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ESSEX

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An Iron Age Site at Rainbow Wood, Thurrock, Essex

by T. W. POTTER

Recent excavations have shown that the gravel terraces on the north side of the Thames at Tilbury were intensively settled in antiquity, where the combination of well-drained, relatively fertile soils and the proximity of the Thames must always have marked out the area as an attractive one for settlement.[1] The site reported here was discovered in 1965 in the course of gravel quarrying. It lay at the south-western end of a small patch of woodland, known locally as Rainbow Wood, on the crest of the Thames terraces, above the 100-foot contour. At the time, the writer was working on the excavations of the site at Mucking, less than half a mile to the north-east of Rainbow Wood, and, when the discovery of Iron Age pottery was reported, it was decided to carry out a brief investigation.[2]

The remains consisted of a thin scatter of Iron Age sherds, associated with a small cluster of pits and postholes (Grid Reference TQ 664 799), uncovered during topsoil stripping. The pits were contained within an area of less than 46 sq. m., and a search by hand and machine failed to bring to light any other archaeological features in the surrounding area.[3] Nevertheless, it seems likely that they formed part of a larger complex, the traces of which either passed unnoticed or had been previously destroyed.

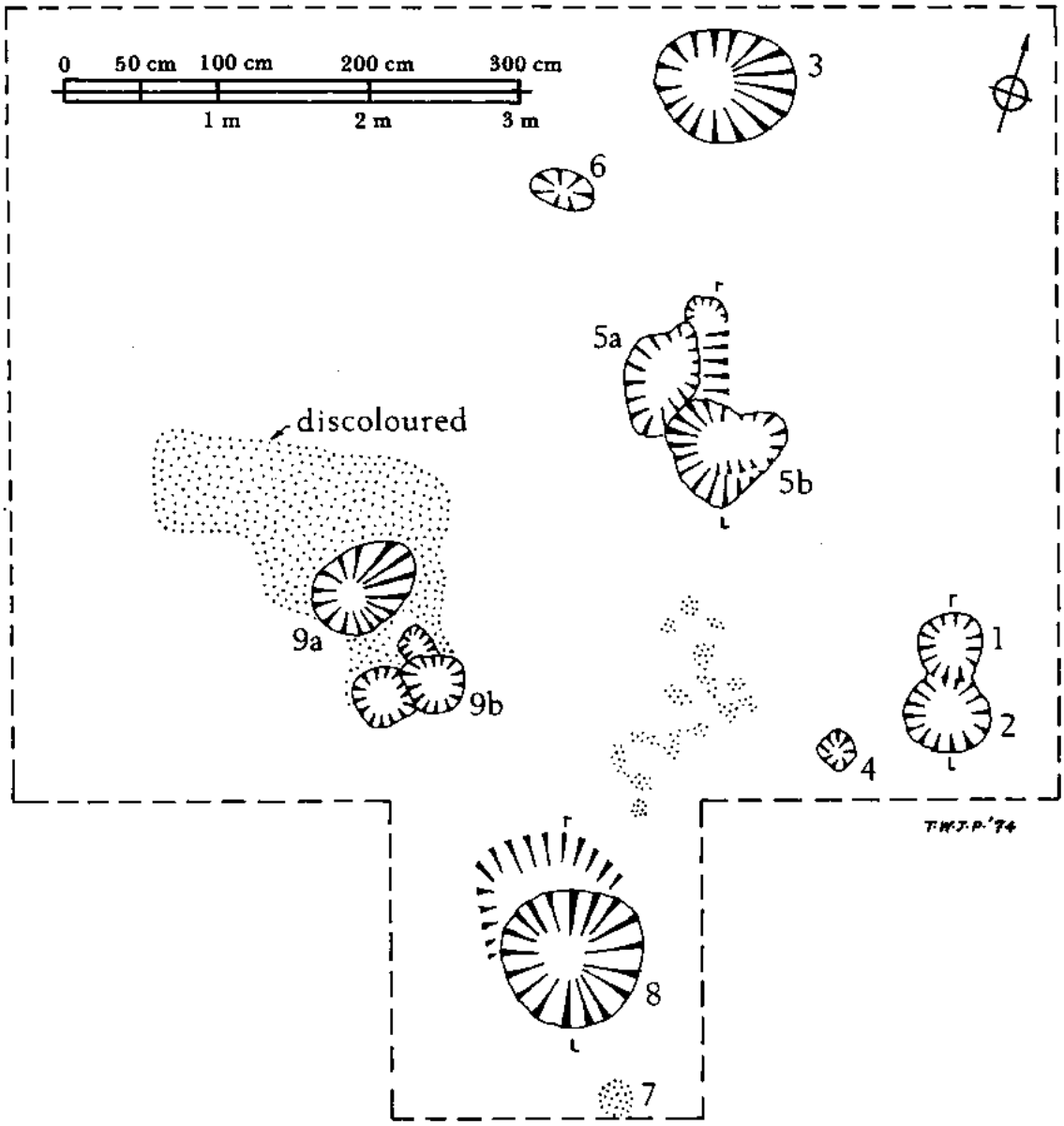
The area containing the pits was thoroughly examined by hand and the following features were revealed (Fig. 1):

1, 2. Two small intersecting pits of which pit 2 was probably the later. Pit 1 was filled with a sandy grey soil, while pit 2 contained a dark grey soil, flecked with charcoal; there was also a tip of dark soil on the south side. Pit 1 yielded a total of 25 sherds and pit 2 a total of 43 sherds, including fragments of two large carinated jars (Fig. 3, nos. 1, 2). A piece of daub was found in pit 2.

3. The bottom of a circular pit with a diameter of over 92 cm. but a surviving depth of only 7.5 cm. The pit had a dark sandy fill, flecked with charcoal, and contained 10 sherds.

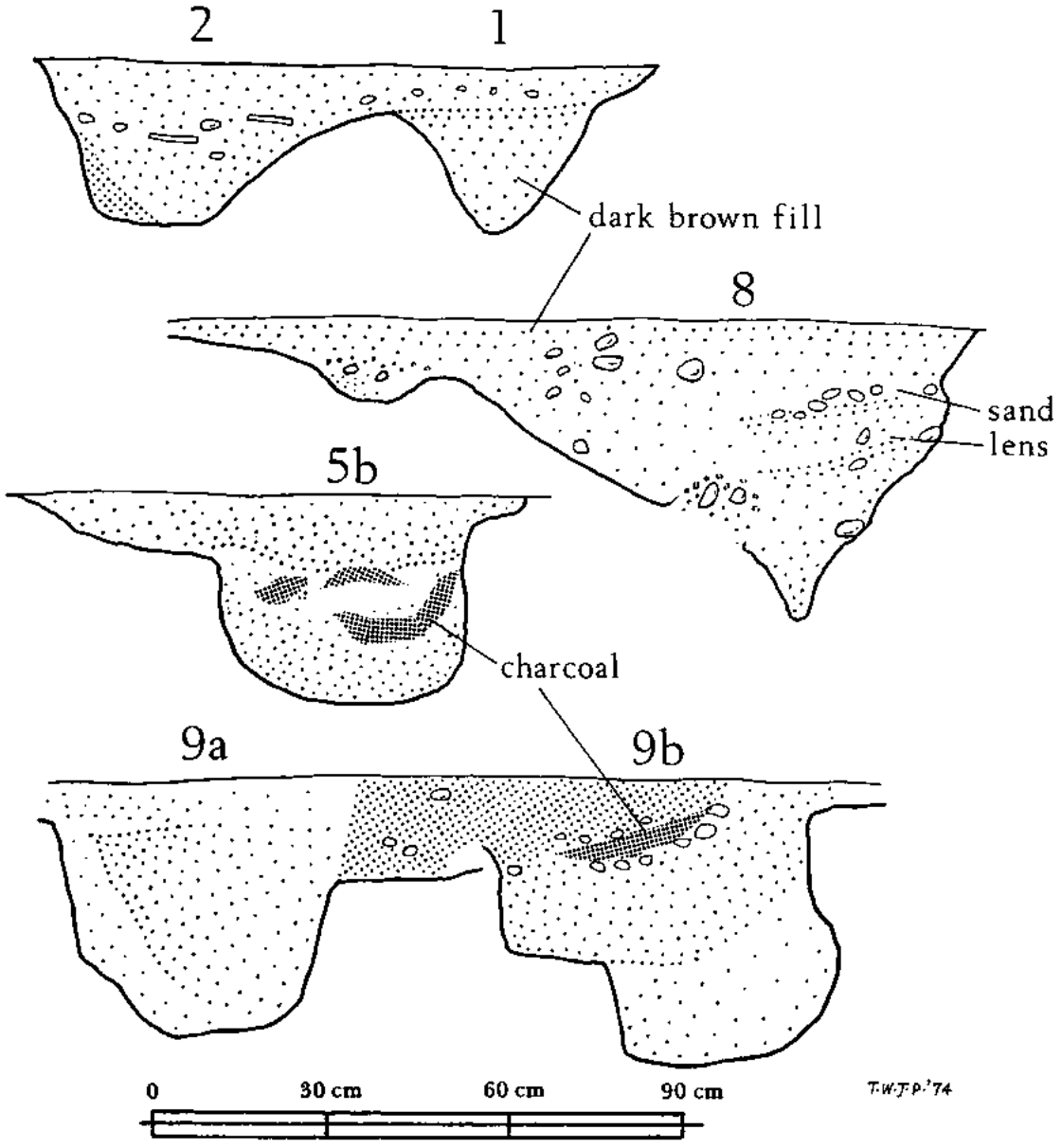
4. The bottom of an approximately square posthole with the width of 30 cm. and a depth of 23 cm. No finds were made. The fill was brown and sandy, with a good deal of charcoal in the top 5 cm.

5. Two small interesting pits with a third indeterminate feature on the north-east side. Pit 5a was 61 cm. in diameter and 43 cm. in depth. It was filled with a dark brown soil, without any obvious stratification. Pit 5b (Fig. 2) was of similar dimensions and contained a sandy brown soil fill, overlain by interleaved layers of charcoal and sand and, above that, a charcoal-flecked dark brown soil. Pit 5a yielded only 5 sherds, while pit 5b contained 48 sherds.



RAINBOW WOOD, THURROCK
Fig. 1 Plan of the excavated features.

6. A small posthole, 53 cm. across at the widest point. The posthole survived to a depth of only 23 cm., in which were traces of a socket stain, 15 cm. in diameter, packed around with sand and pebbles. The posthole yielded 9 sherds.
7. A circular soilmark, some 30 cm. in diameter, but without any significant depth. This may have marked the base of a posthole.



