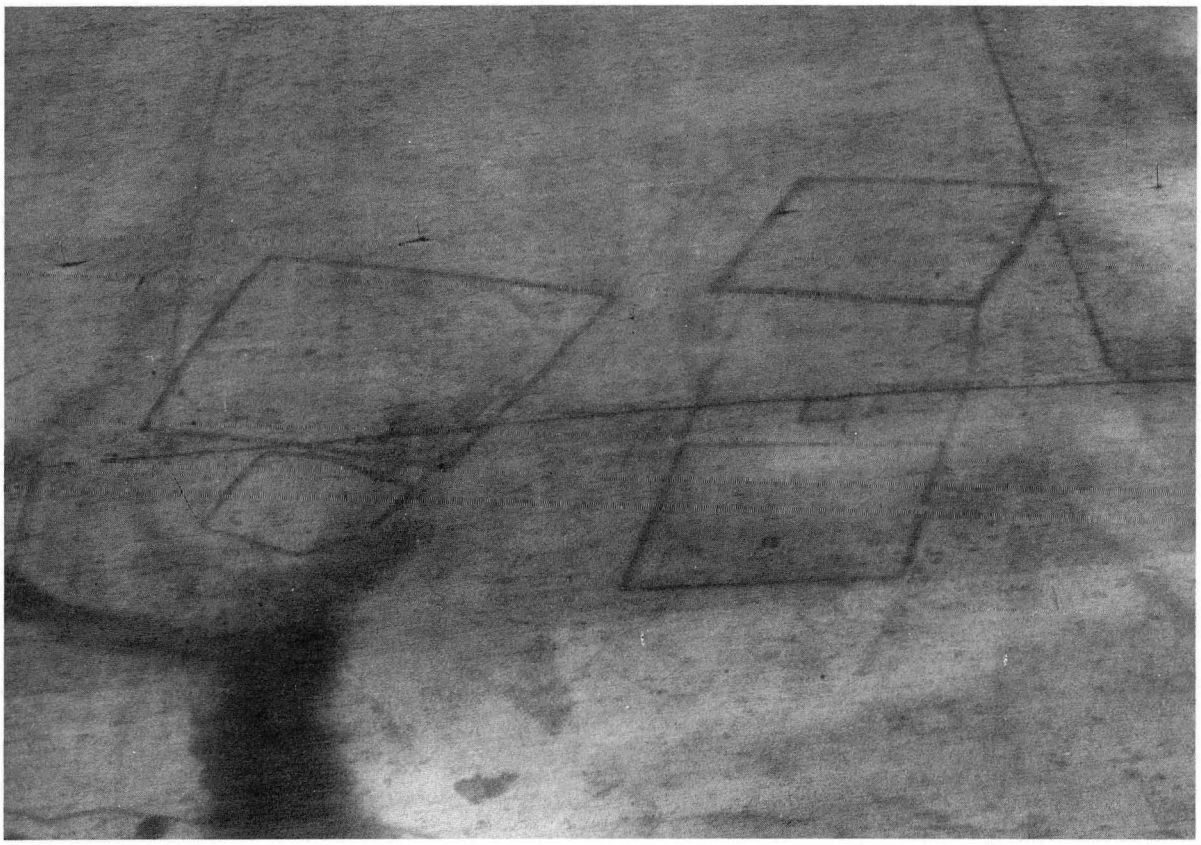

Plate XVIII Stanway (48 and 68) (Cambridge Univ. Collect. No. ABM 60: *Copyright reserved*)

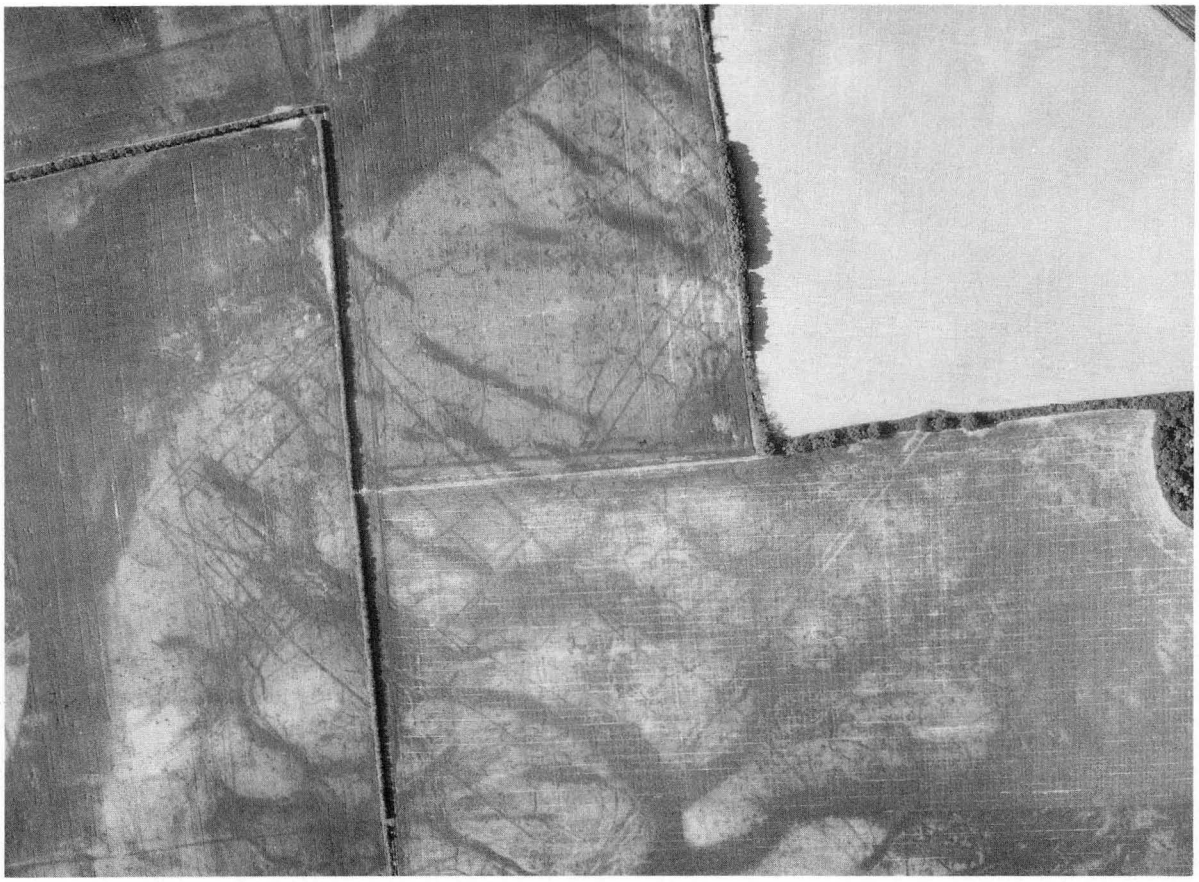

Plate XIX Ulting (75) (NMR No. TL 8109/13/59: *Copyright reserved*)

Plate XX Langford (Cambridge Univ. Collect. No. BZS 21: *Copyright reserved*)

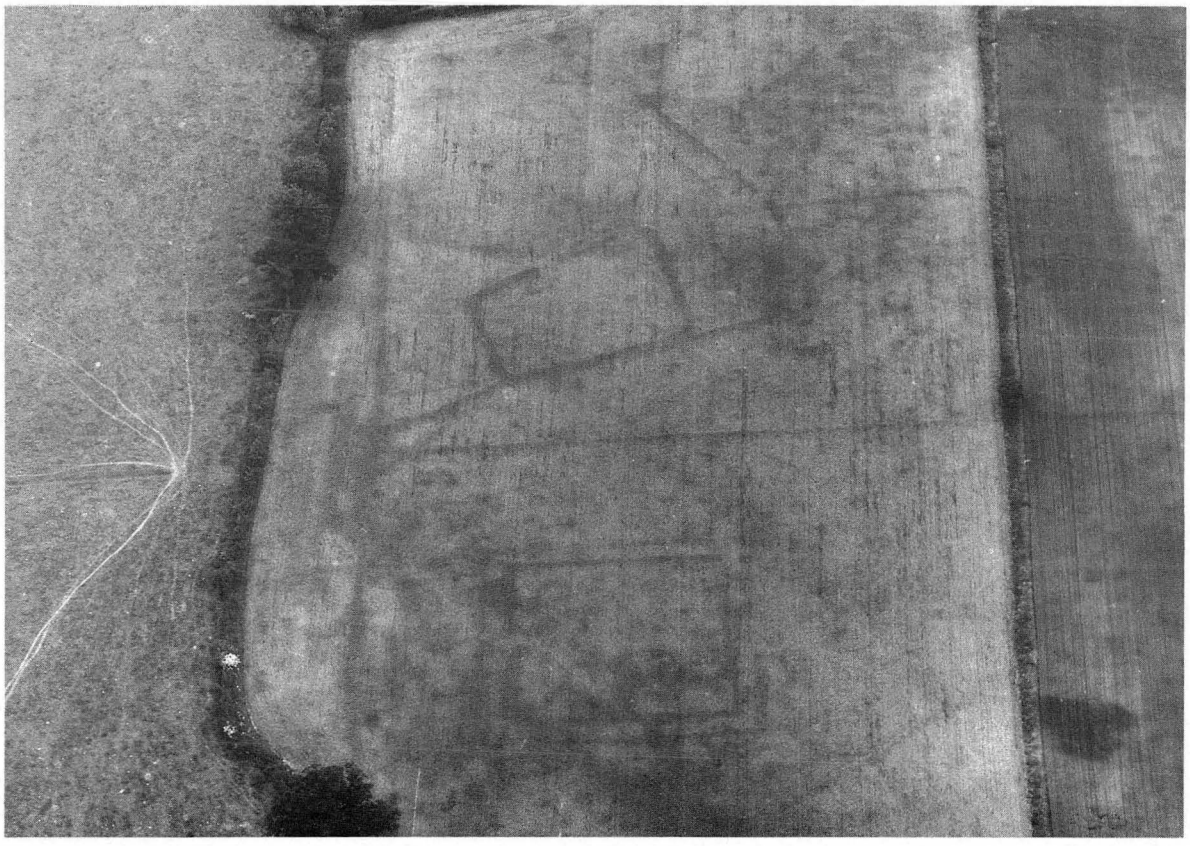

Plate XXI Langford (Cambridge Univ. Collect. No. CJC 57: *Copyright reserved*)

Plate XXII Thurrock (87) (NMR No. TQ 6480/18/404: *Copyright reserved*)

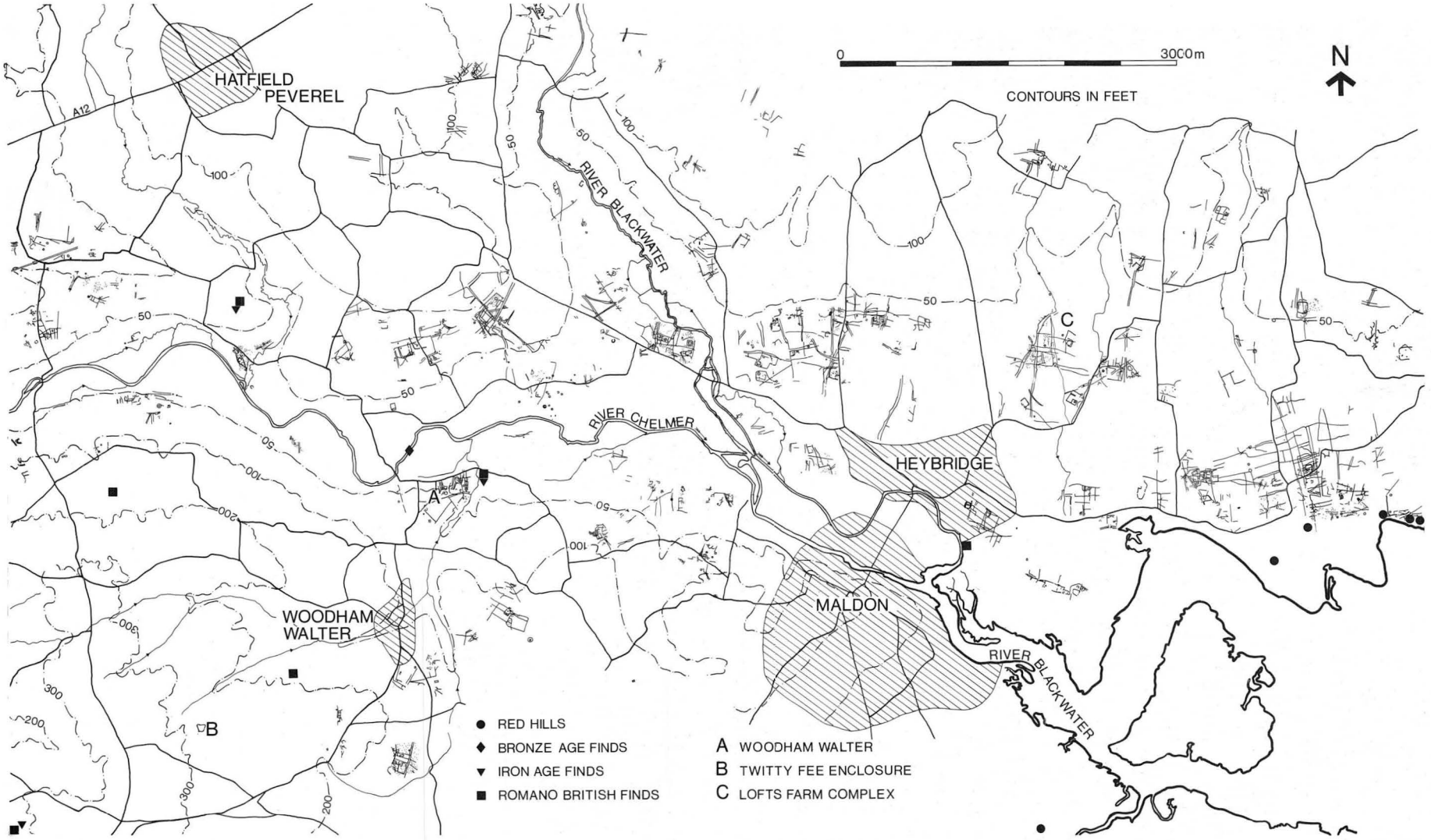

Fig. 30 Distribution of recorded cropmarks in the Chelmer-Blackwater Valley related to excavated sites

Appendix: Feature Information Tables

Key to Tables 3-5

Trenches A, B and C
Pottery:
N =Neolithic
EPRIA =Early pre-Roman Iron Age
MPRIA =Middle pre-Roman Iron Age
LPRIA =Late pre-Roman Iron Age
BR =Belgo-Roman
RB =Romano-British
PM =Post-medieval
FG =Flint-gritted (date uncertain)
(1) =Denotes sherd number (where appropriate)

Other:
F =Flint
FC =Fired clay
M =Metal
T =Tile
S =Stone
B =Bone
C =Charcoal
Ph =Post-hole

Missing numbers indicate features excavated but later discounted. Maximum dimensions shown are taken from the top of the trowelled surface of layer 3 in Trenches A and C, but from the top of layer 4 in Trench B.

Feature No.	*Feature Interpretation*	*Site Co-ordinates*	*Max. Dimensions (metres) N-S*	*E-W*	*Depth*	*Finds Pottery*	*Other*
1	Enclosure ditch	B10 to 1E	3.50	—	1.20	N, EPRIA, MPRIA, LPRIA, RB	F, FC, M, S, B, C
2	Enclosure ditch	B12 to G10	—	2.20	0.80	EPRIA, MPRIA, LPRIA, BR, RB	F, FC, T, S
3	Enclosure ditch	B15 to G14	—	2.40	1.00	N, EPRIA, MPRIA, LPRIA, BR, RB	F, FC, T, S
4	Ditch	B8 to G6	—	1.10	0.50	EPRIA, MPRIA, LPRIA, BR, RB, PM	F, FC, T, S
5	Pit	B11	0.90	—	0.55	—	—
6	Ring-ditch gully	B13 to D18	0.90	—	0.40	EPRIA, LPRIA	—
7	Ditch	E15	1.10	—	0.30	FG(1)	F
8	Ditch	B13 to C13	1.10	—	0.30	Possible pre-IA (1), LPRIA	F
9	Ph	D13	0.40	0.40	*c.*0.15	—	—
10	Gully	F8 to G8	—	0.80	0.30	—	—
11	Pit or Ph	F4	—	0.55	0.10	—	S
12	Ph	B15	0.80	0.80	0.65	MPRIA(1)	—
13	Ph	B14	0.45	0.45	0.20	—	F
14	Ph	B14	0.60	0.50	0.20	MPRIA(1)	—
15	Ph	C15	0.60	0.90	0.37	—	F
16	Ph	C15	*c.*1.00	1.00	0.33	EPRIA(1)	F
17	Ph	D13	0.60	0.60	0.18	FG(3)	—
18	Ph	D15	0.45	0.45	0.32	—	—
19	Ph?	D14	*c.*0.90	*c.*0.90	0.24	FG, possibly MPRIA (2)	—
20	Gully	G15	—	0.55	0.20	—	—
21	Post-slot?	C14 to D14	*c.*2.00	*c.*0.80	*c.*0.25	—	—
22	Ph?	D14	0.55	0.55	0.30	—	F
23	Post-slot?	C15 to D15	—	0.60	0.30	—	—
24	Hollow	G12	*c.*0.50	0.50	0.14	—	C
25	Hollow	G12	*c.*0.80	0.60	0.14	—	—
26	Ph	D12	0.32	0.32	0.20	—	—
27	Ph	E12	0.42	0.42	0.14	—	—
28	Pit	E11	*c.*2.00	—	0.34	—	—
29	Ph	D12	0.33	0.26	0.10	—	—
30	Ph	C1	0.38	0.38	0.28	EPRIA (1), LPRIA (1)	F, C
31	Ph	E13	0.50	0.30	0.15	—	—
32	Ph	C7	0.50	0.50	0.12	—	C
33	Ph	B2	—	0.35	0.17	—	—
34	Ph	B3	—	0.35	0.17	—	—
35	Ph	B3	—	0.50	0.25	—	—
36	Ph	D2	—	0.80	0.40	—	—
37	Ph	D2	—	0.50	0.30	—	—
38	Ph	D2	—	0.50	0.13	FG (1)	—
39	Ph	E5	0.70	0.70	0.25	—	—
40	Ph	D11	0.60	—	0.32	—	—
41	Ph	E15	0.50	0.50	0.26	—	—
42	Ph	F16	0.30	0.30	0.22	—	—
43	Ph	F17	0.30	0.30	0.15	—	—
44	Ph	G17	0.26	0.26	0.08	—	—
45	Hollow	G17	0.60	—	0.22	—	—
46	Ph	E17	0.24	0.24	0.20	—	—
47	Hollow	E8	1.00	1.00	0.18	—	—
48	Hollow	F3	0.80	0.80	0.20	—	—
49	Hollow	C3	0.50	1.30	0.46	—	—
50	Pit	G9	—	—	*c.*0.70	—	—
51	Pit	C10	1.00	1.00	0.55	—	—