RAINBOW WOOD, THURROCK
Fig. 2 Sections of the pits.

8. A substantial pit 92 cm. in diameter and with a second and probably earlier circular feature to the north-west. The pit had a funnel-shaped profile (Fig. 2), suggesting a post socket. The pit was filled with a dark sandy soil, flecked with charcoal and interrupted by two horizontal sand lenses. The pit yielded a large quantity of pottery, amounting to 72 sherds.

9. A complex of small pits, three of which intersected. The pits were associated with an area of dark, discoloured soil, which may have marked the bottom of a larger feature or some *in situ* occupation soil. A similar discoloration, giving a mottled effect, was traced in the area between pits 5 and 8, but was most probably caused by roots. The two main pits, 9a and 9b, are shown in section in Fig. 2. Pit 9b was cut at an oblique angle into the sandy subsoil, and had a shelf on one side and a cavity on the other. It was filled with a sandy brown soil which became progressively more charcoal-flecked towards the top. Pit 9a was also filled with a brown soil and had apparently been cut through the layers associated with pit 9b; however, as the section shows, pit 9a appeared to have been disturbed or recut after it was first filled and there is thus no firm evidence for the chronological relationship of the two pits. A total of 65 sherds came from the pits.

Interpretation

The most obvious feature in the distribution of the pits is the rectilinear arrangement formed by nos. 1/2, 5, 8 and 9. Measuring from the centre of the main pit of each group, they form a square with sides of about 2.90 m. Assuming that this arrangement is not coincidental, the most likely interpretation of the function of these pits is that they held timber uprights, forming the corners of a rectangular structure. The excavation yielded little trace of post sockets but, as noted above, the profile of pit 8 is consistent with the form of a posthole, while the pit 9 complex is perhaps best interpreted as an upright (later dug out) buttressed by an angled post. This may also explain the double pits of the other complexes. The material finds from the pits also support their interpretation as postholes, for the pottery generally comprised small and abraded fragments and does not appear to represent a gradually accumulated deposit of rubbish. The finds presumably represent surface litter which was swept into the pits to pack round the timber uprights.

Square or rectangular arrangements of four (or six) posts are a relatively common feature on British Iron Age sites and the size of the Rainbow example is closely matched, for example, at Tollard Royal, Wiltshire[4] and Wandlebury, Cambs.[5] The first recorded example of one of these post settings was found in Pitt-Rivers' excavation at Rotherly, Wilts., where carbonised grain was identified in the postholes.[6] This prompted their identification as raised granaries, a view which is still widely accepted.[7] More recently, Stanford has proposed that examples in the west of England, with sides of 3.0–3.6 m., are most plausibly explained as huts,[8] while Ellison and Drewitt have used Maori analogies to support an interpretation of the rectangular settings as the footings of watch-towers.[9] It is evident, as Harding has recently emphasised,[10] that the tradition of rectilinear buildings in the British Iron Age is stronger than has sometimes been assumed, and a number of rectangular long-houses have now been discovered at Crickley Hill, Glos.[11] Indeed, it is clear that a single structural explanation for the wide variety of rectangular post settings which occur on Iron Age sites is inherently improbable. It will require a much better preserved site than that at Rainbow to add significantly to the debate; however, it is perhaps worth pointing out that the buttressing arrangement, if correctly interpreted, implies a structure which stood to

some height, while the absence of any traces of wall filling probably rules out any interpretation as a hut. Certainly, given the large size of the huts excavated at Mucking,[12] 3 m. x 3 m. seems too small for a dwelling and the likeliest explanation remains that of a raised granary.

THE POTTERY

411 sherds were found, of which 299 derived from the fill of the pits, while the remainder came from unstratified contexts in the area indicated on Fig. 1. Most of the sherds were small and abraded, the great majority being less than a square inch in size. Joins were also very rare and the whole assemblage gives the impression of a scatter of rubbish which was swept into the pits to provide backfill material. The sherds themselves provide little typological information, and a representative selection is illustrated in Fig. 3.

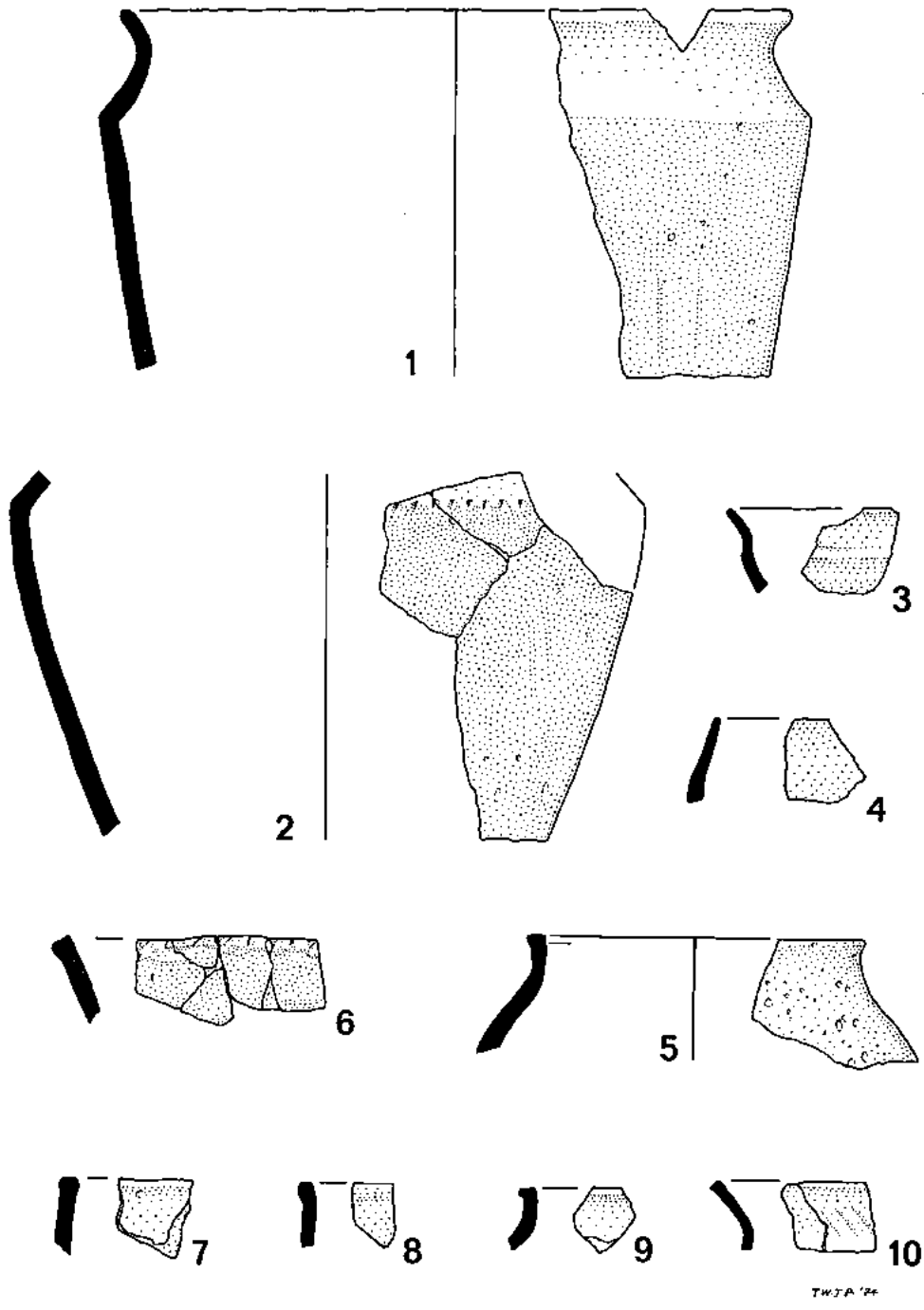
The identifiable forms may be listed as follows:

Carinated ('situlate') jars	6
Everted-rim jars	11
Plain rims	5
Bowls with flared rims	1
Bases	6
Strainers	3

Decoration was exceedingly rare, being confined to finger-tipping on the carination of one jar (Fig. 3, no. 2) and on the rim of another (Fig. 3, no. 6). The fabrics display some variation. The majority of the sherds (54%) comprised a gritty, dark brown-black fabric, with prominent use of shell and crushed flint temper. A very small proportion, only 1% of the total assemblage, showed signs of burnishing, but this may reflect the poorly preserved state of the sherds. 35% of the pottery comprised a red or reddish-brown ware, while two sherds had traces of a red slip, resembling haematite wares. Finally, there was a small group, amounting to 4% of the total assemblage, in a soft, porous, light grey ware, with heavy vesiculation. A jar in this distinctive fabric is illustrated in Fig. 3, no. 5.

Catalogue (Fig. 3)

1. Carinated jar in a gritty reddish-brown fabric with crushed flint and shell temper. Slight burnish on the rim and very light traces of vertical tooling. Pit 2.
2. Wall and shoulder of a carinated jar with fingernail impressions on the carination. Very similar fabric to 1. Pit 2.
3. Carinated bowl with a flared rim. Gritty brown fabric with crushed flint and shell temper. Slipped and burnished on both the interior and exterior and fired to a brownish-red colour. Not unlike haematite wares. Pit 1.
4. Bowl or jar with an inturned rim, in a gritty dark brown fabric. Pit 8.
5. Narrow-mouth jar in a soft light grey fabric, heavily vesiculated. Sparse use of shell grit. Pit 5.



RAINBOW WOOD, THURROCK
Fig. 3 The Iron Age pottery. Scale½

6. Everted-rim jar with a finger-tipped, flat-topped rim. Uneven, rather gritty, dark brown fabric. Pit 8.
7. Rim in a fairly smooth, dark brown fabric with a little shell grit. Lightly burnished on the exterior. Pit 9.
8. Rim in a burnished dark brown fabric. Pit 9.
9. Flat-topped rim in a lightly burnished dark brown fabric. Sparse use of shell grit. Pit 1.
10. Rim of an everted-rim jar in a rather gritty brown fabric with shell and flint temper. Pit 8.

Discussion

The pottery from Rainbow Wood is closely paralleled by the published groups from Linford as well as unpublished material from Mucking. There can be little doubt that these three adjacent sites form part of a very extensive development of the southern Thames terraces, and they may well represent contemporaneous settlements. Hawkes has already provided a full discussion of the Linford pottery,[13] which applies equally to the Rainbow group. More recently, Cunliffe has attempted to define regional groups, and the Rainbow pottery would seem to fit best with his 'Darmsden-Linton' group, which he dates to the 5th-3rd centuries B.C.[14]

THE FLINTS

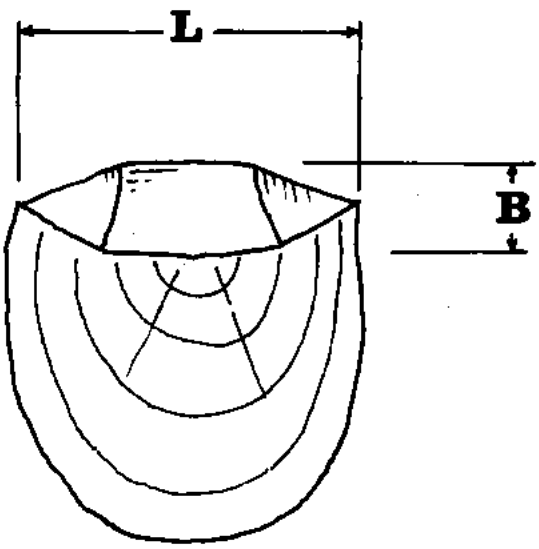
by Sebastian Payne

Full analysis of the flint industry from Rainbow Wood, Thurrock, is unfortunately precluded by several factors. The sample is small, 85 pieces in all, of which many are surface finds, only 44 pieces being from stratified contexts. The sub-soil, a gravel terrace of the Thames, contains much flint, which makes distinction between recent natural and man-made fracture uncertain, since the industry is so crude. Finally, the possibility of contamination of the sample by earlier material cannot be excluded; there is however no positive evidence for any such contamination.

Primary technique

There are 37 flakes or flake fragments which retain at least some part of the striking platform. All show the prominent bulb of percussion associated with the use of a hard hammer.

For the striking platform, I have, on those flakes which have no secondary fracture decreasing its size, measured its length and breadth, defining the platform for this purpose as the facet from which the flake was struck, plus any other adjacent primary facet presenting an angle of 90° or more to the bulbar face. The measurements taken of the platform so defined are the distance between the two triple points where dorsal and bulbar surfaces and the platform meet, and the maximum width of the platform perpendicular to this length (Fig. 4). In Fig. 5a, these measurements are plotted against each other, from which it can be seen that the size and proportions of



RAINBOW WOOD, THURROCK
Fig. 4 Diagram showing measurements taken of the striking platform.

the platform appear to be very variable. The platform is in general large, despite the fineness of the raw material, a good dark flint, and the smallness of the flakes, none of which are more than 6 cm. long. The ratio of width to length of the platform, as shown in the histogram in Fig. 5b, is fairly variable; the peak lies between 0.4 and 0.5.

All the flakes have a plane striking platform, except for one with two facets. There appears to be no great difference between the surface finds and those from excavated contexts, though the excavated specimens appear to be smaller; this is probably a result of the haphazard nature of the surface collection, which includes very few small pieces.

Secondly, I have measured the maximum angle between the platform and the bulbar face (Fig. 6a); the values are plotted in the histogram, Fig. 6b. This shows that the angle is variable; the mean value, approximately 125, is typical of a crude hard-hammer industry.

Although there are no cores in the sample, the core form can be reconstructed with reasonable certainty as a crude polyhedron, with little or no attempt at preliminary preparation, and poor efficiency in flake production.

Tool forms

As the sample is small, a descriptive treatment is adopted. Three main divisions are clearly distinguishable.

1. Pieces probably used as cutting tools, with a sharp edge, usually 2—4 cm. in length, fairly straight or convex, showing more or less use along the edge, and occasionally retouched. There are 14 pieces belonging to this category (e.g. Fig. 7: 1, 2).

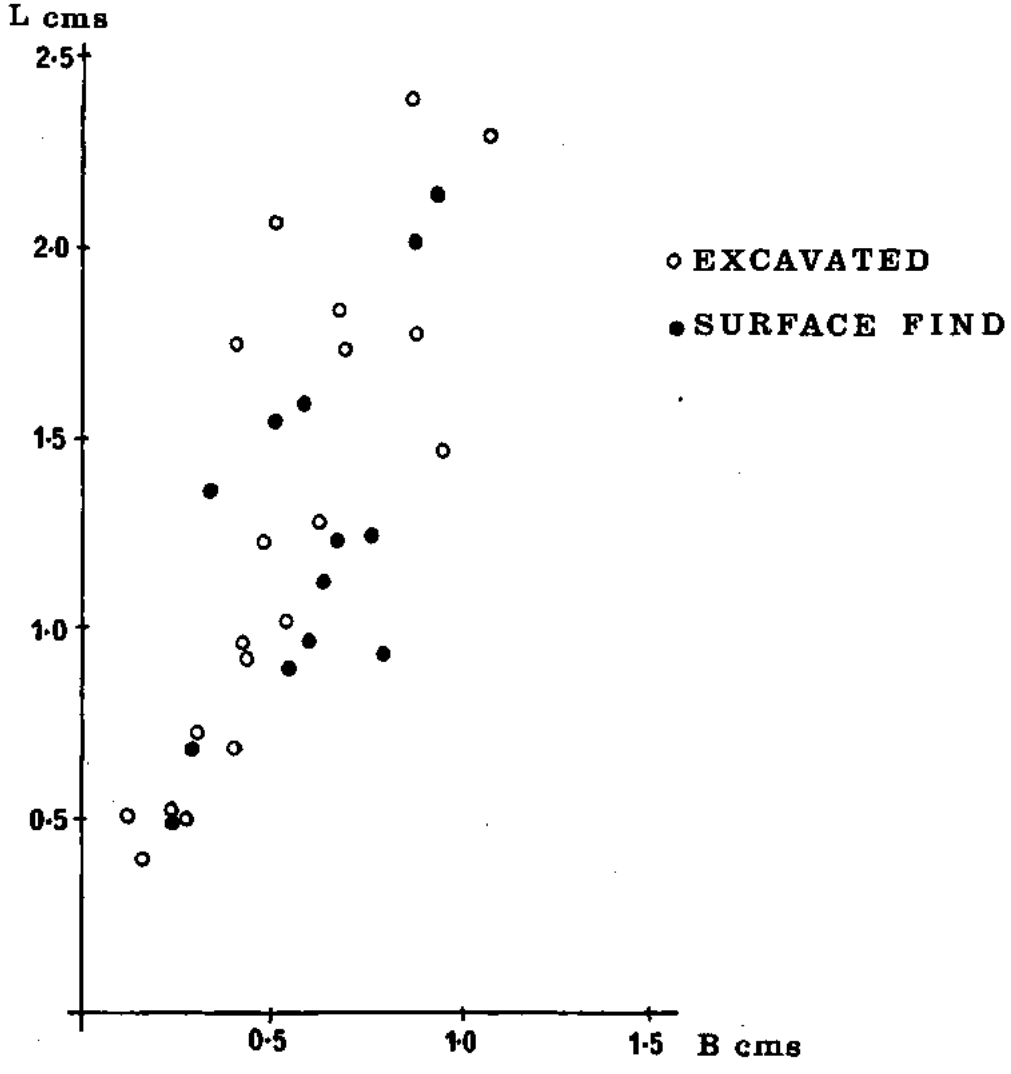


Fig. 5a

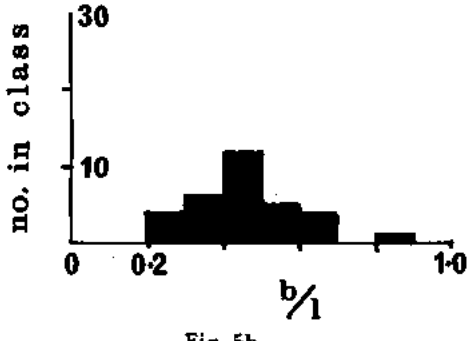


Fig. 5b

RAINBOW WOOD, THURROCK

Fig. 5a Length and breadth of platforms: length plotted against breadth.

Fig. 5b Striking platforms: histogram to show ratio of breadth to length.

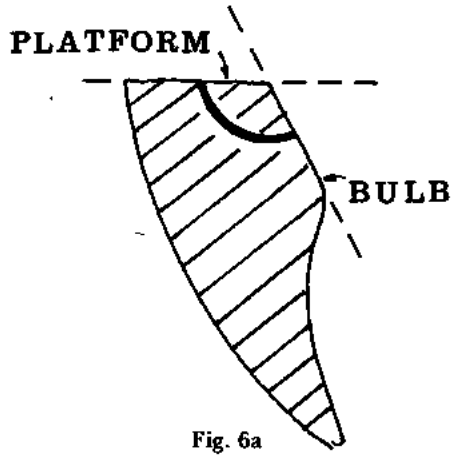


Fig. 6a

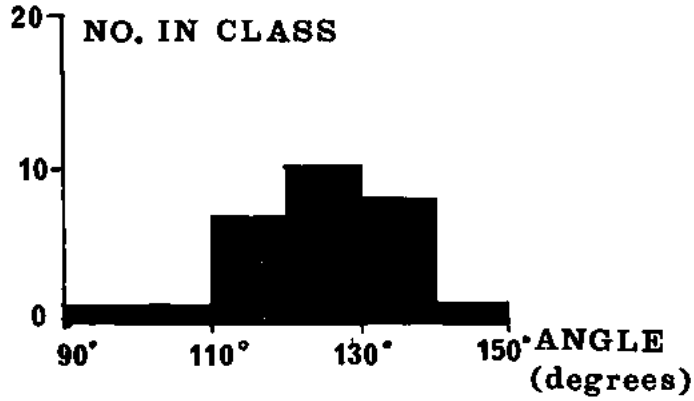


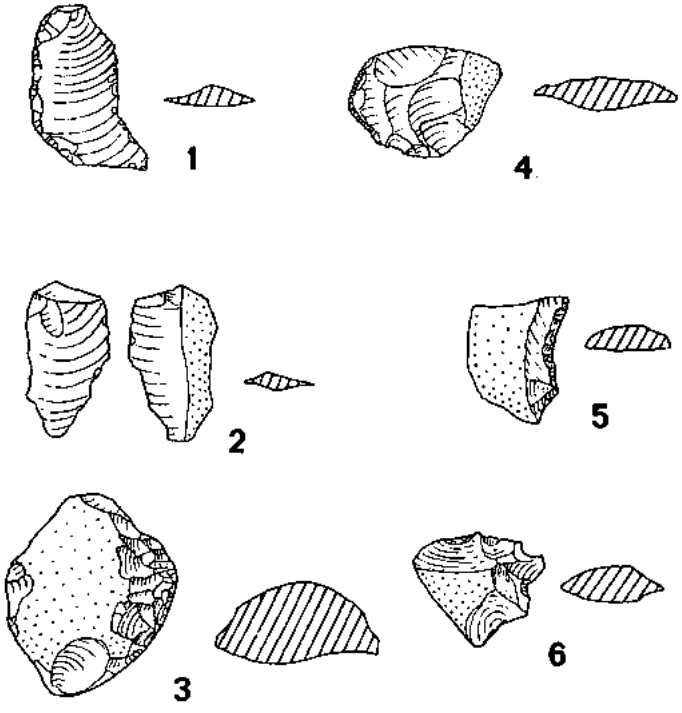
Fig. 6b

RAINBOW WOOD, THURROCK
Fig. 6a Section of flake, to show angle measured.
Fig. 6b Histogram of angle measured.