Table 3 Trench A feature information

Feature No.	*Feature Interpretation*	*Site Co-ordinates*	*Max. Dimensions (metres)*			*Finds*	
			N-S	*E-W*	*Depth*	*Pottery*	*Other*
200	Enclosure ditch	F58 to H56	—	1.00	0.35	LPRIA, FG, RB	F
201	Pit	H52	0.50	0.60	0.15	—	B
202	Hollow or pit	H52	Irregular	—	0.45	—	—
203	Hollow or pit	H52	Irregular	—	0.15	—	—
204	Hollow or pit	E58	—	1.10	0.35	—	—
205	Hollow or pit	G53	0.70	0.50	0.50	—	—
207	Hollow or pit	G53	1.40	1.10	—	—	—
210	Enclosure ditch	F51 to H54	—	0.90	0.30	EPRIA, MPRIA, LPRIA	F, C

Table 4 Trench B feature information

Feature No.	*Feature Interpretation*	*Site Co-ordinates*	*Max. Dimensions (metres)*			*Finds*	
			N-S	*E-W*	*Depth*	*Pottery*	*Other*
100	Enclosure ditch	B8 to E8	—	2.80	1.10	EPRIA, MPRIA, LPRIA, BR, RB, PM	F, BC, M, T, B, C
101	Enclosure ditch	B5 to E5	—	2.30	0.90	EPRIA, MPRIA, BR, RB	F, BC, M, T, S, C
102	Enclosure ditch	B3 to E3	—	2.70	0.80	EPRIA, MPRIA, LPRIA	F, S
103	Ditch (modern)	D12 to D2	1.00	—	0.20	RB, PM	F, M, T
104	Ditch (modern)	D1	0.50	—	0.20	—	—
105	Pit	C8	1.00	—	0.60	N	F, C
106	Pit/ph?	C1	0.50	0.50	0.40	—	F
107	Pit/ph?	C1	0.32	0.32	0.16	—	—
108	Pit/ph?	B1	0.42	0.42	0.18	—	—
109	Pit	B6	0.92	0.40	0.12	—	—
110	Pit	C6	0.86	0.60	0.22	—	F
111	Pit	B11	1.00	2.20	0.58	—	F
112	Pit/ph	B5	0.35	0.50	0.27	—	—
113	Pit/natural?	D8	—	—	—	—	F
114	Pit/ph	B1	0.35	0.35	0.10	—	—
115	Pit	B5	—	0.70	0.30	—	F
116	Pit	B10	0.80	0.80	0.32	EPRIA (1)	F
117	Pit/natural?	D10	1.40	—	0.34	—	F

Table 5 Trench C feature information

An Assessment of Excavated Enclosures in Essex Together with a Selection of Cropmark Sites

by Deborah Priddy and David G. Buckley

Summary

This paper draws together, in gazetteer form, all excavated enclosures in Essex and a small selection of unexcavated cropmark enclosures, representative of the wide range recorded in the County Sites and Monuments Record. It aims to see how far the excavated sites can aid the interpretation of unexcavated cropmarks. The enclosures are presented under very broad morphological headings, and meaningful classification at this stage is only apparent in the case of the most distinctive forms. Nevertheless, the exercise provides the starting point for future work, from which excavation and preservation priorities can be formulated, and gives an insight into the Essex cropmark data for comparative studies elsewhere.

I Introduction

The importance of aerial photography as a tool for recording archaeological landscapes is well established, particularly in counties such as Essex where geology, terrain and current land use are conductive to cropmark formation. Essex has large areas of high grade arable land, extensive mineral deposits, and a rapid rate of development; factors which result in the wide-spread erosion and eventual destruction of archaeological sites. Agriculture in particular has been a constant threat and as a result, few earthwork sites of any period survive. Arable agriculture is, however, also responsible for the dramatic exposure of so many sites from the air, and their recording has revolutionised our understanding of the County's archaeology.

The County Sites and Monuments Record (SMR) contains over 5000 cropmark sites. Many of these are complexes comprising elements which, more often than not, represent multi-period activity. This paper is concerned with 'enclosures' — one of the more readily identifiable components in the cropmark landscape.

Since enclosures are easily identified in a cropmark record, and often represent foci in the historic landscape, archaeological attention is drawn to them. There are well over 1000 cropmark enclosures in Essex, of which over forty have now been excavated. Excavation of anything other than a handful of the rest is clearly not viable (nor even desirable). Having amassed cropmark data for the county, it is clearly essential to assess it in the light of the excavated evidence. This paper represents the first tentative step towards this goal, via the presentation of excavated enclosure plans together with a small number of unexcavated cropmarks in order to see how far the excavated data can be used in interpreting the cropmark record.

Cropmark studies in Essex

The initial study of cropmarks by the Archaeology Section focused on the accessioning of photographs to the SMR and the transcription of cropmark detail onto 1:10,560 map overlays. Sketch plotting of all sites at this scale enabled general patterns and sites of particular interest to be quickly identified for accurate plotting and/or detailed study, and a cropmark survey of the Tendring Hundred is currently in preparation.

Local fliers have made a significant contribution. Notably the work of Mrs I. McMaster and the late Commander R.H. Farrands, published in the Bulletin of the Colchester Archaeological Group, has provided not only a check-list for new sites but also discussions of individual cropmarks. Some discussion of cropmarks has been published in a number of excavation reports and in a county archaeological survey (Buckley 1980). Earlier comparative studies have been conducted by Babbige (1972) and Crook (1977).

II Gazetteer

Form of gazetteer[1]

The gazetteer includes all excavated enclosures[2] and a small selection of unexcavated cropmarks:

(i) Excavated enclosures

Most of these are excavations carried out in response to threats requiring salvage excavation or rescue sampling strategies. A number have been excavated in order to determine condition and archaeological potential in relation to preservation policies. Taken together the excavated sites encompass very different levels and standards of archaeological investigation. In very few instances has total excavation of an enclosure and its interior been carried out. Plans presented in the report are taken from the published sources quoted or from unpublished plans kindly supplied by excavators. Only features thought to relate to the enclosure have been shown. Stipple represents unexcavated cropmarks and a dashed line the hypothetical plan.

(ii) Unexcavated cropmarks

Cropmark enclosures were selected to demonstrate the wide range of forms recorded. Some bias exists in the inclusion of parallels with excavated sites and 'unusual' forms and, given the size of the cropmark record, this is obviously a small, non-random sample. The aerial photographs used have come from a variety of sources (Appendix). Where enclosures have been extracted from a larger complex this is indicated in the text, and only features interpreted as relating to the enclosure have been shown. Recent features (e.g. roads, boundaries) are shown as a dot-dash line on the plans. Unless stated, none of the cropmark sites have been field-walked.

All enclosures have been sequentially numbered in the

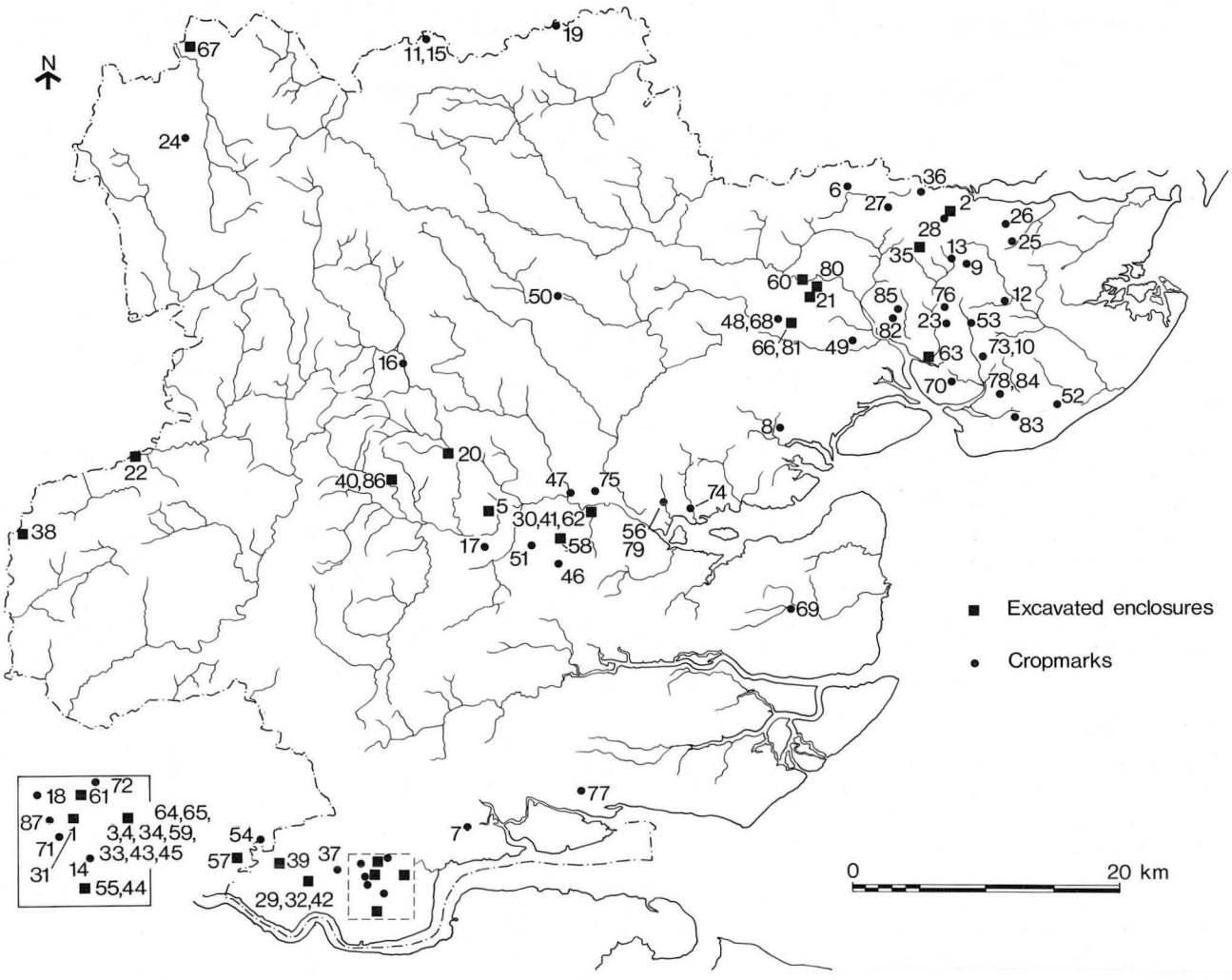

Fig. 31 Location map of sites in the gazetteer

Gazetteer. This number serves to locate them on Figure 31 and on the comparative plans (Figs 32-44). These numbers are also used in the Gazetteer and Discussion to distinguish different enclosures within the same complex or parish.

Classification

The factors which govern the sites included in this Gazetteer are outlined above. The enclosures which have been excavated do not represent the whole range of cropmark forms recorded. The selection of cropmark enclosures, chosen to redress this balance, has also been in part subjective. In order to construct any morphology of enclosures it would be necessary to examine the entire corpus of Essex cropmarks, or to focus on a sample area. The present study is therefore intended to be a more general exercise and enclosures are arranged by very broad morphological groups based on shape and size. This is in no way intended to represent a classification of Essex cropmarks, although for a small, well-recorded group of circular enclosures it does seem possible to propose a tentative morphology. Equally, for the reasons stated above, topographical data has been included in the Gazetteer but at this stage no distributional analysis of any of the forms can be put forward.

The following categories of enclosure are excluded since they are discussed elsewhere:

Cursus monuments: Morphologically distinctive and few in number, these have recently been considered in both a regional and national context as a result of excavations at Springfield, Chelmsford (Hedges and Buckley 1981).

Oval enclosures: A small, but growing number of cropmarks are interpreted as Neolithic oval barrows or mortuary enclosures (Lawson *et al.* 1981).

Hillforts: Those sites which are considered to fall into this category have been discussed in the context of excavations at Danbury Camp (Morris and Buckley 1978).

Field systems: Aspects of land allotment, considering existing boundaries and roads, together with some cropmark evidence, have been discussed by Rodwell (1978).

Moats: Numerous in the county, with a wide morphological range, form and distribution; these have been summarised by Hedges (1978).

A. Circular enclosures
i. Excavated

1. Orsett (Fig. 32)
ECC Site No. TQ68-36

Description
Three incomplete, concentric, discontinuous ditches with an associated palisade slot. Contemporary oval post-hole structure within. The only causewayed enclosure recognised in Essex to date, trial excavations were mounted in 1975, prior to the scheduling (SAM 153), to assess its state of preservation and its assumed date (Hedges and Buckley 1978).

Topography and geology
Lies on the gently sloping ground on the southern edge of a remnant of the 100 ft (30 m) OD Thames terrace.

Date and function
Since only a small area was excavated, little evidence for function was recovered, although it would support those uses postulated by Drewett (1977) and Whittle (1977). Pottery recovered was a regional Middle Neolithic type. Radiocarbon dates for the primary silts of the middle and inner ditches were 2583±112 bc (BM 1214) and 2635±82 bc (BM 1215).

2. Lawford (Fig. 32)
ECC Site No. TM03-20

Description
Single-ditched enclosure (SAM 133) of irregular width, *c.* 40m in diameter, with opposed causeways orientated north-east and south-west. Excavated 1962-3 (B. Blake) and 1971 (F. Peterson). The inner bank survived as a low mound in the 1960s, and excavation showed its outer face was retained by a post and wattle fence. In the centre was a small domestic structure.

Topography and geology
Lies just above 100 ft (30 m) OD on the brickearths and loams overlooking the River Stour to the north.

Date and function
Assumed to be a 'henge' prior to excavation, its character was wholly domestic. Finds date it to the Later Neolithic, although residual Early Neolithic pottery was also recovered (Healey and Shennan in prep.).

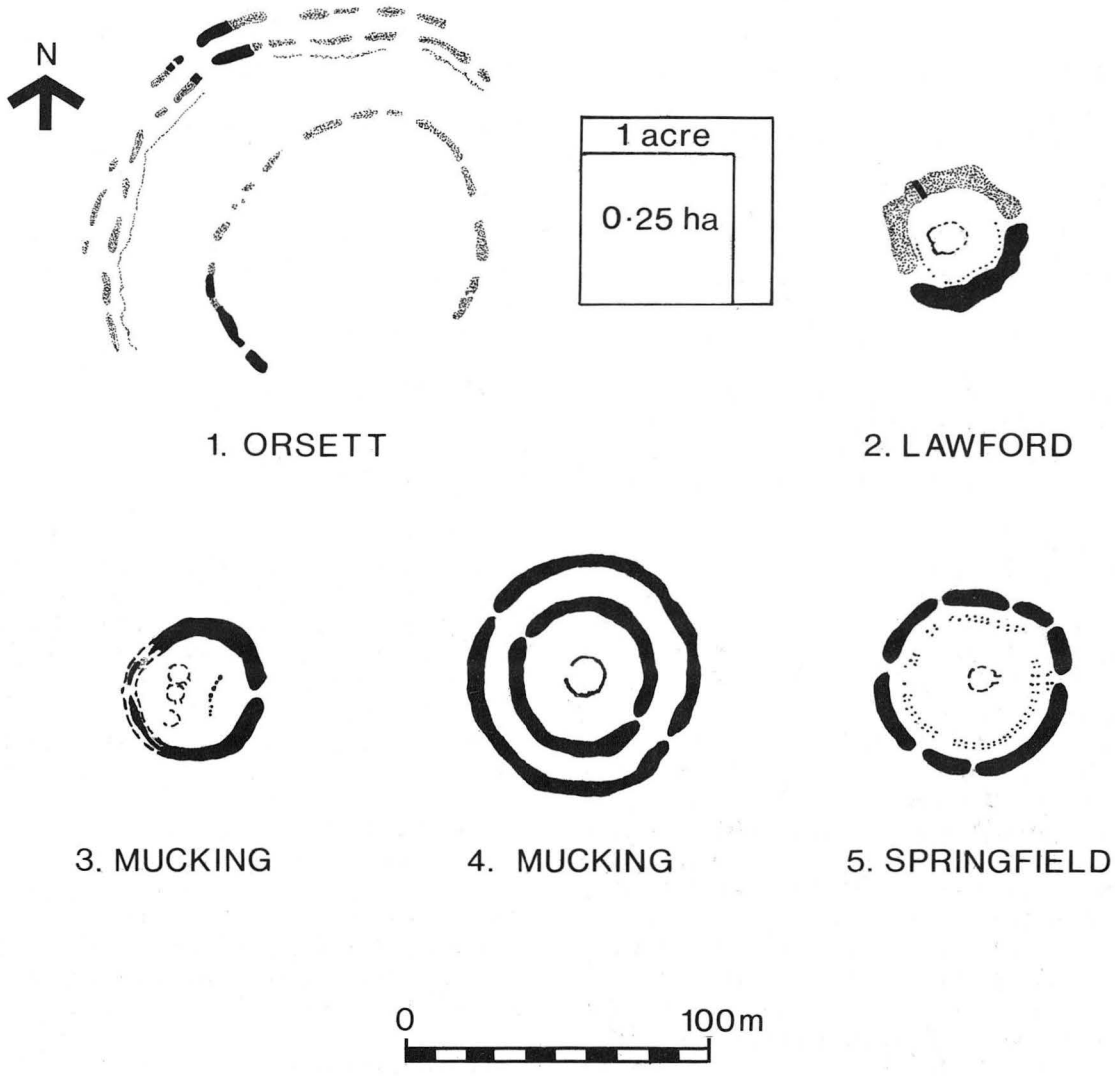

Fig. 32 Circular enclosures (excavated). Scale 1:2500

3. Mucking North Ring (Thurrock) (Fig. 32)
ECC Site No. TQ68-49

Description
Single-ditched enclosure of two phases, *c.* 48m in diameter. Inner bank, possibly revetted. Entrances on east and north-west. The latter was later blocked and the eastern entrance enlarged. Three small circular post-hole buildings were indentified among the many internal features. Fence lines suggest internal division, possibly for stock control. Excavated by M.U. Jones in 1977 and D. Bond in 1978 (Jones and Bond 1980: Bond forthcoming).