2. Pieces probably used as scrapers, with a steep convex edge, heavily retouched, of which there are three, two of which are heavily utilised (e.g. Fig. 7: 3, 4).
3. Pieces probably used as concave scraping tools or spokeshaves, with a heavily retouched notch or notches, of which there are four (e.g. Fig. 7: 5, 6). Two pieces with slight retouched notches may also belong to this type, but could simply be the result of pressure by a small rounded stone in the soil. No certain strike-lights were found, though Fig. 7: 3 may have been so used.

Most of the tools are from the surface collection, as shown below:

	surface	excavated context
Type 1 – 'cutting tool'	12	2
Type 2 – 'convex scraper'	3	0
Type 3 – 'notched scraper'	2	2



RAINBOW WOOD, THURROCK
Fig. 7 The Flints. 1–2: 'cutting tools'; 3, 4: 'convex scrapers'; 5, 6: 'notched scrapers'. Scale 1:2.

Summary

The industry from Rainbow Wood, Thurrock, despite the advantage of good raw material, is crude. Struck from a shapeless core, with more energy than skill, the small coarse flakes are used only for cutting and scraping; secondary work is minimal.

Published with the aid of a grant from the Department of the Environment.

FOOTNOTES

1. For the long history of settlement in the Linford-Mucking area see particularly K. J. Barton, 'Settlements of the Iron Age and Pagan Saxon Period at Linford, Essex' *Trans. Essex Archaeol. Soc.* 3rd series, i (1962), 59–104; M. U. Jones, 'Crop-mark sites at Mucking, Essex' *Antiq. J.* xlviii (1968), 210–230.
2. The excavation was conducted under the auspices of the Department of the Environment, as a sub-project of the Mucking excavations, directed by Mrs. M. U. Jones. The site was first identified by Mr. A. Saunders and Mr. K. Bannister of the Thurrock Local History Society, and permission to excavate was readily granted by the gravel company manager, the late Mr. I. H. Powell, of Hall and Ham Ltd., who also lent a machine. To these, I express my gratitude, and also to Mr. and Mrs. W. T. Jones for their assistance. The location of the site is shown in Fig. 2, *Antiq. J.* xlviii (1968), 21.
3. One other pit group, comprising three small intersecting pits, each averaging 2 ft. in diameter and 1 ft. in depth, was recorded by W. T. Jones in October 1965, after the main excavation had been completed. It was not possible under these salvage conditions to relate precisely the two findspots, however.
4. G. J. Wainwright, 'Excavation of a Durotrigian Farmstead near Tollard Royal in Cranbourne Chase' *Proc. Prehist. Soc.* xxxiv (1968), 112–116.
5. B. R. Hartley, 'The Wandlebury Iron Age hill-fort excavations of 1955–6' *Proc. Cambridge Antiq. Soc.* 1 (1957), 13.

6. A. H. L. F. Pitt-Rivers, *Excavations in Cranbourne Chase* ii (1888), 55.
7. Cf. the discussion by G. J. Wainwright, op. cit., 112–116; and I. M. Stead in *Proc. Prehist. Soc.* xxxiv (1968), 157–159.
8. E.g. in *Archaeol. J.* cxxvii (1970), 108–113.
9. A. Ellison and P. Drewitt, 'Pits and postholes in the British Early Iron Age: some alternative explanations' *Proc. Prehist. Soc.* xxxvii (1971), Part 1, 183–194.
10. Dennis Harding, 'Round and rectangular: Iron Age houses, British and foreign' in edit. C. and S. Hawkes, *Greeks, Celts and Romans* (1973), 43–59.
11. Cf. D. W. Harding, *The Iron Age in Lowland Britain* (1974), plate XI and fig. 13. Rectangular settings of four, six and nine posts have been found at Mucking: cf. *Panorama,* Journal of Thurrock Local History Society, xvi (1972).
12. M. U. Jones (op. cit., 214) indicates 20–40 feet as the size range for the 'drip gullies' surrounding the Iron Age huts.
13. In K. J. Barton, op. cit., 83–7.
14. B. W. Cunliffe in *Antiq. J.* xlviii (1968), 175–191; *Iron Age Communities in Britain* (1974). I am grateful to Miss Clare Fell for the opportunity of discussing the Rainbow pottery; she regards the Rainbow material as later than that from West Harling (*Proc. Prehist. Soc.* xix (1953), 1–40).

The Orsett 'Cock' Cropmark Site

by WARWICK RODWELL

SUMMARY: Excavations and observations during the period 1956–70 are reported on part of a massive cropmark complex in Thurrock. This includes prehistoric, Romano-British and Saxon monuments. Excavation was primarily concerned with a double-ditched defensive enclosure constructed in the mid first century A.D., one of several in the area. After a short life the enclosure was replaced by another, with which was associated domestic and industrial debris, including two groups of pottery wasters which are discussed in their local context.

BACKGROUND

The 1946 R.A.F. aerial survey failed to reveal many new archaeological sites in Essex, but amongst those which did chance to appear on the photographic record was the distinctive rhomboidal double-ditched enclosure in the south-east part of Orsett parish (Plate I).[1] The site lies opposite the 'Cock' Inn, in the north-west angle between Stanford Road (A13) and the old Brentwood Road (A128), near the centre of a 30 m. Thames gravel plateau, at TQ 65358135.

In 1956–7 two trial trenches were dug across the enclosure ditches by Mr. D. Hollingworth, with the assistance of Mr. K. Barton but, unfortunately, no report was published.[2] In 1960–61 the Brentwood Road was realigned and a roundabout built at its junction with Stanford Road; this caused some damage to the western side of the earthwork, by that time known as the 'Roman Camp'. A watching brief on behalf of the then Ministry of Works was undertaken by Mr. B. P. Blake, then Archaeological Assistant at the Colchester and Essex Museum. An interim report was drafted but not published.[3]

In 1968–70 the site was again disturbed during the laying of high-pressure gas pipelines and the present writer undertook a watching brief on behalf of the then Ministry of Public Building and Works (now Department of the Environment). The exceptionally dry summer of 1970 caused vast areas of new cropmarks to appear on the Thurrock gravels and the Orsett 'camp' was once again revealed (although its western side was masked by the new road). Much more detail could be discerned, both inside the enclosure and for a wide area around it; a series of magnificent vertical photographs taken by Dr. J. K. S. St. Joseph has enabled these to be plotted in considerable detail (Plate II).[4]

In the production of this report the opportunity has therefore been taken to assemble as much of the material from the site as possible and present it together with the recent aerial survey results. To achieve this the writer is indebted to many people and wishes to express his gratitude to: Mr. D. Hollingworth who made available his drawings from the 1956–7 excavation; Mr. B. P. Blake who kindly allowed his records

and finds from 1960–1 to be incorporated herein; Mr. D. T-D. Clarke who made available the finds which are in Colchester Museum; the North Thames Gas Board (Pipeline Section) and in particular Messrs. D. F. Whiting and G. Twynham for every assistance in making archaeological recording possible whilst contract work was in progress; the Engineer and Surveyor of Thurrock U.D.C. for supplying copies of plans; Miss S. A. Butcher of the Department of the Environment for her help and interest; Mrs. M.U. Jones and Mr. W. T. Jones for the loan of equipment from the Mucking excavation; Mr. R. Bingley, Assistant Curator of Thurrock Museum, for his valued assistance during and since the work; and finally Mrs. K. A. Rodwell, who assisted with the recording on site 1968–70, who has plotted the cropmarks from aerial photographs and who has given much help in the preparation of the drawings.

INTERPRETATION OF THE AERIAL PHOTOGRAPHS

Figure 1 shows the location of the site in relation to modern features in the south-east part of Orsett parish. The principal cropmarks in the vicinity have also been plotted on this map, so that the site can be seen in relation to the settlement-pattern geography of the area. The cropmarks shown cover an area of about 90 ha. (220 acres) and continue for an unknown distance in all directions; and just off the map, to the south, is the recently discovered causewayed enclosure.[5] It is not proposed to present a detailed analysis of the Orsett cropmarks at this stage, but suffice it to note that at least three different superimposed field systems can be detected over much of the area, interspersed with annular and penannular gullies[6] and small rectangular enclosures (at least three of these lie just to the south of Orsett Park). The greatest concentration of cropmarks can be seen lying between the 'Cock' and Barrington's Farm; this complex includes the 'camp' (Enclosure A) which can clearly be seen to lie at a divergent angle from the other principal cropmark alignments.

Figure 2 shows Enclosure A and adjacent features in as much detail as can be gleaned from the various photographs and excavated sections. The rhomboidal 'camp' is by far the most dominant of the Orsett cropmarks, of which the north, south and west sides can be seen virtually in their entirety. The south-east corner is hidden under vegetation and the old Brentwood Road (where it was located by a pipe trench) and the north-east corner is just visible on the western edge of Brentwood Road. Although formerly known as double-ditched, it can now be seen to be triple-ditched, at least on the south and west sides, and almost certainly on the east as well, but definitely not on the north.[7] The central ditch, being of much slighter construction, did not show well on the 1946 high-altitude photograph and in places the inner and outer ditches are swollen and distorted by later, intrusive features; this is most obvious in the case of the north inner ditch. In overall dimension the earthwork is *c.* 85 m. square and covers an area of some 0.7 ha.; and the actual area enclosed by the inner ditch, allowing for an internal bank, would have been *c.* 58 m. north–south by *c.* 50 m. east–west, or 0.35 ha. The enclosure can be seen to have been divided into two approximately equal parts by an east–west ditch (F4); it clearly pays no regard to the inner and middle ditches, across which it cuts, but stops a little way short of the outer ditch (probably in the tail of its bank). The eastern termination of F4 cannot be seen but presumably it lies under

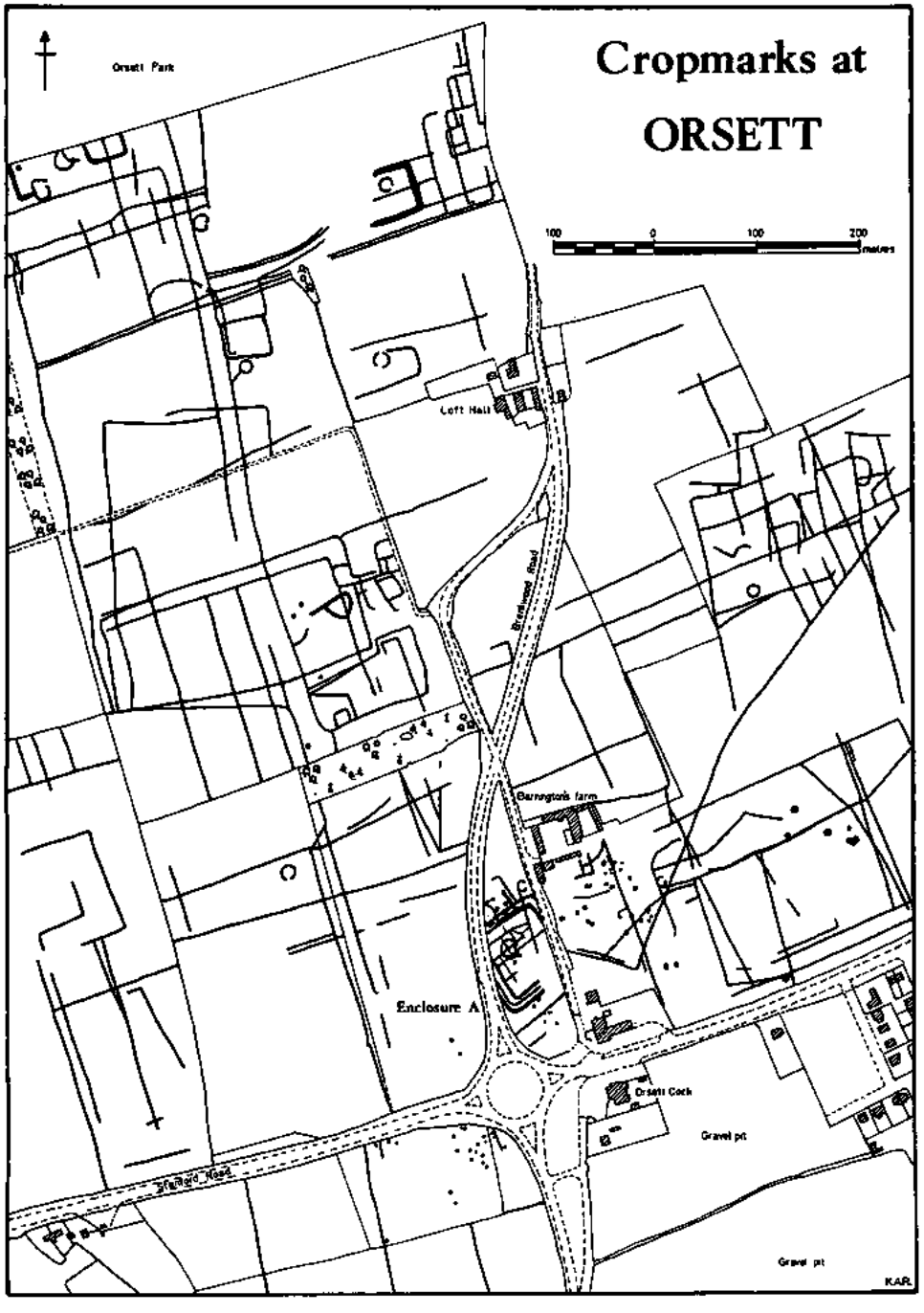


Fig. 1 Plan of cropmarks at Orsett, in relation to modern features.

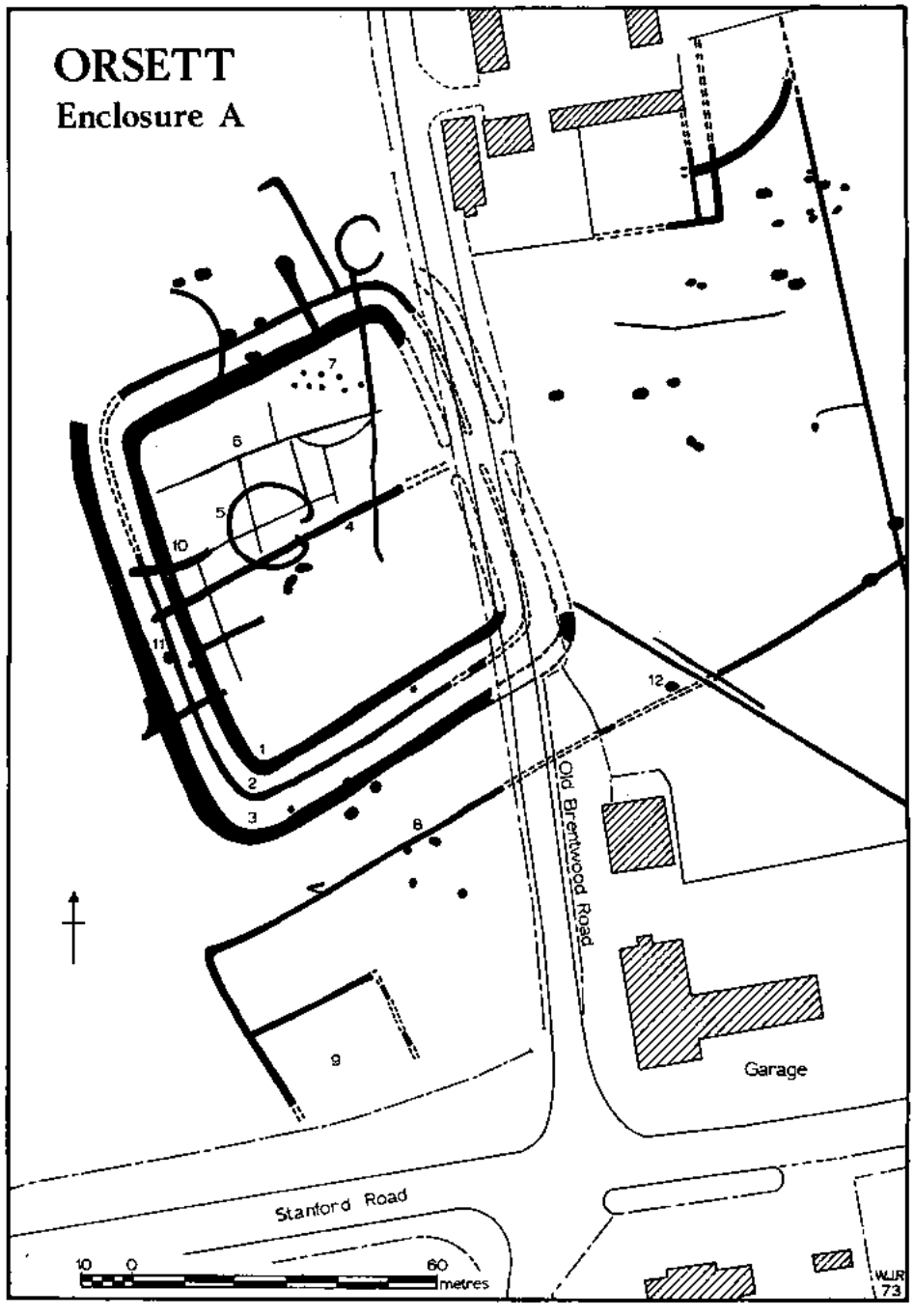


Fig. 2 Enclosure A and associated cropmark features (numbered F1–F12), prior to the realignment of Brentwood Road in 1960–61.

the old Brentwood Road. By analogy with apparently similar enclosures in Thurrock,[8] there should be an entrance in the centre of one (presumably the eastern) side.

Fragments of several curving ditches, perhaps representing penannular hut gullies or wall trenches, can be detected inside and outside the enclosure, but one, asymmetrically placed within it, is worthy of mention (F5). It has a diameter of *c.* 15 m. and a markedly inturned entrance facing east; a closely similar feature can be seen just to the south of Orsett Park (Fig. 1).

Inside Enclosure A faint traces of a system of small fields can be seen (F6), as well as a group of pits (or large postholes, F7) and sundry other features. Outside the enclosure to the north, south and especially to the east, is a random scatter of sub-rectangular pit-like cropmarks suggestive of *Grubenhäuser.* A little to the south of the enclosure, and parallel to its southern edge, is a ditch (F8) which appears to terminate in a small enclosure at its western end (F9) and at the other extremity links with the field-systems to the east of the old Brentwood Road.

EXCAVATIONS 1956–70

In 1956 a single trench, approximately one metre wide, was cut across the western side of Enclosure A, near its south-west corner (Fig. 3, s3). Ditches F1, F2 and F3 were located and sectioned and three minor gullies also found; the trench was extended laterally to trace one of these (Fig. 4, trench 3 plan and Section 3). In the following year another section was dug (trench 1), this time obliquely through the southern side of the enclosure. The trench was continued southwards to cut ditch F8 also (Fig. 3, s1 and s1a). Ditches F1 and F3 were found but the whole of the area between had been disturbed by gravel digging (Fig. 4, Section 1 and Section 1a).

The construction of a surface-water sewer in conjunction with the realignment of Brentwood Road in 1960 provided a deep and very oblique section through the western and northern sides of Enclosure A. Mr. Blake had to work under extremely difficult conditions and although he recovered a considerable quantity of material, little is of any stratigraphical significance (see Fig. 3 for the line of the new road, its sewer and manhole positions).[9] The sewer trench varied in width between 1.5 m. and 2.5 m. and located a number of minor features which defied interpretation; in some cases these also confused and obscured the already oblique sections of the principal ditches. The sewer provided two sections each of ditches F1 and F2, both of which were found to pre-date the short length of ditch F10 (Fig. 2) and although the sewer cut the junction between ditch F2 and F4 their interrelationship was not established. A shallow ditch to the north of F10 was cut through and was probably part of the F6 complex. A pit (F11) was also found between ditches F2 and F3. No finds appear to have been recorded during the making of the road, probably because of its shallow construction depth.