Topography and geology
Occupies a strategic position on the Boyn Hill gravel terrace at 100 ft (30 m) OD, beside a ridgeway to a crossing point of the Thames where the river narrows and changes direction.

Date and function
Radiocarbon dated 680 ± 110 bc and 750 ± 80 bc (HAR 2893 and 2911). Range of finds similar to those from the South Rings (4). Structures suggest a domestic settlement.

4. Mucking South Rings (Thurrock) (Fig. 32)
ECC Site No. TQ68-15

Description
Double-ditched, *c.* 83m in diameter, with opposed causeways orientated north-west and south-east. Excavated in the late 1960s by M.U. Jones (Jones and Bond 1980: Jones forthcoming). The asymmetry of the ditch suggests internal banks. Central circular house gully.

Topography and geology
See Mucking (3)

Date and function
Interpreted by the excavator as a Late Bronze Age/Early Iron Age defensive site, although there was a large amount of domestic rubbish. Radiocarbon dates for the outer ring are 820 ± 110 bc and 860 ± 70 bc (HAR 1634 and 1708); that for the inner is 840 ± 90 bc (HAR 1630).

5. Springfield (Fig. 32)
ECC Site No. TL70-164

Description
Single-ditched enclosure, *c.* 60m in diameter, with six causeways. A concentric double row of post-holes set some way back from the inner edge of the ditch suggests a revetted internal bank (possibly with a walkway) and a gate structure at the eastern causeway. Central circular post-hole building with porch and two smaller circular structures, post-holes and pits. Large dump of bronze-working moulds from ditch silts. Excavated during 1982-6 (Buckley and Hedges in prep.: Priddy 1982b, 142; 1983b, 168; 1984-5b, 134).

Topography and geology
Elevated position overlooking the Chelmer floodplain, 100 ft (30 m) OD, on glacial sands and gravels.

Date and function
Domestic settlement which may be of some wealth and 'status' given the relative complexity of the earthwork, the large central building and the presence of bronze-working. Radiocarbon dates from the enclosure ditch are 830 ± 90 bc (BM 2313) and 420 ± 80 bc (BM 2314).

ii. Cropmarks

6. Boxted (Fig. 33)
ECC Site No. TM03-65

Description
Small enclosure, *c.*40m diameter, with wide (*c.* 5 m) ditch and two opposed causeways orientated north-east and south-west. Appears to have a central 'feature'.

Topography and geology
On the brickearths of the Tendring Plateau at 100 ft (30 m) OD, overlooking the River Stour.

7. Fobbing (Fig. 33)
ECC Site No. TQ78-89

Description
Diameter *c.* 40 m, and ditch *c.* 5m wide. Opposed causeways aligned north- east to south-west.

Topography and geology
On the river gravels at *c.* 50 ft (15 m) OD, overlooking the Vange and Fobbing marshes.

8. Great Wigborough (Fig. 33)
ECC Site No. TL91-64

Description
Approximately 40-45m in diameter; ditch up to 5m wide. Opposed causeways orientated north-west to south-east.

Topography and geology
On the marshes to the north of Salcott Creek, below 50 ft (15 m) OD, on the London Clay.

9. Little Bromley (Fig. 33)
ECC Site No. TM02-69

Description
Diameter *c.* 30 m, with opposed causeways orientated north-west to south-east. Ditch very wide in relation to the area enclosed (Pl. IX). 300 m north of Great Bromley (13). Ring-ditch cemetery to the south.

Topography and geology
Situated on the glacial sands and gravels of the Tendring Plateau at *c.* 100 ft (30 m) OD.

10. Great Bentley (Fig. 33)
ECC Site No. TM12-27

Description
Diameter *c.* 40 m, with a single entrance to the south-east. Opposite this is a large 'dark area' (?blocking an opposing entrance), also a very small, faint ring-ditch.

Topography and geology
On the brickearths and loams of the Tendring Plateau above 100 ft (30 m) OD.

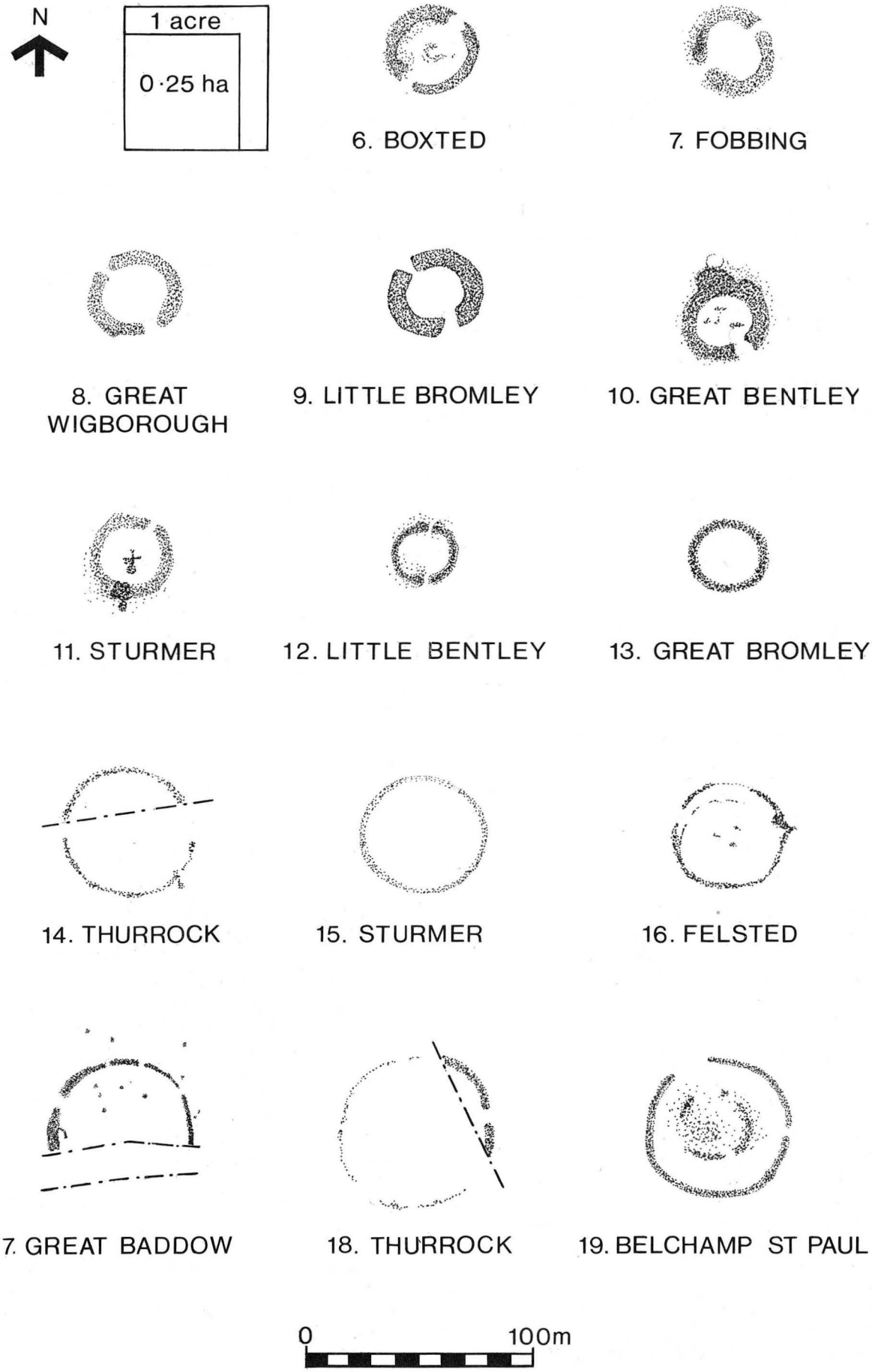

Fig. 33 Circular enclosures (cropmarks). Scale 1:2500

11. Sturmer (Fig. 33)
ECC Site No. TL64-17

Description
Penannular with entrance on the north-east. A number of pits and the cross-tree trenches of a windmill are visible within. Adjacent to Sturmer (15).

Topography and geology
On a small spur of chalky boulder clay, 60 ft (18 m) OD, overlooking the River Stour to the south-east and a stream to the east.

12. Little Bentley (Fig. 33)
ECC Site No. TM12-46

Description
Diameter *c.* 27 m, with opposed causeways orientated north to south; thickened ditch terminals.

Topography and geology
Junction of London Clay with the sands and gravels of the Tendring Plateau at 80-90 ft (24-27 m) OD.

13. Great Bromley (Fig. 33)
ECC Site No. TM02-69

Description
Annular with no apparent entrance causeway; *c.* 35m diameter. Associated with ring-ditch cemetery. 300m south of Little Bromley (9).

Topography and geology
On the glacial sands and gravel at 100 ft (30 m) OD.

14. Thurrock (Fig. 33)
ECC Site No. TQ67-45

Description
Ditch faint and discontinuous on the eastern side; *c.* 60m diameter.

Topography and geology
Sits at the junction of the Thames terrace deposits and the Thanet sands at 80 ft (24 m) OD.

15. Sturmer (Fig. 33)
ECC Site No. TL64-17

Description
Annular, *c.* 50-55m in diameter; no apparent entrance. Adjacent to Sturmer (11).

Topography and geology
On south-facing spur of the chalky boulder clay at 200 ft (61 m) OD.

16. Felsted (Fig. 33)
ECC Site No. TL61-122

Description
Diameter 50 m, with a possible causeway on the west side.

Topography and geology
Situated on the chalky boulder clay of the Colchester-Markshall Plateau, at 230-240 ft (70-73 m) OD.

17. Great Baddow (Fig. 33)
ECC Site No. TL70-136

Description
Partially destroyed by housing and a road, this enclosure is estimated to be *c.* 60m in diameter with one or more causeways. It is 0.7 km from that at Springfield (5).

Topography and geology
Elevated position on the sands and gravels, overlooking the Chelmer floodplain at *c.* 140 ft (43 m) OD.

18. Thurrock (Fig. 33)
ECC Site No. TQ68-65

Description
Faint cropmark, *c.* 70m in diameter, with at least one entrance on the east.

Topography and geology
On the Blackheath Beds at 75 ft (23 m) OD, looking inland over Orsett Fen.

19. Belchamp St Paul (Fig. 33)
ECC Site No. TL74-56

Description
Double-ditched enclosure, *c.* 60m in diameter; entrances in the outer ditch to north-west and east; inner ditch is faint. In close proximity to four ring-ditches and two pit features; a linear cropmark respects it (Pl. X).

Topography and geology
On sands and gravels within a meander of the River Stour at 130 ft (40 m) OD.

B. Curvilinear enclosures
i. Excavated

20. Little Waltham (Fig. 34)
ECC Site No. TL71-81

Description
An oval enclosure of *c.* 0.70 ha, consisting of a palisade or palisade revetting a turf bank, is postulated by the excavator (Drury 1978a, 10) on the basis of a section of ditch, associated with a number of circular houses, and the middle course of the earliest surviving cut of a field ditch. Its western side is hypothetical.

Topography and geology
On the south-western slopes of the Chelmer Valley at 100 ft (30 m) OD, lying on chalky boulder clay/London Clay.

Date and function
Domestic enclosure of the late second to mid-first century BC.

21. Colchester (Fig. 34)
ECC Site No. TL92-136

Description
Polygonal enclosure, *c.* 0.70 ha, with an entrance on the

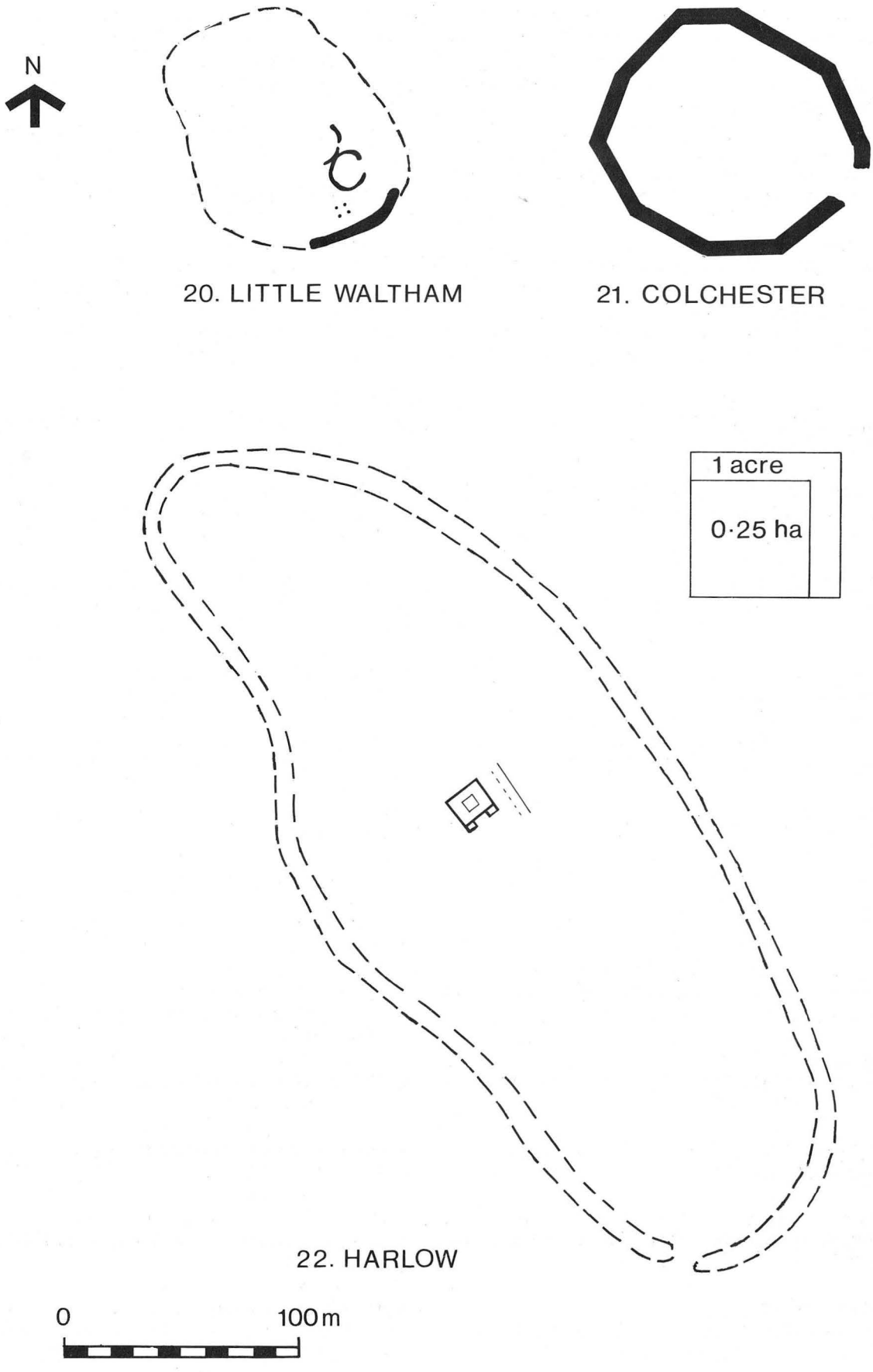

Fig. 34 Curvilinear enclosures (excavated). Scale 1:2500

eastern side; course and dimensions not traced precisely. Excavated just after the war and published by Hull (1958, 236-240). The enclosure was later surrounded by a walled enclosure which respected it, and a rectangular temple built in its centre.

Topography and geology
On the sands and gravels at 100 ft (30 m) OD, to the south-west of *Camulodunum*.

Date and function
Hull suggested that the ditch represented a palisade trench and that the earliest temple had also been timber. On analogy with Uley (Glos.), Crummy (1980, 258) raises the question as to whether it might be of Iron Age origin, the ditch demarcating a sacred area containing a tree or other sacred feature.

22. Harlow (Fig. 34)
ECC Site No. TL41-2

Description
Irregular oval ditched 'enclosure' of *c.* 3.75 ha, with entrance at the southern end.

Topography and geology
Low gravel hill, just below 150 ft (46 m) OD, overlooking the Stort floodplain.

Date and function
It is not clear whether this is a natural feature rather than an enclosure. Surrounds a Romano-Celtic temple, but Wheeler (1928, 300) suggested it may have origins as an Iron Age religious site.

ii. Cropmarks

23. Frating (Fig. 35)
ECC Site No. TM02-143

Description
Sub-circular, *c.* 0.62 ha, with east and south-west facing entrances. South-eastern portion is indeterminate on the other side of a field boundary. Smaller oval enclosure to the north (not drawn).

Topography and geology
On the brow of a hill at 90 ft (27 m) OD, on the sands and gravels of the Tendring Plateau.

24. Wendens Ambo (Fig. 35)
ECC Site No. TL53-150

Description
Pear-shaped enclosure with north-east facing entrance, *c.* 0.85 ha (Pl. XI).

Topography and geology
Situated on the upper chalk at *c.* 250 ft (75 m) OD, above the floodplain of a tributary of the River Cam.

25. Bradfield (Fig. 35)
ECC Site No. TM12-82

Description
Sub-circular, *c.* 1.6 ha, with partially segmental ditch on the eastern side (Pl. XII).

Topography and geology
Brickearths and loams of the Tendring Plateau at *c.* 110 ft (34 m) OD.

26. Bradfield (Fig. 35)
ECC Site No. TM12-55

Description
Pair of conjoined curvilinear enclosures: the southern pear-shaped, *c.* 1.14 ha, with a west facing entrance and an outer ditch on the western side; the northern is *c.* 0.32 ha (Pl. XIV).

Topography and geology
Overlooking the Stour Estuary, on the brickearths and loams, at 120 ft (37 m) OD.

27. Dedham (Fig. 35)
ECC Site No. TM03-23

Description
Sub-circular enclosure (*c.* 0.9 ha) joined to a smaller pear-shaped enclosure by a short ditched trackway. The latter appears to have two entrances on its east side (?discontinuity of cropmark) and from its apex is a further short ditched trackway which terminates in a 'dog-leg' (Pl. XV).

Topography and geology
On sands and gravels at 140 ft (39 m) OD, overlooking the Stour Valley.

28. Lawford (Fig. 35)
ECC Site No. TM03-68

Description
Sub-circular, *c.* 0.5 ha, with south-east facing entrance and irregular ditch.

Topography and geology
110 ft (33 m) OD on the brickearths and loams of the Tendring Plateau.

C. Sub-rectilinear enclosures under 0.25 ha
i. Excavated

29. Ardale School (Thurrock) (Fig. 36)
ECC Site No. TQ57-7

Description
Penannular enclosure, *c.* 0.03 ha, excavated in 1980 (Wilkinson 1980).

Topography and geology
Situated on the level ground of the Thames terrace gravels at 60 ft (18 m) OD, overlooking the former Mar Dyke Fen.

Date and function
Middle Iron Age date; relative lack of domestic debris suggests a cattle pen.

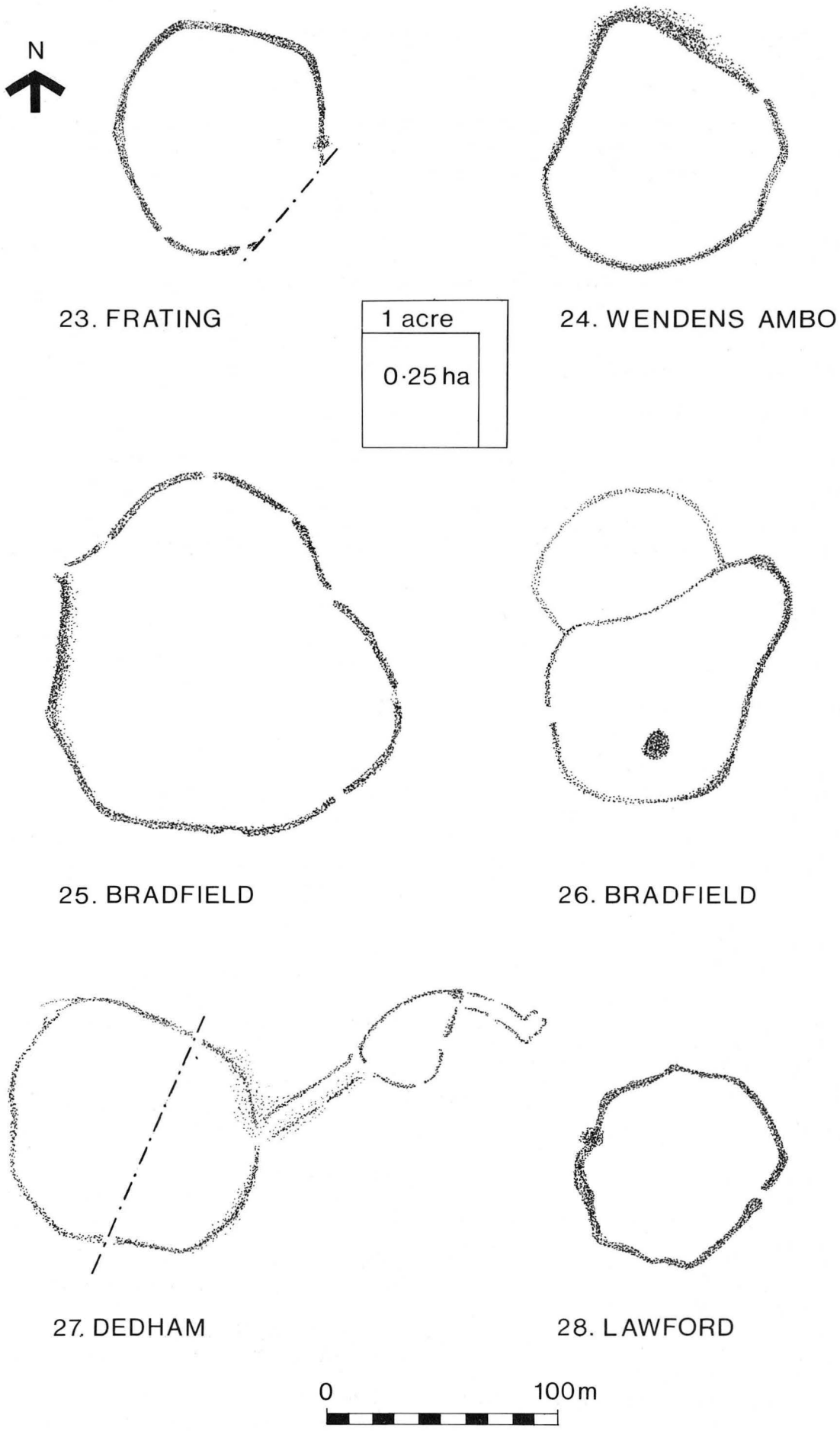

Fig. 35 Curvilinear enclosures (cropmarks). Scale 1:2500

30. Woodham Walter (Fig. 36)
ECC Site No. TL80-43

Description
Sub-rectangular, *c.* 0.09 ha, with a south-facing entrance. North-west corner of the ditch excavated in 1975 (Buckley and Hedges, this volume) and found to have a V-shaped profile. Interior not examined.

Topography and geology
Relatively flat site at 50 ft (15 m) OD, on a gently sloping bench of a post-alluvial fan on the south terrace of the Chelmer.

Date and function
Middle-Late Iron Age. Interpreted as a domestic enclosure.

31. Orsett (Thurrock) (Fig. 36)
ECC Site No. TQ68-36

Description
D-shaped enclosure, *c.* 0.12 ha, on the site of the Neolithic causewayed enclosure, Orsett (1). North-west corner excavated (Hedges and Buckley 1978).

Topography and geology
See Orsett (1)

Date and function
Archaeomagnetic dating confirms the ceramic range of 300-100 BC. Pottery evidence suggests a small enclosed settlement.

32. Ardale School (Thurrock) (Fig. 36)
ECC Site No. TQ57-7

Description
D-shaped enclosure, *c.* 0.13 ha, containing several pits with pottery. Excavated in advance of roadworks (Wilkinson 1980).

Topography and geology
See Ardale School (29)

Date and function
Dates to the first-second centuries AD. Occupation evidently nearby although no structures within the enclosure.

33. Mucking (Thurrock) (Fig. 36)
ECC Site No. TQ68-15

Description
Rectangular, *c.* 0.03 ha, with an east-facing entrance. Excavated by M.U. Jones.

Topography and geology
See Mucking (3)

Date and function
Few sherds of second-century BC pottery from primary ditch fills; two cremations with an omphalos jar from the top fill.

34. Mucking (Thurrock) (Fig. 36)
ECC Site No. TQ68-15

Description
Incomplete rectangular enclosure, *c.* 0.09 ha, containing a rectangular building trench and a number of pits.

Topography and geology
See Mucking (3)

Date and function
Domestic enclosure; pits within the house contained Belgic material.

35. Ardleigh (Fig. 36)
ECC Site No. TM02-15

Description
Sub-rectangular enclosure, *c.* 0.04 ha, surrounding a penannular gully 17 m in diameter. Excavated 1963-4 (B. Blake) and 1966 (Erith and Holbert 1970).

Topography and geology
Situated on loams, just above the valley bottom at 110 ft (34 m) OD.

Date and function
Domestic house enclosure, constructed in the third century BC. Destroyed by fire in the first century BC.

36. Dedham (Fig. 36)
ECC Site No. TM03-36

Description
Rectangular enclosure, 0.08 ha, trenched in 1959 by Colchester Museum (Blake 1960, 356-7).

Topography and geology
On the brickearths and loams, overlooking the Stour Valley at 100 ft (30 m) OD.

Date and function
First-century AD pottery recovered.

37. Thurrock (Fig. 36)
ECC Site No. TQ68-38

Description
One of three small enclosures, *c.* 0.04 ha, trenched in 1961-2 (Turner forthcoming).

Topography and geology
On the sands and gravels of the Thames terraces at 100 ft (30 m) OD.

Date and function
Function unknown, presumed to be of Roman date.

38. Nazeingbury (Nazeing) (Fig. 36)
ECC Site No. TL30-9

Description
Incomplete curvilinear enclosure; estimated original area

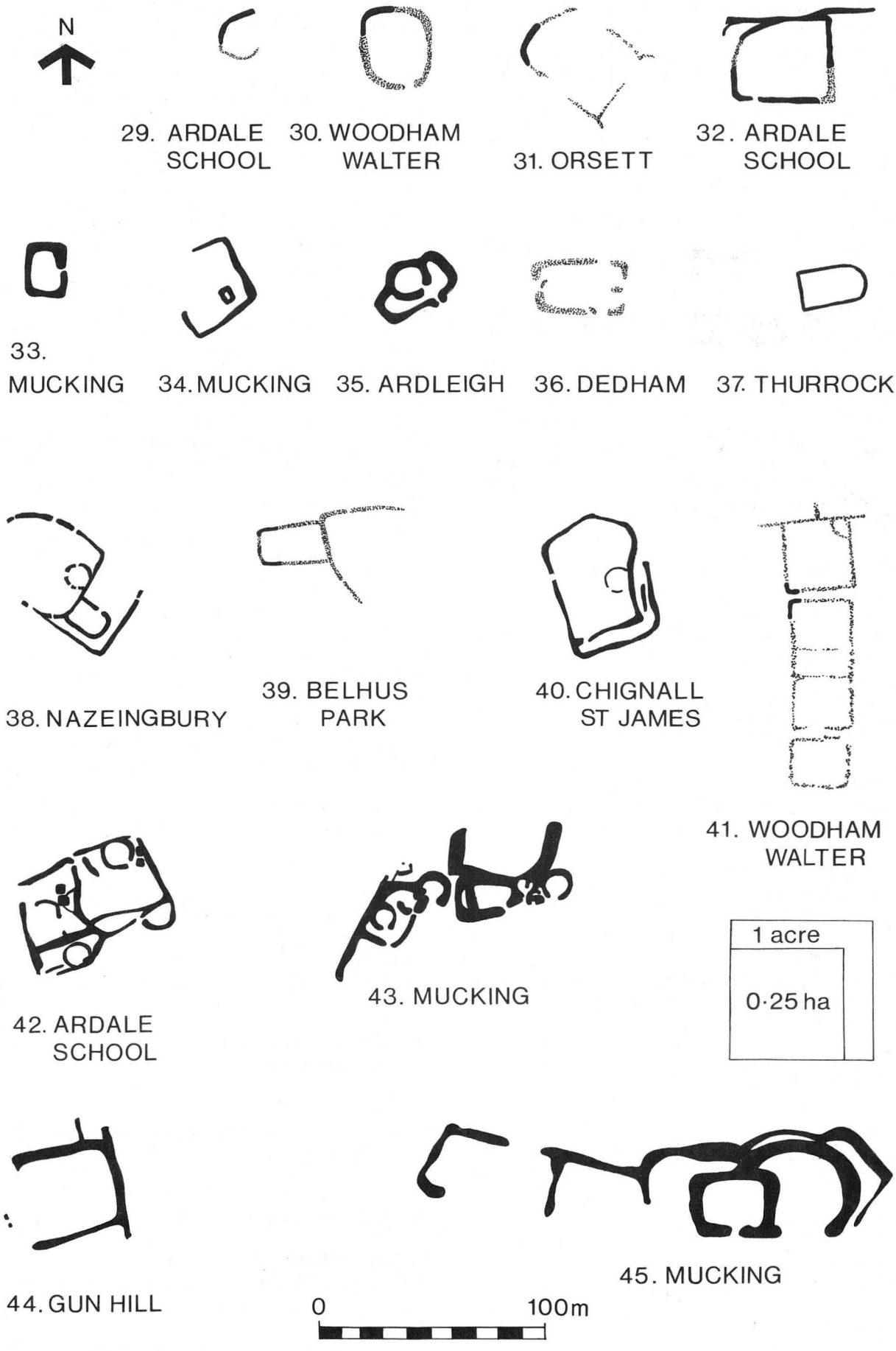

Fig. 36 Sub-rectangular enclosures under 0.25 ha (excavated). Scale 1:2500

c. 0.13 ha; to the south-east is an adjoining sub-rectangular compound 10m by 14 m, with one entrance. The outer rectilinear ditches form part of a later field system. Excavated in advance of mineral extraction in 1975-6 (Huggins 1978).

Topography and geology
Situated at *c.* 100 ft (30 m) OD, on the terrace gravels of the River Lea.

Date and function
Both enclosures are of Belgic date and are interpreted as farmyard/house enclosures.

39. Belhus Park (Thurrock) (Fig. 36)
ECC Site No. TQ58-65

Description
Two conjoined enclosures: the western is sub-rectangular, *c.* 0.045 ha, and appears to have had an internal bank; the eastern is incomplete (Wilkinson 1980 and forthcoming).

Topography and geology
On the gravels of a broad, flat terrace at 60 ft (18 m) OD.

Date and function
Early and Middle Iron Age pottery in the ditch fills; the latter predominates in the upper fills. Although no evidence for a building was found, enough occupation debris exists to postulate a significant multi- period Iron Age (and possibly Romano-British) enclosed settlement.

40. Chignall St James (Fig. 36)
ECC Site No. TL61-97

Description
Sub-rectangular enclosure, *c.* 0.2 ha in area, with partial double ditch, containing one round-house. Excavated in advance of mineral extraction (Clarke in prep.).

Topography and geology
Situated above the floodplain of the River Can, at 140 ft (43 m) OD, on chalky boulder clay.

Date and function
Provisionally dated to the Middle Iron Age, it appears to be a small domestic enclosure with a ditched entrance-way for herding stock.

41. Woodham Walter (Fig. 36)
ECC Site No. TL80-43

Description
Group of four sub-square enclosures, ranging from 0.04-0.07 ha, partially conjoined, aligned north-south. Ditches sectioned in 1975 (Buckley and Hedges, this volume).

Topography and geology
See Woodham Walter (30)

Date and function
Date unknown, assumed to be Roman. Interpreted as stock enclosures.

42. Ardale School (Thurrock) (Fig. 36)
ECC Site No. TQ57-7

Description
Group of conjoined rectangular enclosures, internally sub-divided, with three penannular gullies and a number of pits containing large quantities of daub. Excavated in 1980 (Wilkinson 1980 and forthcoming).

Topography and geology
See Ardale School (29)

Date and function
A Middle and Late Iron Age domestic settlement of several phases.

43. Mucking (Thurrock) (Fig. 36)
ECC Site No. TQ68-15

Description
Group of penannular gullies with small associated compounds (Jones 1974, 189).

Topography and geology
See Mucking (3)

Date and function
Middle Iron Age houses with individual compounds.

44. Gun Hill (Thurrock) (Fig. 36)
ECC Site No. TQ67-72

Description
Rectangular enclosure, *c.* 0.15 ha, with external bank and a trackway leading up to it from the north. Southern ditch re-cut at a slightly later date. Fragments of the butt-end of a later entrance survived on the western side, adjacent to a later enclosure (Gun Hill (55)). Excavated 1969-70 (Drury and Rodwell 1973).

Topography and geology
Situated on highest point of a sharply defined gravel spur of the Thames terrace at 75 ft (23 m) OD.

Date and function
Middle/Late Iron Age stock enclosure, with associated droveway.

45. Mucking (Thurrock) (Fig. 36)
ECC Site No. TQ68-15

Description
Complex of small rectilinear enclosures, with a prominent semi-circular enclosure *c.* 55m in diameter.

Topography and geology
See Mucking (3)

Date and function
Belgic material recovered. The circular enclosure is interpreted by the excavators as a sheep fold (Jones and Jones 1975, 146).

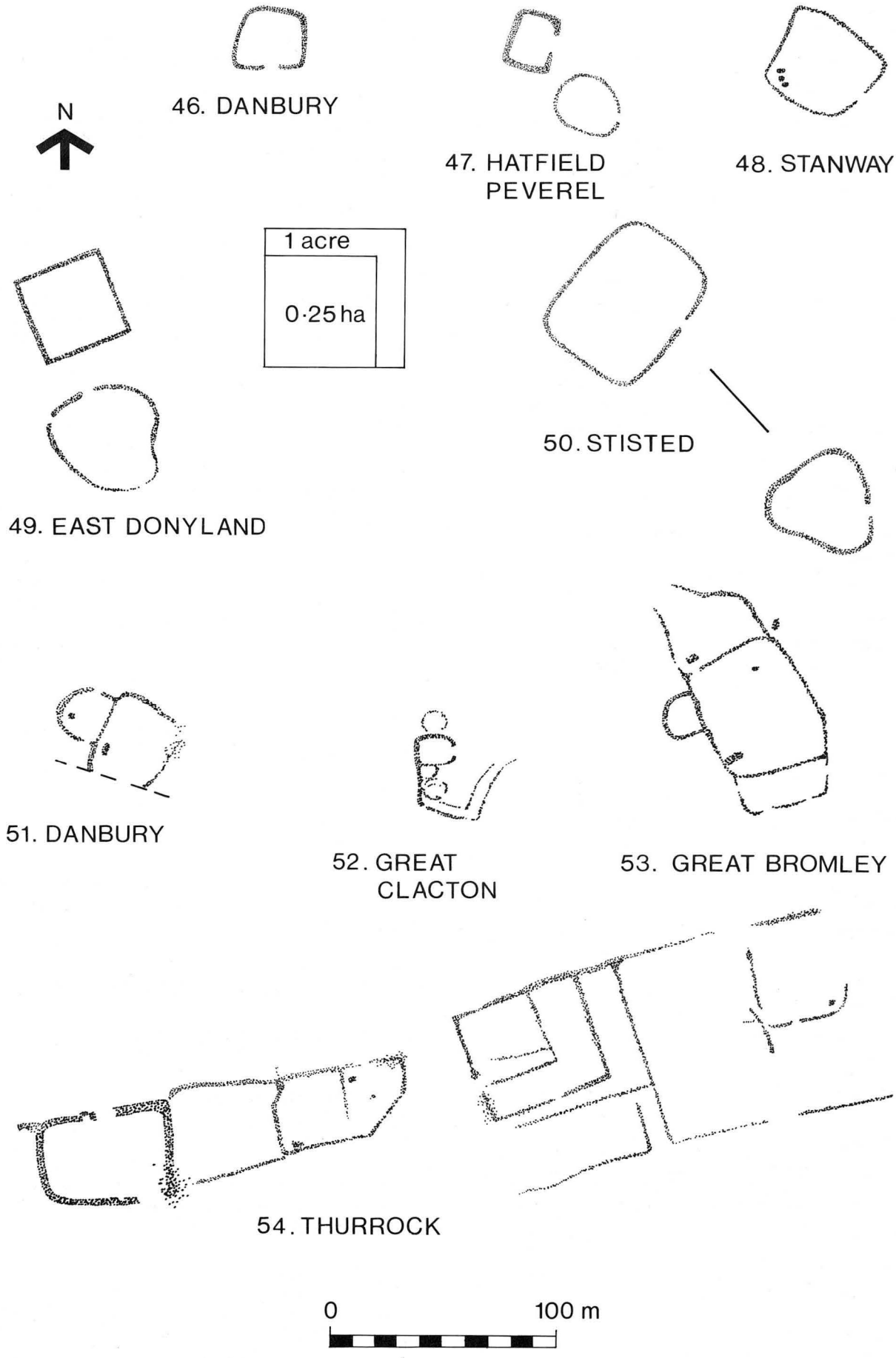

Fig. 37 Sub-rectangular enclosures under 0.25 ha (cropmarks). Scale 1:2500

ii. Cropmarks

46. Danbury (Fig. 37)
ECC Site No. TL70-68

Description
Sub-rectangular enclosure, *c.* 0.06 ha, with south-facing entrance.