In 1968 destruction began again when three pipelines, from Stanford le Hope, Chadwell St. Mary and Purfleet, were designed to meet at a valve-pit inside the 'camp' (VP1 on Fig. 3). In spite of the fact that the site was scheduled under the Ancient Monuments Acts, the Inspectorate of Ancient Monuments was not consulted until the eve of destruction, by which time it was too late to negotiate an alternative route for

the pipeline or to mount an excavation. The present writer was therefore asked to observe the construction works and record the findings. The most to be hoped for in the circumstances was to obtain fresh sections of the west and south ditches and possibly to locate the unknown eastern side of the enclosure.

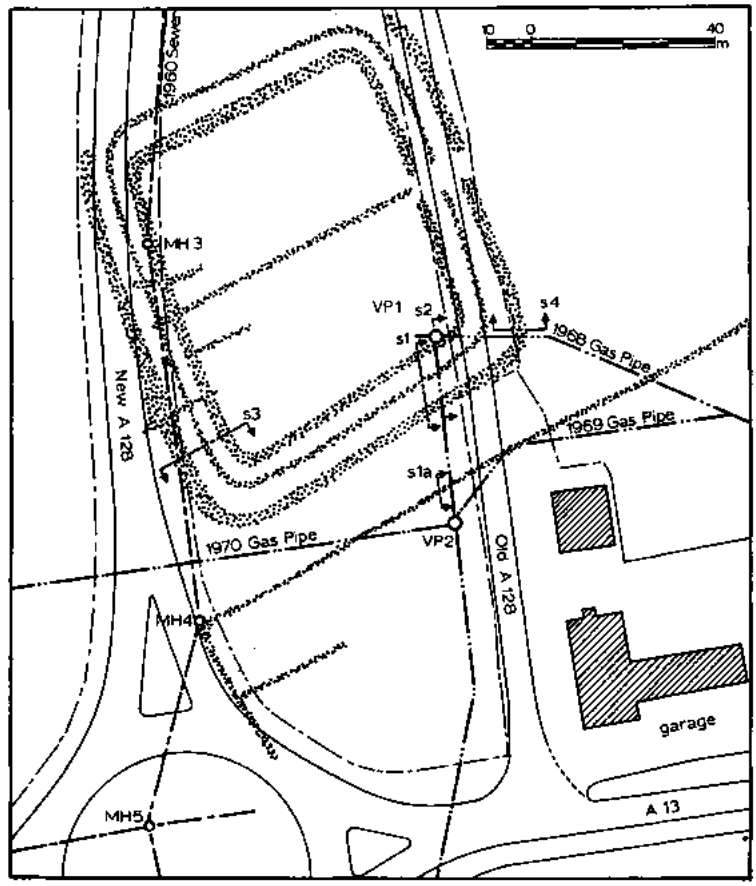


Fig. 3 Plan of Enclosure A at Orsett showing the positions of published sections (s1–s4), archaeological trenches, gas pipelines and sewer trench.

Construction work reached the 'camp' in December 1968: a broad wayleave was marked out for the operational zone and the topsoil bulldozed from a continuous strip, *c.* 10 m. wide along the pipeline route. The conditions were such that no features were observable, in plan, in this strip. Along one side of this strip the actual pipe trench was excavated; this varied between one and three metres in width, was *c.* 2 m. deep and had battered sides. A hole approximately 5 m. square was gouged out for the valve-pit.

The trench (2) from Chadwell St. Mary cut the south ditches, as predicted (Fig. 3, s2); although there was considerable disturbance in the area through gravel digging,

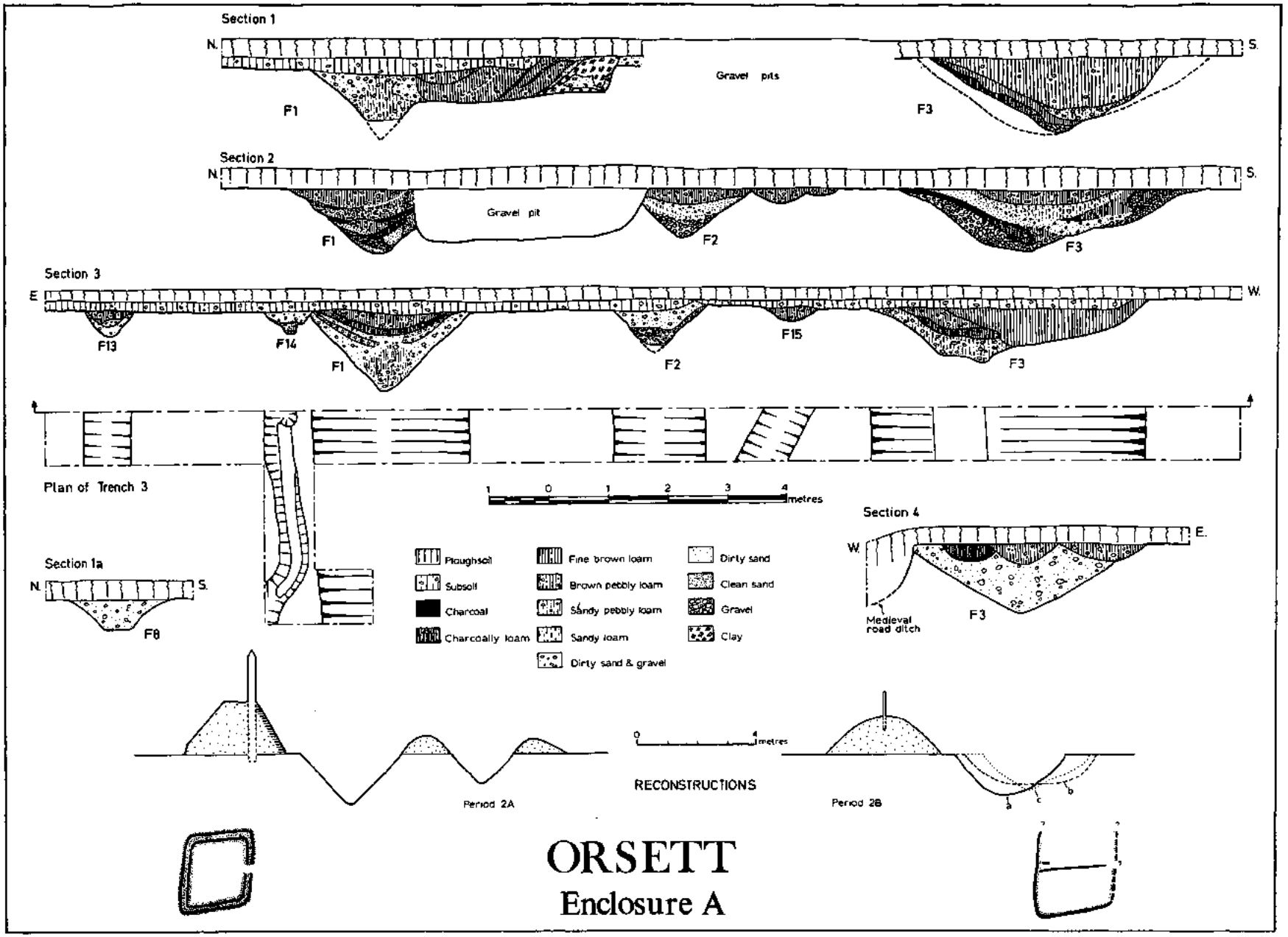


Fig. 4 Plan of Trench 3; sections 1–4 and suggested reconstruction of the earthworks of Enclosure A.

ditch F2 was found in this section (Fig. 4, Section 1). The trench (4) from Stanford Le Hope located the hitherto unknown south-east corner of the 'camp'. Although nothing is visible on the ground here, the position of the corner is still reflected by a kink in the hedgerow alignment. Ditches F1 and F3 were recorded (Fig. 3, s4 and Fig. 4, Section 4). Ditch F2 must lie under the old Brentwood Road and was not seen, due to modern disturbances and the rapid backfilling of this section.

The continuation of the pipeline westwards to Purfleet was scheduled to take place in the summer of 1970; however, before work commenced Thurrock U.D.C. discovered an error in planning which showed that when the A13 is converted into a dual-carriageway the newly constructed valve-pit would be suspended in mid-air above an underpass! Consequently, in August 1969 the valve-pit was demolished, the pipe trench reopened back as far as the north-east corner of the Garage premises and the pipe removed. A fresh trench further south was excavated and a new valve-pit constructed outside the 'camp' (VP2 on Fig. 3).

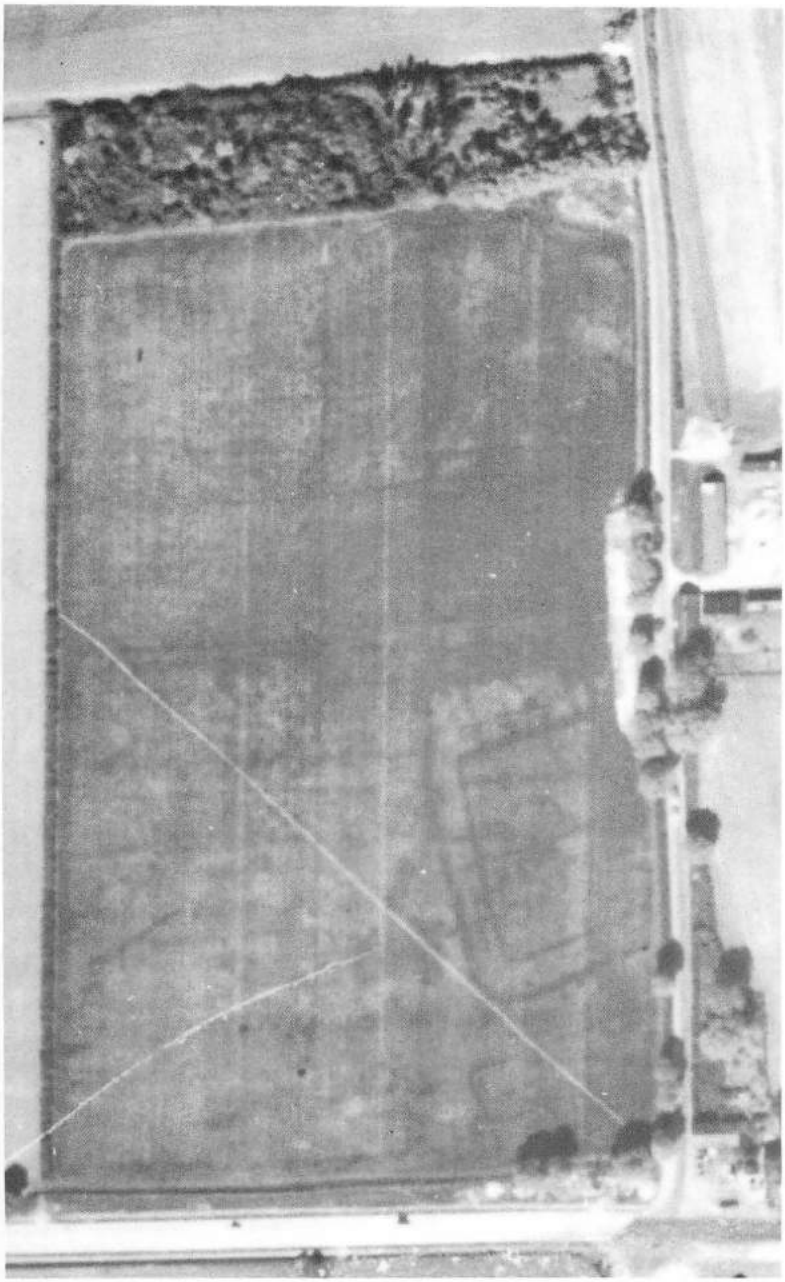
In July 1970 the final length of pipeline was laid: it ran westwards from VP2, under the new Brentwood Road (by thrust-bore) and then along the north side of the A13. Although this trench was observed no features were recorded. Undoubtedly, some were present, but the methods employed for bulk excavation, coupled with the intense drought, removed all chances of detecting discrete soil changes.