Topography and geology
On the glacial sands and gravels, overlooking Sandon Brook, just below 100 ft (30 m) OD.

47. Hatfield Peverel (Fig. 37)
ECC Site No. TL70-145

Description
Small rectangular enclosure, 0.03 ha, with wide entrance in the east long side; horseshoe-shaped enclosure, 0.05 ha, to the south-east.

Topography and geology
On the non-glacial sands and gravels of the Chelmer floodplain, below 65 ft (20 m) OD.

48. Stanway (Fig. 37)
ECC Site No. TL92-36

Description
Pear-shaped enclosure, *c.* 0.15 ha, with south-east facing entrance. Three large pits visible within (Pl. XVIII). Adjacent to Stanway (68).

Topography and geology
Sands and gravels at 100 ft (30 m) OD, overlooking the Roman River Valley to the south.

49. East Donyland (Fig. 37)
ECC Site No. TM02-186

Description
Two enclosures: the northern is regular, *c.* 40m square, with no apparent entrance; the southern is pear-shaped, *c.* 0.16 ha, with two entrances in the north-west side (Pl. XVI).

Topography and geology
On the glacial sands and gravels at *c.* 100 ft (30 m) OD.

50. Stisted (Fig. 37)
ECC Site No. TL72-81

Description
Two enclosures in close proximity: one approximately pear-shaped, *c.* 0.13 ha, with a single east-facing entrance; the northern a sub-rectangular enclosure, *c.* 0.25 ha.

Topography and geology
Situated on London Clay, on the south bank of the River Blackwater at 120 ft (37 m) OD.

51. Danbury (Fig. 37)
ECC Site No. TL70-161

Description
Sub-rectangular enclosure, *c.* 0.10 ha, with a small D-shaped compound on the west side. A large 'pit' visible in each.

Topography and geology
On the sands and gravels of the Danbury Ridge at 230 ft (70 m) OD.

52. Great Clacton (Fig. 37)
ECC Site No. TM11-88

Description
Small penannular gully, *c.* 18m diameter, with adjoining double ditch, possibly forming a partially open enclosure to the south. Three small circular gullies are evident, clustered around the enclosure.

Topography and geology
At 50 ft (15 m) OD, on the sands and gravels of the Clacton Plain.

53. Great Bromley (Fig. 37)
ECC Site No. TM12-67

Description
Sub-rectangular enclosure, *c.* 0.24 ha, with apparently later compounds to the north and south, and a small D-shaped compound to the west. The northern compound has a wide funnel-shaped entrance. Several large pits are visible (Pl. XVII).

Topography and geology
On the brickearths and loams at the southern edge of the Tendring Plateau, at 100 ft (30 m) OD.

54. Thurrock (Part GLC) (Fig. 37)
ECC Site No. TQ58-31

Description
String of rectilinear enclosures ranging in shape and area, but mostly sub-rectangular, *c.* 0.15 ha, with larger sub-divided enclosure.

Topography and geology
On the Thames terrace gravels at 54 ft (20 m) OD.

D. Rectilinear enclosures under 1 ha
i. Excavated

55. Gun Hill (Thurrock) (Fig. 38)
ECC Site No. TQ67-72

Description
Sub-rectangular, 0.3 ha, with internal turf-revetted rampart; east-facing entrance; excavated in 1969-70 (Drury and Rodwell 1973).

Topography and geology
See Gun Hill (44)

Date and function
Mid-first century AD pottery. No evidence for domestic occupation; interpreted as some form of military defence.

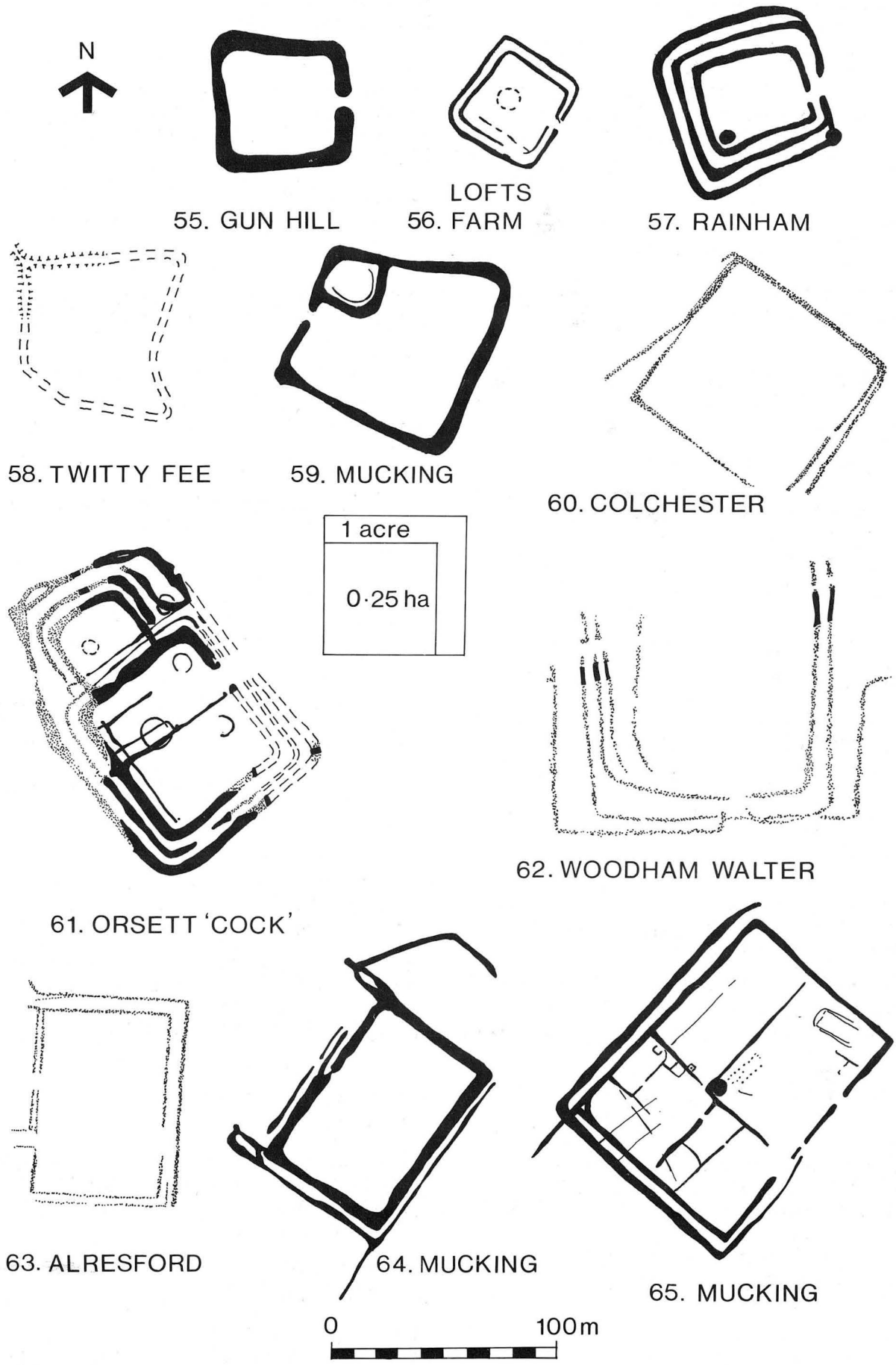

Fig. 38 Rectilinear enclosures under 1 ha (excavated). Scale 1:2500

56. Lofts Farm (Great Totham) (Fig. 38)
ECC Site No. TL80-51

Description
Sub-square, double-ditched enclosure, *c.* 0.10 ha, with east-facing entrance. Central circular building gully *c.* 10m in diameter. Excavated in 1985 in advance of mineral extraction (Brown in prep.).

Topography and geology
Sands and gravels, overlooking the Blackwater Estuary at 100 ft (30 m) OD.

Date and function
Late Bronze Age pottery and other finds; radiocarbon dates awaited. Probably a domestic enclosed settlement.

57. Rainham (GLC) (Fig. 38)
ECC Site No. TQ58-52

Description
Trapezoidal, triple-ditched enclosure, *c.* 1.6 ha, with western entrance. Excavated in advance of mineral working (Greenwood 1982).

Topography and geology
Lies on alluvium at 20 ft (6 m) OD, on the Thames terrace, overlooking a stream to the north.

Date and function
Spans Late Iron Age to the Roman period, the multi-ditched enclosure representing the Roman phases.

58. Twitty Fee (Danbury) (Fig. 38)
ECC Site No. TL70-39

Description
Polygonal enclosure, *c.* 0.36 ha, surviving as an earthwork with ill-defined rampart and ditch. Excavated in 1933 (Bull 1937).

Topography and geology
Lies on the sands and gravels of the Chelmer Valley, on an east-facing slope at 250 ft (76 m) OD.

Date and function
Late Iron Age pottery from the ditch fills, although earlier material was found scattered over the site.

59. Mucking (Thurrock) (Fig. 38)
ECC Site No. TQ68-15

Description
Sub-rectangular enclosure, *c.* 0.47 ha, with internal bank and V-shaped profile ditch. Entrance in the middle of the west side, widened when the inner compound was constructed.

Topography and geology
See Mucking (3)

Date and function
Archaeomagnetic date of 100 ± 50 BC (Jones 1977, 35). Enclosed dwelling.

60. Colchester (Fig. 38)
ECC Site No. TL92-114

Description
Approximately 80m square (0.56 ha), double-ditched on south-east side. Entrance in inner ditch on east side. Excavated by Lt. Col. R.J. Appleby in 1952 (Colchester Museum 1950-4, 53).

Topography and geology
Lies on the floodplain, north of the River Colne at 50 ft (15 m) OD.

Date and function
Tentatively dated by the excavator to not later than the Early-Middle Iron Age.

61. Orsett 'Cock' (Thurrock) (Fig. 38)
ECC Site No. TQ68-3

Description
Rectangular, conjoined enclosures (SAM 115): the larger, apparently triple-ditched, is 0.35 ha, and has an internal bank and possible rampart and north-facing entrances. Excavated in advance of roadworks (Rodwell 1970: Toller 1980 and in prep.).

Topography and geology
On the 100 ft (30 m) OD gravel terrace, at the highest point in the locality, near a ridgeway.

Date and function
Originally ascribed a Roman military function (Rodwell 1970), further excavation has not borne this out. The first phase is Middle Iron Age, and the later occupation, including the internal partition and the outer ditch, date to the first century AD. The evidences suggests an enclosed farmstead.

62. Woodham Walter (Fig. 38)
ECC Site No. TL80-43

Description
Rectangular double-ditched enclosure (SAM 176), *c.* 0.8 ha, possibly using the river terrace slope on the north for its fourth side. Central entrance in the south side. More than one phase apparent. Limited excavations in 1975 (Buckley and Hedges, this volume).

Topography and geology
See Woodham Walter (30)

Date and function
Although the interior was not examined, this is interpreted as a domestic settlement. It was constructed in the mid-first century BC and continued in use into the second century AD.

63. Alresford (Fig. 38)
ECC Site No. TM01-127

Description
Rectangular enclosure, *c.* 80 by 55m (0.44 ha). An outer ditch is discontinuous and varies in distance from the

inner ditch; two entrances in the west side. Emergency recording prior to destruction by mineral working in 1984 (Priddy 1984-5a and b).

Topography and geology
On the high ground at 60 ft (18 m) OD, overlooking the Colne Estuary, Alresford Creek to the west and a stream to the east.

Date and function
Pottery from the first to third centuries AD retrieved from the ditch sections. Assumed to be a domestic settlement.

64. Mucking (Thurrock) (Fig. 38)
ECC Site No. TQ68-15

Description
Rectangular enclosure; main ditch 2m wide with a V-shaped profile. Surrounded on three sides by a slight outer ditch, with a centrally placed entrance in the north side.

Topography and geology
See (Mucking) (3)

Date and function
Considered by the excavator to be a quasi-military enclosure of the first century AD (Jones 1978, 172); military metalwork found.

65. Mucking (Thurrock) (Fig. 38)
ECC Site No. TQ68-15

Description
Rectangular enclosure with outer ditch around three sides and entrances in the south side. Internally divided into four regular compounds.

Topography and geology
See Mucking (3)

Date and function
Romano-British farmstead.

66. Gosbecks (Colchester) (Fig. 39)
ECC Site No. TL92-3

Description
Wide-ditched enclosure, *c.* 100m square (1 ha), east facing causeway; lies within a double-walled enclosure with a square double colonnade. Within the ditched enclosure is a Romano-Celtic temple (SAM 57). Enclosure (81) is situated to the south-west.

Topography and geology
On the sands and gravels at 100 ft (30 m) OD, overlooks the Roman River Valley.

Date and function
Only the square ditched enclosure is considered here. Crummy (1980, 260) suggests it is to be compared with *Viereckschanzen*, rectangular sacred enclosures found on the continent, especially in southern Germany. Although it is generally assumed that the ditched enclosure here is pre-conquest, Crummy points out that the integration of the other elements is so neat that a post-conquest date should not be discounted.

67. Great Chesterford (Fig. 39)
ECC Site No. TL53-17

Description
Ditched enclosure: a parallelogram of 0.9 ha. Temple at present under excavation, enclosure ditch sectioned (Priddy 1984-5b).

Topography and geology
Hillside position on the chalk at 150 ft (46 m) OD.

Date and function
Enclosure with inner precinct wall surrounding a

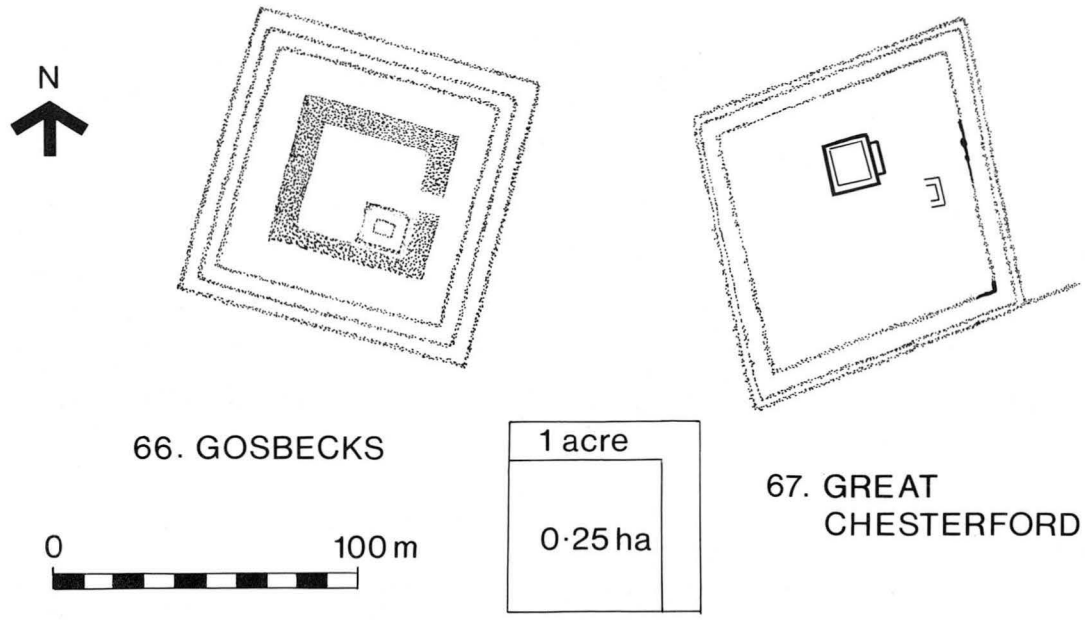

Fig. 39 Rectilinear enclosures under 1 ha (excavated). Scale 1:2500

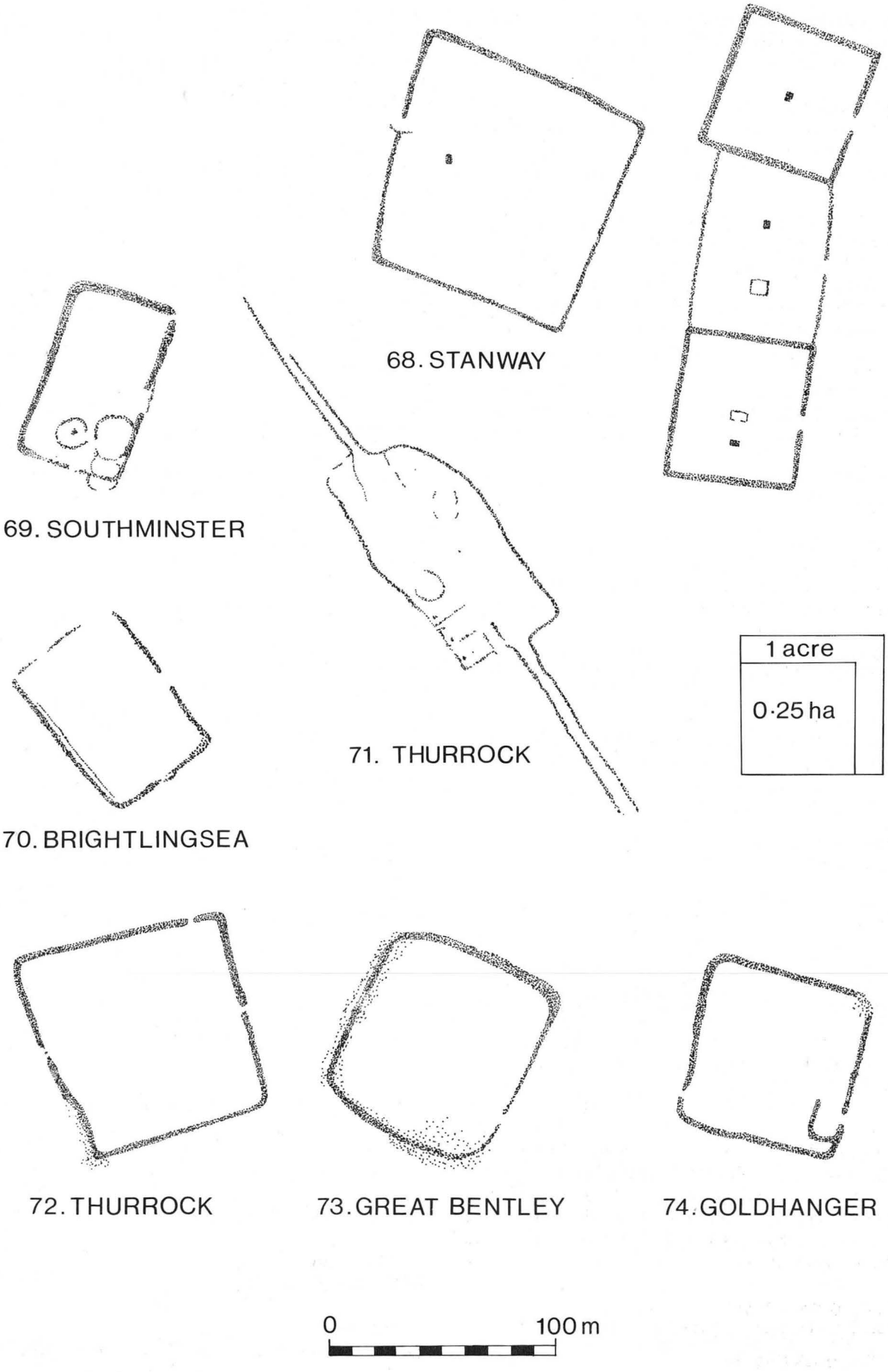

Fig. 40 Rectilinear enclosures under 1 ha (cropmarks). Scale 1:2500

Romano-Celtic temple, the latter dating from the late first century AD onwards.

ii. Cropmarks

68. Stanway (Fig. 40)
ECC Site No. TL92-36

Description
Group of four rectilinear enclosures immediately to the west of the Gryme's Dyke. Three are linked in a block aligned north-south, their average area being 0.37 ha. The largest (1 ha) lies to the west and is less regular; immediately to the south is enclosure (48). The three conjoined enclosures each have a central rectangular pit-like feature, whilst the southern two have small rectangular structures which line up with the 'pits' along the long axis. Each has a central east-facing entrance. It appears that the central enclosure may be a later feature created by joining the north and south enclosures (Pl. XVIII).

Topography and geology
See Stanway (48)

69. Southminster (Fig. 40)
ECC Site No. TL90-19

Description
Rectangular enclosure, *c.* 80 by 50m (0.4 ha). Number of entrances unclear due to discontinuous cropmark. Penannular gullies may represent circular houses although it is adjacent to a further group of ring-ditches (?barrows). There is also an adjoining field system (SAM 198).

Topography and geology
Situated on a small spur overlooking Asheldham Brook at 70 ft (21 m) OD, on the non-glacial sands and gravels.

70. Brightlingsea (Fig. 40)
ECC Site No. TM01-20

Description
Rectangular enclosure, *c.* 75 by 50m (0.375 ha), with an entrance in the centre of the east side.

Topography and geology
Site is just inland from Alresford Creek, looking north over the floodplain, just above 50 ft (15 m) OD. On glacial sands and gravels.

71. Thurrock (Fig. 40)
ECC Site No. TQ67-77

Description
Sub-rectangular enclosure, *c.* 105 by 50m (0.525 ha), with ditched trackways leading to its entrances in the middle of the short north and south sides. Very faint internal cropmarks appear to represent sub-divisions, possible house gullies and ditches to control entry and exit of stock. Neolithic arrowheads found nearby (Couchman 1979, 34).

Topography and geology
Situated on the Thames terrace at 80 ft (24 m) OD.

72. Thurrock (Fig. 40)
ECC Site No. TQ68-50

Description
Sub-rectangular enclosure, *c.* 90 by 85m (0.765 ha) possibly with three entrances.

Topography and geology
At the junction of the Blackheath Beds and the glacial sands and gravels; 80 ft (24 m) OD.

73. Great Bentley (Fig. 40)
ECC Site No. TM11-75

Description
Sub-square, *c.* 85 by 80m (0.68 ha), with no visible entrance.

Topography and geology
On the Tendring Plateau sands and gravels at 80 ft (24 m) OD.

74. Goldhanger (Fig. 40)
ECC Site No. TL80-93

Description
Sub-square, *c.* 70m (0.49 ha), with an entrance at the south-east corner. Inner ditch appears to be associated with this; possible second entrance at south-west corner.

Topography and geology
Elevated position at 70 ft (21 m) OD, on head deposits, looking out across the Blackwater Estuary.

75. Ulting (Fig. 41)
ECC Site No. TL80-86

Description
Rectilinear enclosure complex, only partially abstracted here, aligned on a trackway. To the south-west of the trackway is a multi-ditched enclosure, presumably of several phases (Pl. XIX). To the north-east is a large (1.75 ha) enclosure, with a ditched trackway running along its east side (Pl. XIX).

Topography and geology
On the glacial sands and gravels, overlooking the Lower Chelmer Valley at 95 ft (29 m) OD.

76. Frating (Fig. 41)
ECC Site No. TM02-110

Description
Double-ditched, sub-rectangular enclosure with main entrance in the east side; *c.* 0.64 ha.

Topography and geology
Situated on the brickearths and loams of the Tendring Plateau, at 100 ft (30 m) OD.

77. Hadleigh (Fig. 41)
ECC Site No. TQ88-2

Description
Double-ditched enclosure (SAM 108): outer dimensions *c.* 120m square; inner *c.* 65m square. Entrance in the east

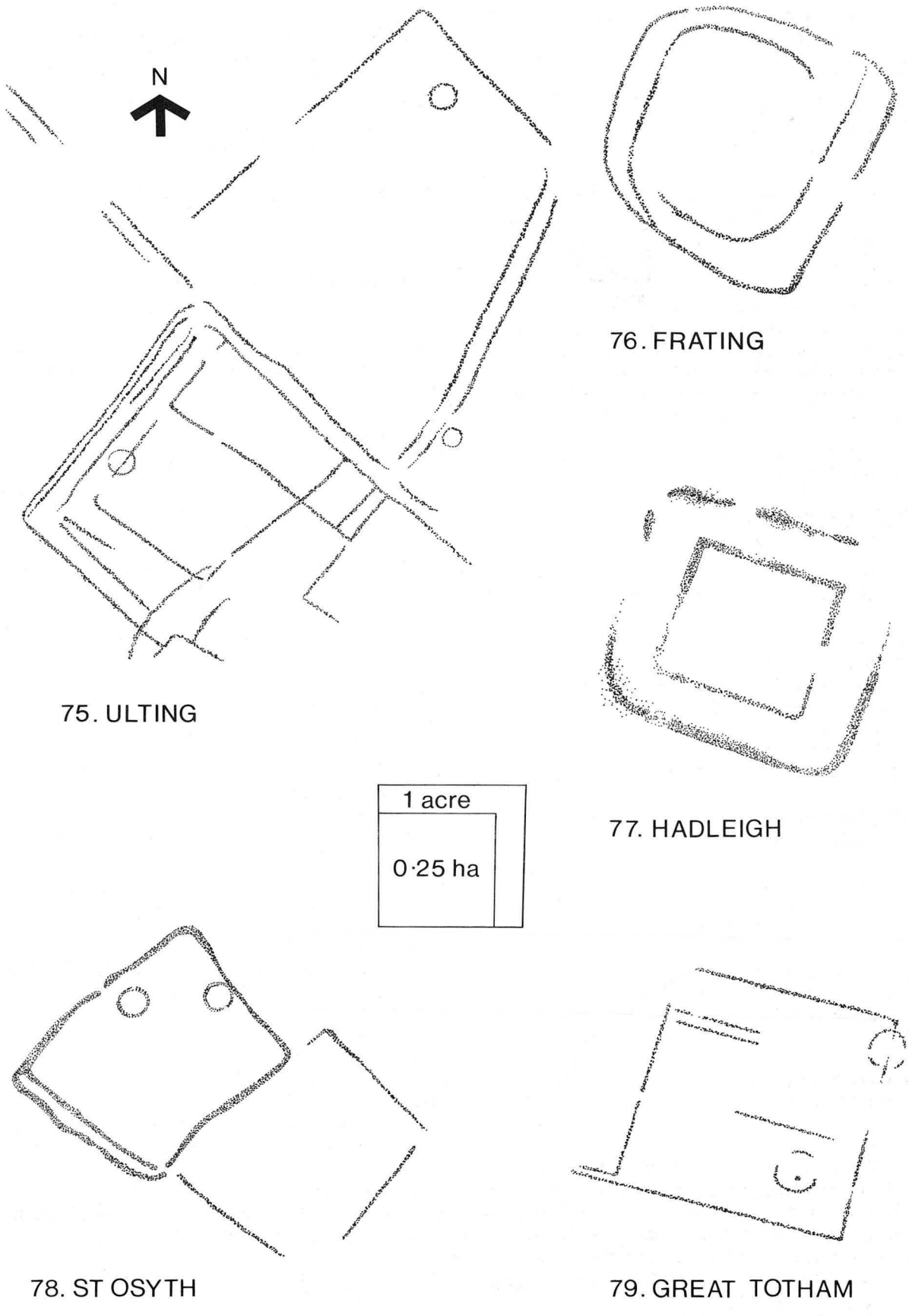

Fig. 41 Rectilinear enclosures under 1 ha (cropmarks). Scale 1:2500

side of inner ditch, but cropmark too faint to identify further entrances.

Topography and geology
Commands a wide view over the mouth of the Thames, on London Clay at 240 ft (73 m) OD.

78. St Osyth (Fig. 41)
ECC Site No. TM11-91

Description
Two conjoined enclosures of similar area (0.63 ha); the northern appears to have a ditched trackway running along the west side, the southern appears to be later annexe.

Topography and geology
Situated on the top of a coastal ridge at 60 ft (18 m) OD, on glacial sands and gravels.

79. Great Totham (Fig. 41)
ECC Site No. TL80-51

Description
Square enclosure, *c.* 1 ha, with faint traces of internal subdivision; one ring-ditch within and a second straddling the ditch.

Topography and geology
Overlooking the upper reaches of the Blackwater, at 25 ft (8 m) OD on sands and gravels.

E. Rectilinear enclosures between 1 and 4 ha
i. Excavated

80. Colchester (Fig. 42)
ECC Site No. TL92-15

Description
Polygonal walled enclosure, *c.* 1.32 ha; average 2 ft (0.6 m) wide, with buttresses alternating on its inside and outside. Trenched by Hull (1958, 224-233).

Topography and geology
On the sands and gravels, just above the floodplain of the Colne, at 100 ft (30 m) OD.

Date and function
Temple enclosure: earliest dating evidence for the temple is late first century AD, the area being maintained until at least AD 333.

81. Gosbecks (Colchester) (Fig. 42)
ECC Site No. TL92-3

Description
Trapezoidal enclosure, *c.* 1.3 ha, with no apparent entrance. Double-ditched trackway on the south-east and south-west sides, with a smaller enclosure to the north-east. The latter was sectioned by M.R. Hull and Lt. Col. R.J. Appleby in 1949 (Hull 1958, 270-1). South-west of the temple enclosure (66).

Topography and geology
See Gosbecks (66)