DESCRIPTION OF THE FEATURES

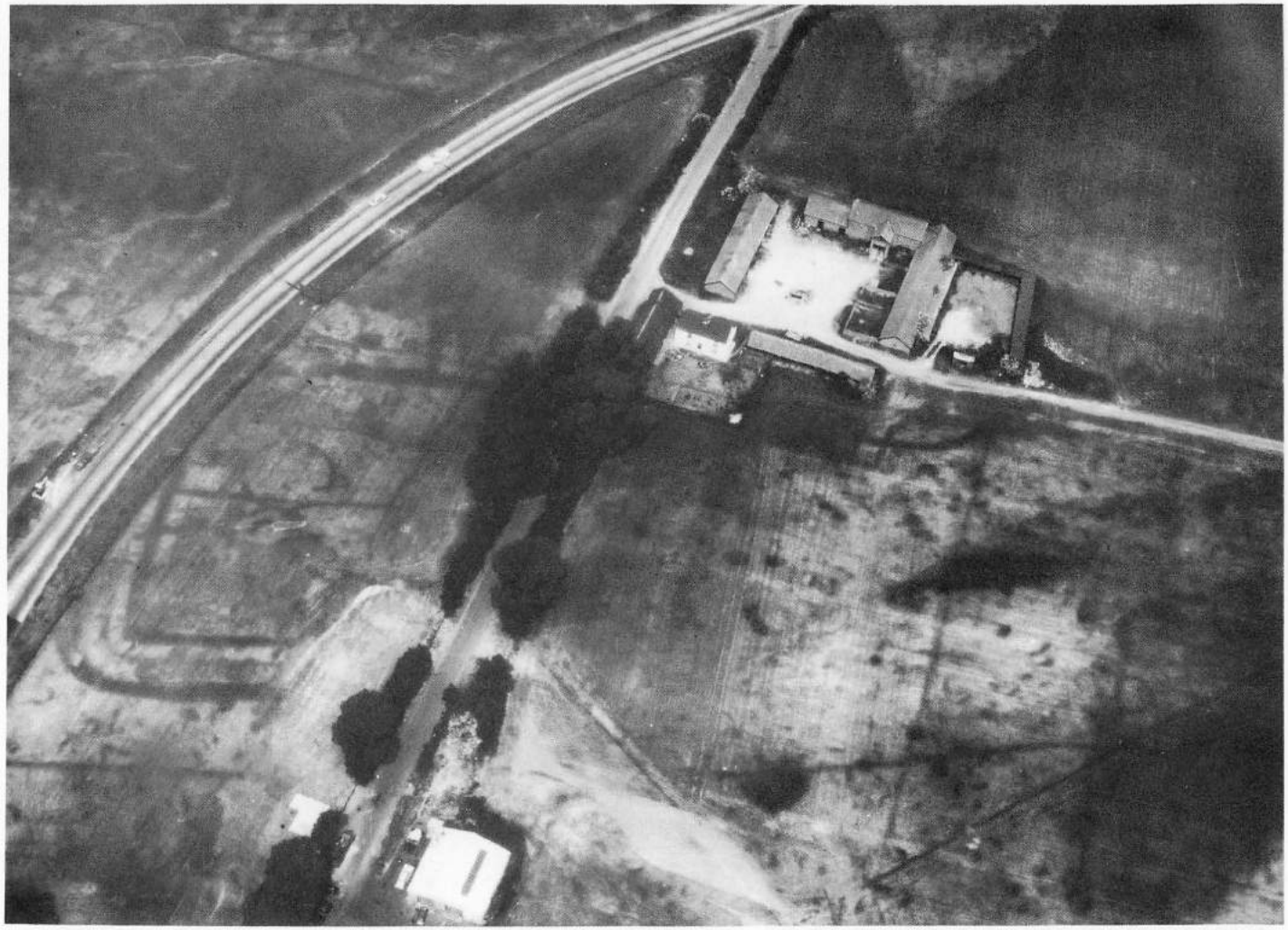
Ditch F1

The innermost ditch of Enclosure A has been sectioned on the north, west and south sides. The most straightforward section was recorded in trench 3, where it was found to be V-shaped, 1.7 m. deep and 3.2 m. wide (projected to ground level). The ditch had been at least three-quarters filled with sterile sand and gravel before it had had time to lose its shape by weathering or accumulate any debris in the bottom; this filling was sealed from lip to lip with a uniform layer of charcoal-rich loam (Fig. 4, Section 3). Trench 1 provided a basically similar section, although it would appear that the ditch was not quite bottomed here by the excavators (Fig. 4, Section 1); this is not difficult to understand, since the cleaner fills in these ditches often closely resemble the banded natural gravel. In Section 1 the southern lip of the ditch had been cut away by a shallow flat-bottomed gravel pit. The pipe-trench section, only a few metres to the east of the previous one, provided a rather different profile, with a more rounded and weathered appearance (Fig. 4, Section 2). This may simply be due to the fact that the ditch was beginning to turn the south-east corner, with the consequent distortion of the section. Furthermore, the interleaved fills and the 'notch' in the scarp slope suggest intrusive features dug into the ditch. Blake recorded that where the ditch was cut by the sewer, at the north-west corner of the enclosure, its sections were confused by the presence of other features, a fact which is confirmed by the evidence of the aerial photographs.

PLATE I



Vertical aerial photograph of Enclosure A at Orsett, taken 1946.



Oblique aerial photograph of Enclosure A at Orsett, looking north (1970).

Ditch F2

The middle ditch of Enclosure A was sectioned in the same places as the inner ditch. It was totally engulfed by gravel pits in Section 1, whilst in Sections 2 and 3 it appeared as a basically V-shaped ditch, some 1.2 m. deep by 2.3 m. wide (at ground level), with a berm averaging 1.75 m. between it and ditch F1. Blake noted the ditch was somewhat shallower on the north side, where it was cut by the sewer. The filling of F2 was essentially sterile sand and gravel.

Ditch F3

The outermost ditch of Enclosure A appeared in Sections 1, 2 and 3 and in the sewer trench. It presents a very different profile from those of the other ditches: Sections 1, 2 and 3 are closely similar[10] and all show a broad U-shaped ditch with two major recuts. Initially, the ditch was *c.* 1.5 m. deep and *c.* 3.75 m. wide; the subsequent recuts were a little shallower and moved progressively outwards from the enclosed area. The first recut was very broad in relation to its depth, and virtually flat-bottomed; and the second recut took the form of a broad V-shape. This profile appeared on its own in Section 4 (Fig. 4), at the south-east corner of the enclosure, and if the earlier cuts had ever existed here they must have been totally removed by the medieval road ditch. With the exception of Section 4, ditch F3 contained darker, more humic fills than F1 and F2, and more charcoal, fired clay, etc. In Section 4 three small pits or gullies were seen to have been cut into the backfilled ditch – one was a hearth pit.

Ditch F4

This cross-ditch divides the enclosure into two equal parts and, as previously noted, its western end stops just short of ditch F3, suggesting a relationship to an internal bank at this point. Clearly, it cannot have co-existed with F1 and F2 and although its junction with F2 was destroyed by the 1960 sewer, there is no record of the stratigraphical sequence. See, however, ditch F10, below.

Gully F5

Penannular gully with inturned entrances, facing east – diameter *c.* 15 m. No excavation has taken place.

Field ditches complex F6

Unexcavated, although at least one of these ditches probably appeared in the sewer trench section.

Pit group F7

Unexcavated.

Ditches F8 and F9

The long ditch (F8) with its terminal enclosure (F9) which runs parallel to the south side of the 'camp' was sectioned in trench 1 and twice more in the gas pipeline – once close to trench 1 and once in the field north of Orsett Garage. It was found to be

c. 0.8 m. deep by 2 m. wide and contained a sterile filling of dirty gravel (Fig. 4, Section 1A).

Ditch F10

This is a short length of ditch which, like F4, seems to have a relationship in plan to F3, and provides the crucial evidence for the sequence of the main enclosure ditches, since it was shown in 1960 that F10 postdates both F1 and F2.

Pit F11

This lay between ditches F2 and F3 (west) and was recorded in the sewer trench without any details, apart from the fact that it produced a large quantity of fourth-century pottery; kiln-group 2, see p. 28.