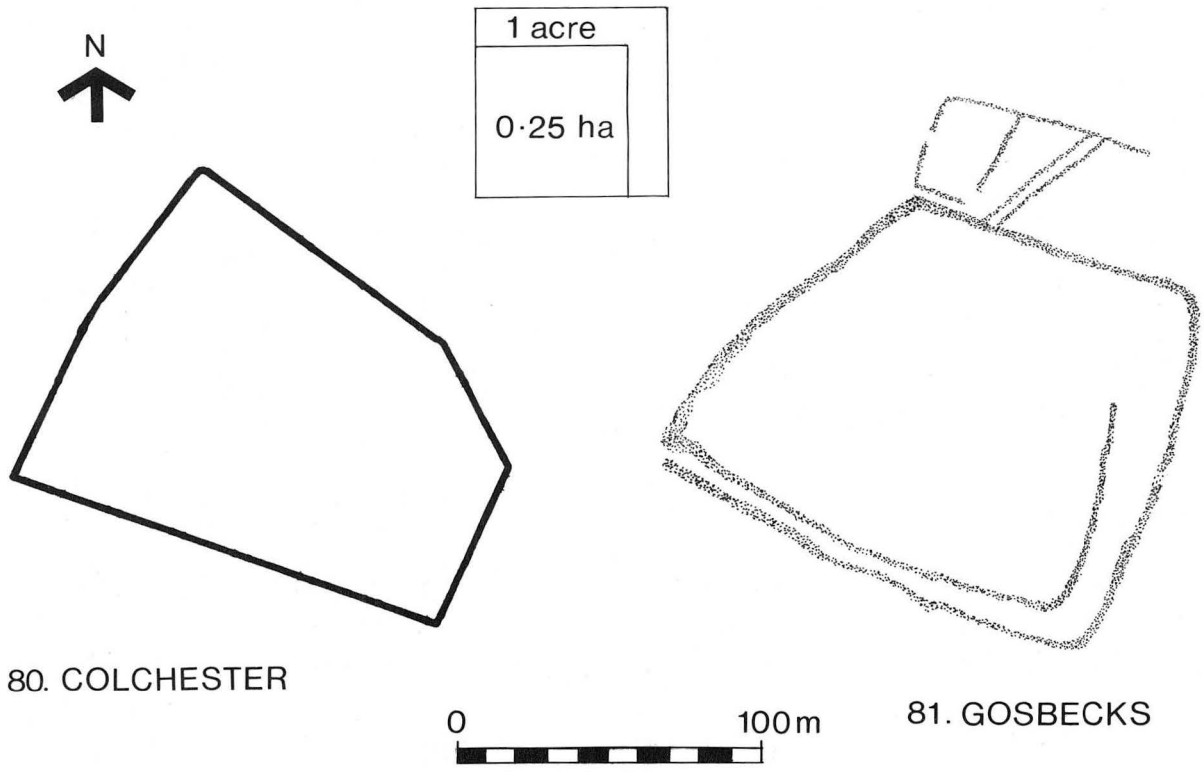

Fig. 42 Rectilinear enclosures over 1 ha (excavated). Scale 1:2500

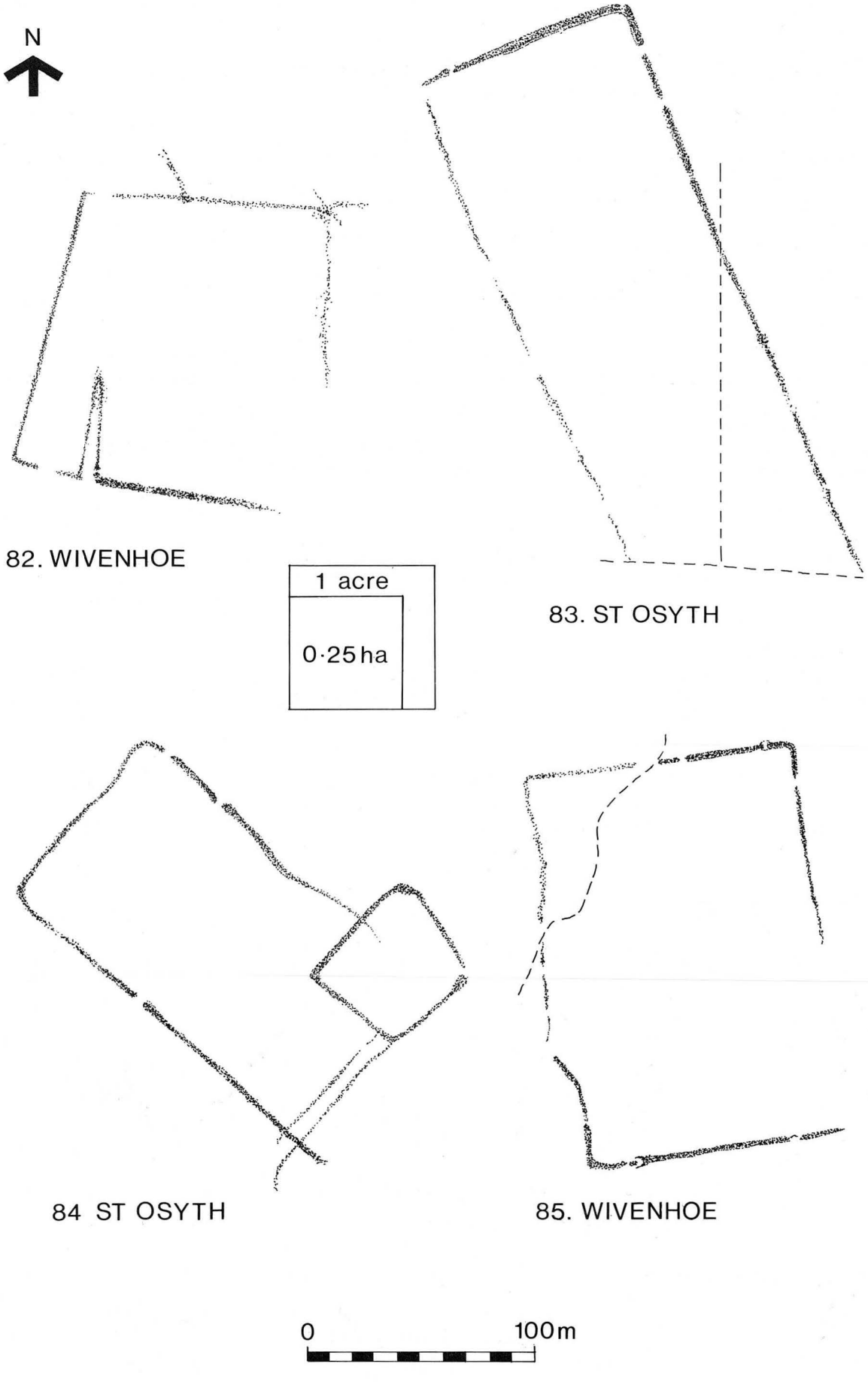

Fig. 43 Rectilinear enclosures over 1 ha (cropmarks). Scale 1:2500

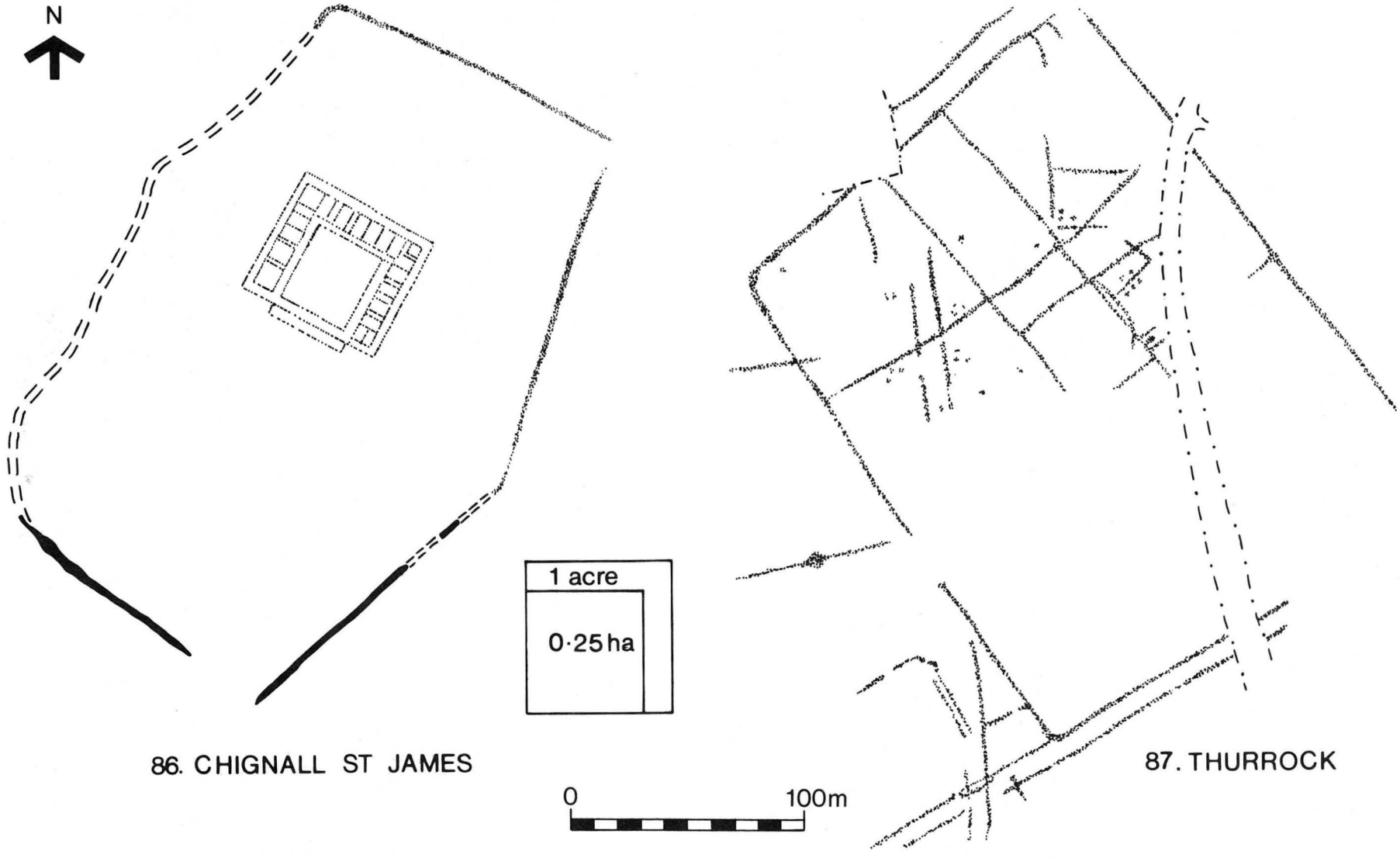

Fig. 44 Rectilinear enclosures over 4 ha. Scale 1:2500

Date and function
Pottery suggests a pre-Roman origin for both enclosures. Crummy (1980, 264) suggests the enclosure, situated as it is at the convergence of many trackways and the dyke system, represents a native farmstead which was the site of a royal household.

ii. Cropmarks

82. Wivenhoe (Fig. 43)
ECC Site No. TM02-163

Description
Rectangular, *c.* 120 by 130m (1.56 ha); discontinuous cropmark; funnel-shaped entrance on south side.

Topography and geology
On a spur of glacial sands and gravels, overlooking the River Colne at 100 ft (30 m) OD.

83. St Osyth (Fig. 43)
ECC Site No. TM11-90

Description
Large rectangular enclosure, 100m wide and at least 270m long (2 ha). Western side faint, difficult to assess whether a discontinuous ditch or cropmark. Position of southern side unknown (Pl. XIII).

Topography and geology
Situated on a ridge of high ground at 50 ft (15 m) OD, on non-glacial sands and gravels.

84. St Osyth (Fig. 43)
ECC Site No. TM11-91

Description
Rectangular enclosure, *c.* 1.25 ha, appears to butt against a smaller, *c.* 0.25 ha, sub-square enclosure and a ditched trackway which forms its south side.

Topography and geology
Overlooks Brightlingsea Creek, on sands and gravels at 60 ft (18 m) OD.

85. Wivenhoe (Fig. 43)
ECC Site No. TM02-107

Description
Rectangular enclosure, *c.* 170 by 115m (*c.* 1 ha). Discontinuous ditch but apparent entrances in the south and west sides.

Topography and geology
Level ground at 100 ft (30 m) OD, on glacial sands and gravels.

F. Rectilinear enclosures over 4 ha
i. Excavated

86. Chignall St James (Fig. 44)
ECC Site No. TL61-97

Description
Polygonal enclosure, *c.* 4.2 ha. Part excavated in advance of gravel extraction (Buckley and Going 1977: Clarke in prep.).

Topography and geology
See Chignall (40)

Date and function
Villa enclosure of several phases, the first probably dating to the late first century AD. Field systems to either side, smaller enclosures in the vicinity.

ii. Cropmark

87. Thurrock (Fig. 44)
ECC Site No. TQ68-78

Description
Rectangular enclosure, *c.* 250 by 200m (5 ha), sub-divided into a number of compounds; ditched trackways run along the north and south sides (Pl. XXII).

Topography and geology
Flat ground above 60 ft (18 m) OD, on the Thames terrace gravels.

III Discussion

A number of factors become immediately apparent from the Gazetteer and can usefully be set out as a preliminary to the discussion.

i. Form is often, though not invariably, an indicator of date.

ii. The scale of excavation and lack of diagnostic features/artefacts preclude firm conclusions about the functions of many enclosures. Therefore, at the present time, form is unreliable as a guide to function.

iii. A very wide range of enclosure type is evident. The broad divisions used in this study are useful for ease of discussion. Consideration of the circular enclosures shows that more detailed classification of distinctive forms is possible where all examples can be considered.

iv. Within any classification based on form, the size range is such that although enclosures may 'cluster' around particular sizes, sub-division based on size is to a certain extent arbitrary.

v. The primary functions of demarcation and/or protection can be assigned to all Essex enclosures. The range of possible uses arising from these is considerable and may include some or all of the following:
Domestic: individual dwellings, collective settlements. *Agricultural*: animal enclosures (pounds, paddocks, fields), arable fields, horticultural plots.
Communal or special status: industrial areas, meeting places, markets, administrative centres, defences, sacred places, religious sites, cemeteries.

A. Circular enclosures

These are consistently among the earliest enclosures recorded in the county, spanning the Neolithic to the Late Bronze Age. They are the only enclosure form which can be readily classified by form and size.

i. Single-ditched circular enclosures over 50m in diameter

Excavated enclosures: Mucking North Ring (3), Springfield (5).
Unexcavated cropmarks: Thurrock (14), Sturmer (15), Felsted (16), Great Baddow (17), Thurrock (18).

ii. Double-ditched circular enclosures over 50m in diameter

Excavated enclosures: Mucking South Rings (4).
Unexcavated cropmark: Belchamp St Paul (19).

Although morphological differences exist, the excavated single and double-ditched circular enclosures over 50 m are contemporary, suggesting major defended settlements. These sites are therefore considered together.

Both Mucking North Ring and Springfield date to the Late Bronze Age and represent domestic settlements. Whilst the North Ring at Mucking has circular structures and internal fence lines suggestive of domestic habitation and perhaps stock control, at Springfield the revetted internal bank, gateway structure, large central building, and evidence of metalworking suggest a more prestigious settlement. Ellison (1980, 135) has noted a relationship between the distribution of major enclosures and metalworking in Wessex, the distribution of weapons and ornaments occurring within a local sphere of influence. Essex has long had impressive concentrations of Bronze Age metalwork, but few sites were identified until recent years. Both Springfield and Mucking North Ring fit within a growing distribution of circular enclosures also recognised south of the Thames (Champion 1980). The South Rings at Mucking, although of larger and more complex form, also date to the Late Bronze Age and are seen as a further site within this group. The site consists of double concentric ditches with opposed causeways, and contains a central circular structure. The excavator has put forward a strongly defensive role for this site (Jones forthcoming), drawing on its similarity to an earlier Bronze Age site at Thwing (East Yorks) for which a defensive function is suggested (Manby 1980).

There is some degree of homogeneity amongst the cropmark enclosures, both in terms of morphology and distribution. The cropmark at Great Baddow is situated less than a kilometre to the south of Springfield, whilst two further examples in Thurrock (14 and 18) are in close proximity both to each other and to Mucking.

Assuming the cropmarks at Thurrock and Great Baddow to be contemporary with Mucking and Springfield respectively, a pattern of well- constructed, strategically-paired enclosures, commanding the major river valleys in the south of the county, might be postulated. The cropmark at Sturmer might indicate a similar situation in the upper reaches of the Stour Valley, although that at Belchamp St Paul is more likely to represent a religious or ritual site associated with a small adjacent barrow group. The cropmark at Felsted is a rare 'keyhole exposure' on the heavy soils of the boulder clay plateau and should be carefully monitored, given the absence of Bronze Age sites and paucity of fieldwork in this area. The East Anglian distribution is unclear and further work would be most useful, since Lawson (1984, 60) suggests they are present in Suffolk and Norfolk. Further afield, the existence of similar enclosures in north-east France has been noted by Cunliffe (1982, 41).

iii. Circular enclosures 30-40m in diameter with opposed causeways

Excavated enclosures: Lawford (2).
Unexcavated cropmarks: Boxted (6), Fobbing (7), Great Wigborough (8), Little Bromley (9), Little Bentley (12).

iv. Penannular enclosures 30-40m in diameter

Excavated enclosures: None
Unexcavated cropmarks: Great Bentley (10), Sturmer (11).

v. Annular enclosures 30-40m in diameter

Excavated enclosures: None.
Unexcavated cropmarks: Great Bromley (13).

Lawford is the only site in this group to have been excavated. Provisionally interpreted as a 'henge' monument, excavation showed it to enclose a single domestic structure, dating to the Neolithic period. Lawford is slightly larger than the other cropmarks in this group, and the ditch showed a marked irregularity, almost segmental, which is not shared by the others. A larger cropmark in the same parish (Lawford (28)) also seems to exhibit an irregular segmental ditch.

Elsewhere, enclosures of this size, both with opposed and single causeways, have been assigned a date within the Late Neolithic/Bronze Age, and a variety of functions under the blanket term 'hengiform' (Wainwright 1969). A number of features and locational characteristics may indicate a variety of uses and dates for Essex examples. Both opposed-causewayed and penannular enclosures, with the exception of Little Bentley, have one feature in common; a very wide ditch in relation to the area enclosed. An absence of associated cropmarks (i.e. barrows) for Fobbing, Great Wigborough and Little Bentley may be symptomatic of Late Neolithic/Early Bronze Age enclosed settlements such as Lawford. Communal religious sites or meeting places of the same period may account for others, particularly Little Bromley, sitting amidst a large barrow cemetery; Boxted, where faint indications of ring-ditches are visible; and the penannular Great Bentley, where the juxtaposition of a ring-ditch group is also recorded. The annular cropmark at Great Bromley is very close to that at Little Bromley, and is far larger than many of the surrounding ring-ditches. Although its lack of causeways could perhaps indicate a very large focal barrow, it may be that it too is an enclosure associated with the cemetery.

The presence of windmill cross-trees within the cropmark at Sturmer suggests a far more recent origin although it is adjacnet to the large circular enclosure (15), and it is possible that other cropmarks in this group may prove to be moated mill mounds. Documentary and cartographic research is needed to eliminate these spurious 'prehistoric sites' and to make a positive contribution to post-medieval archaeology.

The distribution of the potential prehistoric sites among the smaller circular enclosures is centred very much on the brickearths, loams and gravels of the Tendring Plateau and it is interesting that these sites do not seem to occur on the North Thames Terrace or in the Chelmer-Blackwater Valley.

B. Curvilinear enclosures

Few sites within this broad category have been excavated and little homogeneity exists amongst either the excavated

or cropmark examples.

i. Sub-circular causewayed enclosures

Excavated enclosure: Orsett (1).
Unexcavated cropmarks: None.

The Orsett causewayed enclosure is the only Neolithic site of its type to be identified in the county, although others exist close to the Essex border at Sawbridgeworth (Herts), Kedington, Fornham all Saints and Freston (Suffolk).

Distinctive in form, comprising three incomplete concentric causewayed ditches, its outer ditch encloses an estimated 1.6 ha, similar to the largest recorded curvilinear cropmark at Bradfield (25). In contrast its inner circuit encloses *c.* 0.6 ha, comparable with some circular cropmarks such as Frating (23) and Lawford (28). Its place in the classification of causewayed enclosures is discussed elsewhere (Palmer 1976).

ii. Sub-circular enclosures under 2 ha

Excavated enclosures: None.
Unexcavated cropmarks: Bradfield (25).

At 1.6 ha, Bradfield is the largest curvilinear cropmark recorded; a single-ditched enclosure which appears either to be discontinuous, or to have a number of causeways. These are not numerous enough to be considered as a potential causewayed enclosure, although in size it is similar to the area enclosed by the outer ditch of Orsett. The apparent funneling of one entrance may indicate a stock-controlling function. Lack of parallels makes dating speculative: an Iron Age date, or earlier, is therefore suggested, in line with the generally prehistoric preference for curvilinear forms seen in Essex and elsewhere.

iii. Curvilinear enclosures over 2 ha

Recorded enclosures: Harlow (22).
Unexcavated cropmarks: None.

An 'enclosure' with an area of 3.75 ha, of irregular elongated oval shape, is said to surround a Romano-Celtic temple. Wheeler (1928, 300) suggested the origins of the site, including the enclosure, might go back to the Iron Age. All other Romano-Celtic temples in the county appear to have rectilinear enclosures, and the extent to which this may be a natural feature is not entirely clear.

iv. Curvilinear enclosures over 0.5 ha

Excavated enclosures: Little Waltham (20).
Unexcavated cropmarks: Frating (23), Wendons Ambo (24), Bradfield (26), Dedham (27), Lawford (28).

Only one enclosure, a Late Iron Age farmstead at Little Waltham, has been excavated, and its plan is very tentative. Although a number of circular house sites were recorded, this is likely to represent a single domestic unit. No internal features are visible within the cropmark enclosures, with the exception of a large pit-like feature at Bradfield. The irregularity and segmental appearance of the Lawford enclosure has already been commented on in relation to the smaller Neolithic domestic enclosure in the same parish (2). Bradfield and Wendens Ambo are pear-shaped rather than sub-circular, but whether this implies a temporal or functional similarity is unknown. The sub-circular enclosure at Dedham, with its associated trackways and funnel-shaped subsidiary enclosure, appears to fall readily into a type of Iron Age stock enclosure recognised in Hampshire (Perry 1969), particularly that at Manor Farm (Palmer 1984, 50, fig. 19).

Parallels for curvilinear enclosures outside the county come from Wessex at Winnall Down (Fasham 1985), Sussex (Bedwin 1978), and the East Midlands at Colsterworth (Grimes 1961). No settlements of the 'Little Woodbury' type have been recorded (Cunliffe 1974, 162, fig. 11.1). Drury (1980, 50) has stressed the apparent lack of Early Iron Age enclosures in the county, and Iron Age defended sites in Essex are on a relatively small scale in hillfort terms (Morris and Buckley 1978). This may be due to local topography and politics which gave rise to a flexible system of smaller defences (0.5-1.5 ha), comparable to that in Sussex (Bedwin 1978) where some defensive enclosures appear to have agricultural origins.

Curvilinear enclosures are not well understood in the county. Parallels elsewhere suggest a prehistoric date, with the probability of a number belonging to the Iron Age. The whole range of site uses are possible for the cropmark sites presented here, with the exception of Dedham where a stock-control function seems very likely. Many of these cropmarks are concentrated on the Tendring plateau with occasional outliers such as Wendens Ambo. However, this picture is probably more indicative of the appearance of keyhole sites in non-cropmark producing areas rather than a true distribution.

C. Sub-rectilinear enclosures under 0.25 ha

i. Sub-rectangular enclosures under 0.10 ha

Excavated enclosures: Mucking (33), Mucking (34), Ardleigh (35), Dedham (36), Thurrock (37), Belhus Park (39), Mucking (43).
Unexcavated cropmarks: Danbury (46), Hatfield Peverel (47).

None of the excavated enclosures pre-date the Middle Iron Age, with the exception of Belhus Park where Early Iron Age pottery was recovered. Middle Iron Age dates at Mucking (33), Ardleigh and Mucking (43) compare with a Late Iron Age date for Mucking (34) and a probably post-conquest date for Dedham and Thurrock. The presence of circular building gullies at Mucking (34), Ardleigh and Mucking (43) suggests domestic compounds enclosing single dwellings, possibly incorporating stock control (as suggested by the excavator of Belhus Park). Cropmark examples at Danbury and Hatfield Peverel seem likely to fit this pattern of domestic and agricultural enclosures of later prehistoric and Roman date.

ii. Horseshoe enclosures under 0.10 ha

Excavated enclosures: Ardale School (29), Woodham Walter (30).
Unexcavated cropmarks: Hatfield Peverel (47), Danbury (51), Great Clacton (52).

The enclosures at Ardale School and Woodham Walter were both found to be of Middle Iron Age date. Whilst the former is interpreted as a stock pen, the latter may well represent a domestic enclosure. However, as this is a common form, of which only few examples have been excavated, different interpretations almost certainly exist for the cropmark examples. The combination of small sub-rectangular and horseshoe enclosures at Hatfield Peverel could either be seen as contemporary or multi-phase domestic occupation/stock keeping. Circular building gullies at Great Clacton imply the presence of domestic occupation around, if not within, the enclosure. Danbury

suggests a further possible domestic enclosure with a subsidiary stock pen. Further examples of these enclosures need to be examined in order to clarify whether chronological and functional differences exist between the different forms of small enclosures.

iii. Sub-rectangular/D-shaped enclosures between 0.10-0.25 ha

Excavated enclosures: Orsett (31), Ardale School (32), Nazeingbury (38), Chignall St James (40), Ardale School (42), Gun Hill (44), Mucking (45).
Unexcavated cropmarks: Great Bromley (53), Thurrock (54).

These enclosures appear to be comparable in date and function to the smaller enclosures described above. None of the excavated enclosures pre-date the Middle Iron Age, and only one (Ardale School (32)) is of Roman date. Domestic and agricultural functions are implied.

Several, including Ardale School (42) and the unexcavated Great Bromley cropmark, have evidence for internal sub-divisions and external subsidiary enclosures, whilst Mucking and the cropmarks at Thurrock demonstrate a 'chain' formation which is particularly characteristic of cropmarks on the North Thames gravels.

iv. Pear-shaped enclosures under 0.25 ha

Excavated enclosures: None.
Unexcavated cropmarks: Stanway (48), East Donyland (49), Stisted (50).

No enclosures comparable with the cropmarks recorded have been excavated, although the Middle Iron Age enclosure at Ardale School (42) is of similar form in its earliest phase. It is interesting that Stanway and East Donyland are in close proximity to cropmarks interpreted as Late Iron Age/Romano-British religious sites. However, without excavation it is impossible to say whether this is coincidence or a significant relationship between different enclosure forms.

v. Square enclosures under 0.25 ha

Excavated enclosures: Woodham Walter (41).
Unexcavated cropmarks: East Donyland (49), Thurrock (54).

The chain of sub-rectangular/square enclosures at Woodham Walter is possibly of Roman date. Stock or horticultural uses have been suggested. Cropmarks of a slightly larger size occur in the 'enclosure chain' at Thurrock. Although the cropmark at East Donyland may be similar, it is possible that it and other regular enclosures such as Langford (not in gazetteer: Pl. XXI; Eddy 1980b, 81, fig. 16) indicate Romano-Celtic temple sites.

D. Rectilinear enclosures under 1 ha

These enclosures range from sub-square to rectangular with varying degrees of regularity.

i. Single-ditched enclosures

Excavated enclosures: Gun Hill (55), Twitty Fee (58), Mucking (59), Colchester (60).
Unexcavated cropmarks: Stanway (68), Southminster (69), Brightlingsea (70), Thurrock (72), Great Bentley (73), Goldhanger (74), St Osyth (78), Great Totham (79).

With the exception of an Early Iron Age date claimed for a sub-square enclosure at Colchester, all other excavated enclosures of this type belong to the Late Iron Age (Twitty Fee, Mucking) and Roman (Gun Hill) period. Domestic or agricultural functions seem likely, although a conquest period defensive role has been postulated for Gun Hill. It is difficult to establish with certainty to what extent defence is a primary function (see Orsett 'Cock' (61) below), and a number of similar cropmarks, particularly on the North Thames terrace, have had their defensive role questioned (Babbige 1972). Circular buildings appear to exist within half of the cropmark enclosures discussed here, but this cannot be taken to mean that buildings do not exist within the other enclosures.

A particularly interesting group of rectangular and sub-square cropmarks at Stanway comprise three conjoined enclosures, each apparently having a centrally-aligned, square, pit-like feature and/or small enclosure. The alignment of these features, and the apparent relationships between the different enclosures, may indicate a further Romano-Celtic religious complex situated immediately to the west of the Gryme's Dyke.

ii. Multiple-ditched enclosures

Excavated enclosures: Orsett 'Cock' (61), Woodham Walter (62), Alresford (63), Mucking (64), Mucking (65), Gosbecks (66), Great Chesterford (67).
Unexcavated cropmarks: Ulting (75), Hadleigh (77).

Multiple-ditched enclosures encompass the same range of size and forms seen above. The interpretation of cropmark examples is often complicated by the complexity of successive phases, and it is partly on this basis that enclosures such as Orsett 'Cock', with its origins in the Middle Iron Age, were originally interpreted as Roman military sites. Excavation there, as at Woodham Walter and at the smaller Rainham enclosure (57), demonstrates that these features frequently represent modification or reconstruction of an enclosure over a long period, often beginning in the Iron Age and continuing well beyond the Roman conquest. Cropmarks such as those at Ulting and Langford (not in gazetteer: Pl. XX; Eddy 1980b, 81, fig. 16) are clearly multi-phase enclosures. Although there is a danger in interpreting multi-ditched enclosures as single-phase enclosures there is no doubt that these existed. For example Lofts Farm (see above), as well as proving to be earlier than provisionally interpreted, represents a single period Bronze Age domestic enclosure and is a cautionary tale in placing too much faith in local parallels. The large double-ditched cropmark at Hadleigh has long been cited as a first-century AD fort (Dunnett 1975) and may yet prove to be so, although a non-military function cannot be ruled out. One of the Mucking enclosures (64) has been interpreted by the excavator as a quasi-military enclosure due to the presence of small amounts of first-century AD military metalwork. A further interpretation of multiple ditches has been suggested by Crummy (1980); rather than representing a strongly defended enclosure he has pointed out that such ditches may represent an area surrounded by a ditched trackway. The distinctively regular multi-ditched enclosures at Gosbecks and Great Chesterford represent temple enclosures and may find parallels among the smaller cropmark examples at East Donyland (49) and Langford (not in gazetteer: Eddy 1980b, 81, fig. 16).

E. Rectilinear enclosures between 1 and 4 ha

Excavated enclosures: Colchester (80), Gosbecks (81).
Unexcavated cropmarks: Wivenhoe (82), St Osyth (83), St Osyth (84), Wivenhoe (85).

These enclosures range widely in form and size and are among the largest recorded in the county (see F below).

The excavated enclosures represent a Roman temple enclosure at Colchester and a Late Iron Age/Roman ?native farmstead at Gosbecks. Crummy (1980) has postulated that the form and position of the Gosbecks enclosure, within the Late Iron Age/Roman rural religious complex, may represent an associated 'royal' settlement. Stock control functions are likely for some of the cropmark examples, although the regular, elongated (and incomplete) form of St Osyth (83) could perhaps be considered as a potential Neolithic mortuary enclosure or cursus-related monument.

F. Rectilinear enclosures over 4 ha

Excavated enclosures: Chignall St James (86)
Unexcavated cropmarks: Thurrock (87)

One excavated enclosure at Chignall St James has its origins in the first century AD, surrounding the courtyard villa clearly seen on aerial photographs. Although the enclosure at Thurrock boasts no comparable cropmark buildings within, it almost certainly represents a villa/farmstead of considerable prosperity on the Thames gravels.

Conclusion

The primary aim of this paper has been to present plans of dated enclosures together with a selection of undated cropmarks; therefore its conclusions are based on a subjective sample. Clearly a great diversity of enclosure size and form exists, and in some cases the correlation between excavated and unexcavated enclosures appears to be more straightforward than in others as, for example, with circular enclosures. This study represents a first stage, and a provisional outline of Essex cropmark enclosures. For the immediate future, it identifies enclosure 'types' and individual sites which would repay preservation and excavation. To this end, recommendations for scheduling have been forwarded to the Historic Buildings and Monuments Commission. Future work, based on a computerised SMR will enable a more analytical approach to be applied to the corpus of Essex enclosures.

Appendix: Photographic References for Cropmark Plots

The principal sources of aerial photographs are: Cambridge University Committee for Aerial Photography; Air Photographic Unit, National Monuments Record, R.C.H.M. (England); Mrs Ida McMaster; and the late Cmdr. R.H. Farrands.

Aii Circular enclosures

6.	**Boxted** (TM03-65)	
I.McM	TM03-65	
7.	**Fobbing** (TQ78-89)	
CUC	YG 53	1959
8.	**Great Wigborough** (TL91-64)	
I.McM	TL91-64	1971
9.	**Little Bromley** (TM02-69)	
CUC	BXS 62	1976
	BXJ 30	1976
NMR	TM0827/10/406-7	1976
	TM0827/12/51-2	1976
RHF	134.3	1976
10.	**Great Bentley** (TM12-27)	
CUC	ASK 51	1967
	AOS 72	1966
	BXJ 82	1977
	BXJ 89	1977
NMR	1022/1/174, 177	1974
	1022/4/211	1974
RHF	142.3	1976
PMB	4/038/74/221-3	1974
11.	**Sturmer** (TL64-17)	
CUC	BYZ 78	1978
SAU	DA9, DC20-21	1976
12.	**Little Bentley** (TM12-46)	
CUC	BXJ 36	1976
	BXJ 42	1976
	BXJ 44	1976
	BXJ 43	1976
NMR	1224/1/247, 248	1974
	1224/2/292	1974
	1224/4/375, 377	1976
RHF	116 1-2	1973
PMB	4/038/74/247	1974
	4/039/74/140	1974
13.	**Great Bromley** (TM02-69)	
CUC	BXJ 27	1976
	BXS 57	1976
	BXJ 24, 92, 93	1976
NMR	TM0927/4/408	1976
	TM0920/1/60	1976
CMR	0927/7/57	1976
14.	**Thurrock** (TQ67-45)	
CUC	BBS 78-9	1970
15.	**Sturmer** (TL64-17)	
CUC	BYZ 78	1976
SAU	DA9	1976
	DC20	1976
16.	**Felsted** (TL61-122)	
CUC	ADI 15-16	1961
17.	**Great Baddow** (TL70-136)	
CUC	BJJ 53	1972
18.	**Thurrock** (TQ68-65)	
CUC	BB 17	1970
	BWX 85	1976
	BWX 86	1976
NMR	TQ 6381/3/190	1972
	TQ 6381/7/148	1975
19.	**Belchamp St Paul** (TL 74-56)	
CUC	ADR 74	1961
	BCT 76	1970
	BCT 78	1970
	BCT 79	1970
	BYC 61	1976
	BYC 62	1976

Bii Curvilinear enclosures

23.	**Frating** (TM02-143)	
NMR	TM 0822/1/467	1976
PMB	4/038/74/224	1974
	4/038/74/225	1974
24.	**Wendens Ambo** (TL53-150)	
CUC	BJJ 74-5	1972
	BJF 51	1972

25. **Bradfield** (TM12-82)

CUC	AUQ 84	1968
	BHE 68	1971
RHF	144.4	1976
	175.8	1977
PMB	4/039/74/051	1974
I.McM	1.1, 1.2	

26. **Bradfield** (TM12-55)

CUC	AUQ 81	1968
	AUQ 82	1968
RHF	124.1	1974
	176.1	1977
	175.1	1977
CG	4.29.4.24	1974
PMB	4/039/74/020	1974

27. **Dedham** (TM03-23)

CUC	BCT 6, 8, 10	1970
	BFM 7	1971
	BER 72	1971
	BIU 23	1972
	BJJ 5-7	1972
NMR	TM 0431/1/73	1974
	TM 0530/2/77	1974
	TM 0431/1/81, 83, 91	1974
	TM 0331/1/91	1974
	TM 0431/4/98	1974
	TM 0431/2/94	1974
	TM 0431/3/96	1974
HS	70 1010 103/2164-6,	1970

28. **Lawford** (TM03-68)

CUC	AAW 28	1960
	BHE 59	1971
NMR	0830/3/24-5	1977
PMB	4/039/84/025	1974
	4/039/74/026	1974

Cii Sub-rectilinear enclosures under 0.25 ha

46. **Danbury** (TL70-68)

CUC	BWT 4	1976
	BJJ 51	1972
	BZK 28	1976
NMR	TL 7505/ /201, 203	1979

47. **Hatfield Peverel** (TL70-145)

CUC	BVA 21	1975
NMR	TL 7909/6/336-7	1975
I.McM	TL 70-145 (2 prints)	

48. **Stanway** (TL92-36)

See 68.

49. **East Donyland** (TM02-186)

CUC	ABM 64	1960
NMR	TM 0121/4/314-5	1976
HS	16-076/77	1960

50. **Stisted** (TL72-81)

CUC	BXN 48	1976
NMR	TL 7824/1/160	1974
	TL 7824/5/119	1975
	TL 7824/7/104	1976

51. **Danbury** (TL70-161)

CUC	BXR 17	1976
NMR	TL 7605/2/87	1976

52. **Great Clacton** (TM11-88)

CUC	BXT 3	1976
	BWT 72-3	1976
NMR	TM 1616/1/254	1974

53. **Great Bromley** (TM12-67)

CUC	BXS 66	1976
	BXJ 34	1976
PMB	4/038/14/244	1974
I.McM	TM12-64(3-11a,12a,13a;2-5,6)	1976
RHF	175.2, 175.3	1977

54. **Thurrock** (TQ58-31)

CUC	BBZ 35-8	1970
NMR	TQ 5683/2/234, 286	1975
	5682/4/318-19, 322	1975
	5683/7/290, 447	1975-6
	5683/7/452	1975

Dii Rectilinear enclosures under 1 ha

68. **Stanway** (TL92-36)

CUC	ABM 60	1960
	BXS 2	1976
	CCS 34	1977
NMR	TL 9522/3/156	1973
	TL 9522/4/158	1973
I.McM	8 prints	1982

69. **Southminster** (TL90-19)

CUC	BIW 48-9	1972
	BIW 53	1972
	BJC 59	1972
	BJC 61-64, 66	1972
	BXM 80-81	1976
NMR	TL 9600/1/170	1974
	TL 9600/2/189	1976
	TL 9600/2/190	1976

70. **Brightlingsea** (TM01-20)

CUC	BXM 106	1976
	BXM 107	1976
NMR	TM 0818/1/152	1974
	TM 0818/1/153	1974
	TM 0817/1/335-6	1976
HS	18/35	1960

71. **Thurrock** (TQ67-77)

CUC	BIK 14, 16, 17	1972
NMR	TQ 6480/18/406-7	1976

72. **Thurrock** (TQ68-50)

CUC	BWX 80-82	1976
	BWV 26,30-31,36,38,40-41	1976
NMR	6581/16/153,155	1975
	6582/3/141,146	1975
	6381/7/148	1975
	6582/4/418-19	1975
	6481/7/276-77	1975
	6480/18/402-406	1975
	6489/19/427-8	1975
	6580/31/409	1975
	6481/6/420,422,426	1975

73. **Great Bentley** (TM11-75)

NMR	TM 1119/1/222	1974
PMB	4/038/74/180	1974

74. **Goldhanger** (TL80-93)

CUC	BCA 12-15	1970
NMR	TL 8809/1/126	1972
I.McM	3.20	1977

75. **Ulting** (TL80-86)

CUC	AFJ 86-7	1962
	BJJ 59	1972
	BZK 42-3, 37	1976
	BZS 10,12,14	1976
NMR	TL 8109/12/54-5	1976
	TL 8109/13/59-60	1976
	TL 8109/16/66	1977

76. **Frating** (TM02-110)

NMR	0823/4/2	1976
RHF	100.2	1962
	130.6	1975
I.McM	TM02-110	1977

PMB	4/039/74/148-9	1974
HS	1059107/0010	1970
	1059109/0042	1970

77. Hadleigh (TQ88-2)

CUC	CR 86	1949

78. St Osyth (TM11-91)

CUC	ZK 77, 80	1959
	BJB 101-2	1972
	BUZ 98	1975
RHF	170.2	1977
NMR	1216/2/129 and 132	1976
PMB	4/50/72/117	1972
I.McM	2.1 1-5	1976

79. Great Totham (TL80-51)

CUC	BJJ 32	1972
NMR	TL 8608/3	1975
	TL 8608/4/150	1975

Eii Rectilinear enclosures between 1 and 4 ha

82. Wivenhoe (TM02-163)

CUC	ADS 7	1961

83. St Osyth (TM11-90)

CUC	BJB 95-7	1972
NMR	TM 1314/3/121	1974
	1315/1/213-215	1974
	1315/2/216	1974
	1114/1/224	1974
	1315/3/10, 13, 15	1976
PMB	4/50/72/119	1972
HS	11 19/09	1960

84. St Osyth (TM11-91)

See 78

85. Wivenhoe (TM02-107)

CUC	ZK 87-88	1959

Fii Rectilinear enclosures over 4 ha

87. Thurrock (TQ68-78)

CUC	BZZ 2	1970
	BIK 18	1972
	BWX 87-9	1976
NMR	6380/3/210	1972
	6480/5/217,219	1972
	6479/3/220-1	1974
	6479/4/227	1974
	6480/12/217, 219	1974
	6480/18/402-5, 428	1976

End notes

1. Abbreviations

CUC	Cambridge University Collection: University of Cambridge Committee for aerial photography. The Mond Building, Free School Lane, Cambridge
CMR	Colchester Museum Records: Colchester and Essex Museum, The Castle, Colchester
CG	Mr C. Going: 29 Station Road, Great Dunmow, Essex
ESMR	Essex County Sites and Monuments Record: Archaeology Section, Planning Department, Essex County Council, County Hall, Chelmsford
HS	Huntings Surveys
I.McM	Mrs I. McMaster: Fen House, Mount Bures, Suffolk
JDH	Mr J.D. Hedges: Formerly County Archaeology Officer, Essex County Council
MAFF	Ministry of Agriculture, Fisheries and Food
NMR	National Monuments Record: Air Photographic Unit, R.C.H.M. (England), Fortress House, 23 Savile Row, London W1X 2HE
PMB	Potato Marketing Board
RHF	Late Cmdr R.H. Farrands
SAM	Scheduled Ancient Monument
SAU	Suffolk Archaeological Unit, Shire Hall, Bury St Edmunds, Suffolk

2. Enclosures excavated at Wendens Ambo (Hodder 1982) were accidently omitted from the gazetteer but have been included in the discussion. The small earthwork enclosed mound at Portingbury Hills (Wilkinson 1978) has also been omitted.

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