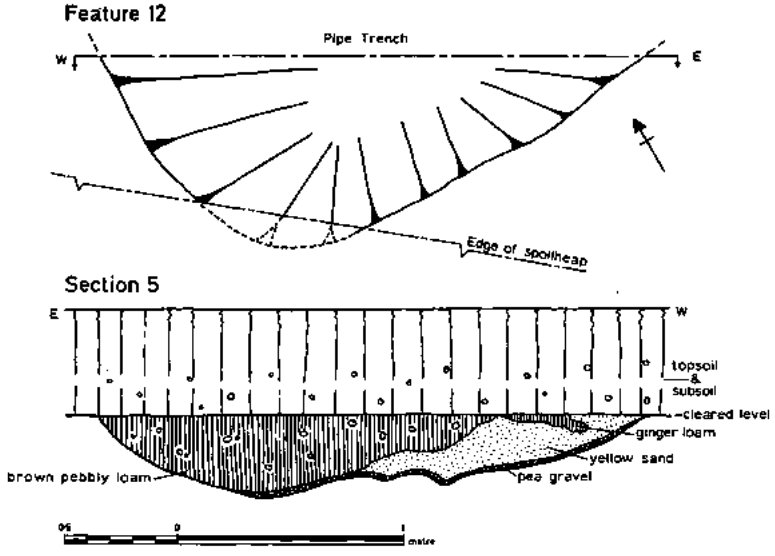


Fig. 5 Plan and section of the Anglo-Saxon pit revealed in a pipe-trench (F12).

Pit F12

This shallow pit was found in section in the gas-pipe trench and the surviving portion excavated by Mr. Bingley in 1968 (Figs. 2 and 5). It could well have been the corner of a sub-rectangular feature which, from its orientation and the fact that it yielded Anglo-Saxon 'grass-tempered' pottery, might support its identification as a *Grubenhaus*. Unfortunately, the section obtained is hopelessly oblique, but suggests the feature had a flattish bottom (Fig. 5, Section 5).

Other features

Several small features appear on the aerial photographs and others were found by Hollingworth and Blake but they are so fragmentary, and mainly undated, that meaningful discussion is impossible. Of the two short lengths of gully found east of

ditch F1, it is just possible that one of these (F13) represents the foundation trench for a timber palisade associated with a rampart (see Fig. 4, Trench 3). F14 was a short length of gully, containing postholes, just east of ditch F1 in trench 3 and F15 was another shallow ditch or gully in the same trench.

THE FINDS

All the illustrable material which can be traced has been included in the following catalogue. In addition, there are many small sherds which are assignable to a period but are not worthy of illustration; these have all been taken into account in the *Summary of Features and Finds* (Appendix, p. 37). Trench 1 apparently yielded no finds; trench 2 (gas pipe) very few stratified sherds; trench 3 a large collection, especially from ditch F3, and from trench 4 (gas pipe) there were no finds. The 1960 sewer yielded a large collection, but very little was stratified. The finds from the 1956–7 excavations and the 1968 gas pipeline are in Thurrock Museum, whilst those from the 1960 sewer trench are in the Colchester and Essex Museum.

POTTERY

Early–Middle Pre-Roman Iron Age (Fig. 6)

No features have been definitely assigned to this period, but a scatter of flint-tempered sherds was found in residual contexts – only two are illustrable.

1. Rim of a small jar in a well-fired medium-brown fabric tempered with crushed calcined flint. Cf. *Gun Hill*, Fig. 13.17, 18.[11] From ditch F1, trench 3.
2. Sherd, probably from the shoulder of a bowl, in grey fabric tempered with crushed calcined flint; surfaces reddish-brown. Parts of three shallowly impressed dimples survive. Cf. *Gun Hill*, Fig. 13.6. From ditch F3, trench 3.

Late Pre-Roman Iron Age and Early Roman

Pottery of this period can be divided into two groups: the fine black 'Belgic' wares and the coarse, often shell-tempered, fabrics.

3. Rim of bowl or jar in hard grey fabric tempered with grog; surfaces fired black and were probably burnished originally. From the first cut of ditch F3, trench 3.
4. Small bowl of fine brown-grey fabric with black surfaces, probably originally burnished. Cf. *Gun Hill*, Fig. 15.50. From ditch F1, uppermost filling; trench 3.
5. Large bowl rim in fine black fabric, with black-burnished surfaces. Same location as No. 4.
6. Small rim probably from a beaker, in hard grey grog-tempered fabric; the exterior has fired black and the interior light brown. The lip is flattened and there are slight cordons on the neck. Cf. *Cam.* f. 58E.[12] From ditch F3, probably its first cut; 1960 sewer trench.
7. Rim of hard, brown grog-tempered fabric with smooth grey-brown surfaces, probably lightly burnished. There is a series of vertical scored lines on the neck. From ditch F3, first cut; trench 3.

8. Jar rim with internal thickening, in hard grey grog-tempered fabric; medium-brown surfaces. Cf. *Gun Hill,* Fig. 16.74. From ditch F10; 1960 sewer trench.
9. A similar but smaller vessel, coarsely made in medium-grey fabric, tempered with crushed shell and a little grog; surfaces fired light brown, and now vesiculated. From ditch F3, second recut; trench 3.

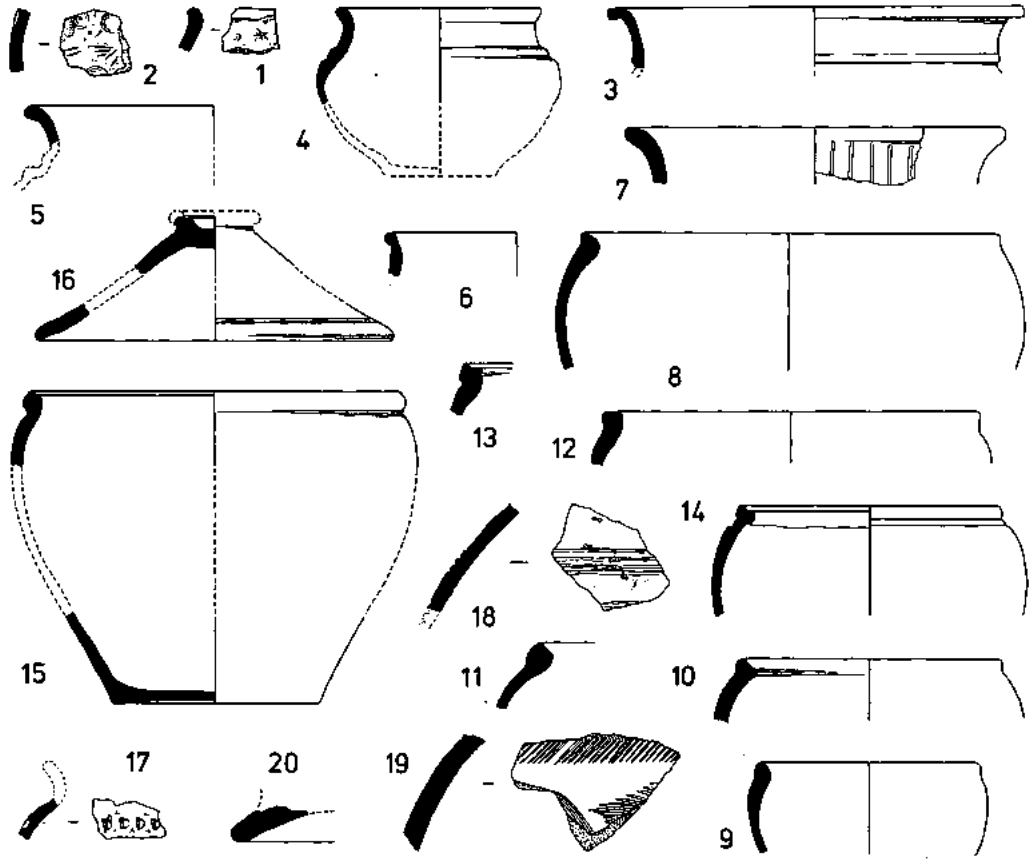


Fig. 6 Pottery from Orsett: Nos. 1–2, EPRIA; Nos. 3–7, 'Belgic'; Nos. 8–19, LPRIA and early Romano-British; No. 20, Anglo-Saxon. Scale ¼.

10. Internally-thickened rim of cooking pot, with soot encrustation on exterior. Hard, medium-brown grog-tempered fabric. Unlocated; 1960 sewer trench.
11. Cooking pot rim in grey shell-tempered fabric, with slightly hollowed lid-seating. Brown surfaces, now vesiculated. Cf. *Gun Hill,* Fig. 16.98, 99. From ditch F3, first recut, charcoally loam; trench 3.
12. Clubbed rim of cooking pot, with soot encrustation. Fabric as No. 11. Cf. *Gun Hill,* Fig. 16.86. From ditch F1, uppermost filling; trench 3.

13. Jar with internally-ledged rim in brown-grey fabric, formerly heavily shell-tempered, now vesiculated. Diameter uncertain. See No. 15 below. Unstratified from ditch F1; 1960 sewer trench.
14. Jar with internally ledged rim in hard dark-grey sandy fabric; brown surfaces and external soot encrustation. This form and fabric are commonly found on the 'red hills' on Canvey Island; and cf. *Gun Hill,* Fig. 16.89, 92. From ditch F3, primary fill; trench 3.
15. Jar with internally-ledged rim in similar fabric to No. 13. The form is well-known in central and southern Essex in the mid first century A.D.; this particular fabric often occurs with potters' graffiti incised on the shoulder of the vessel.[13] Unlocated, from 1960 sewer trench.
16. Fragments of two separate but similar lids, in hard dark-grey fabric, tempered with some crushed shell and grog (now vesiculated). Often found in association with ledged-rim jars like Nos. 13 and 15. Cf. *Gun Hill,* Fig. 17.110–12; and Canvey Island.[14] From ditch F3, second recut; trench 3.
17. Shoulder fragment of a jar in coarse grog-tempered brown fabric with black surfaces; decorated with a row of deep finger-nail impressions. This can be paralleled by unpublished vessels from pre-conquest levels at Kelvedon. From Ditch F3, upper filling; trench 3.
18. Shoulder sherd of a large jar in coarse brown grog-tempered fabric; decorated with horizontal bands of combing. Paralleled by vessels from pre-conquest levels at Wickford and Kelvedon. From ditch F3, second recut; trench 3.
19. Shoulder sherd of a large jar in grey fabric tempered with grog and crushed shell (now vesiculated); medium-brown surfaces; decorated with deeply-incised lines in chevron formation and lightly impressed combing. For parallels see No. 18. From ditch F10.

Anglo-Saxon

20. Fragment of a pedestal-base of rough brown-black fabric with 'grass tempering'. For the general type see J. N. L. Myres, *Anglo-Saxon Pottery and the Settlement of England* (1969), Fig. 12. From ditch F3, latest fill; trench 3.

Romano-British Kiln Group 1 (Fig. 7)

A large group of pottery was found in the uppermost filling of ditch F2 (north side), in the 1960 sewer trench. Much of the pottery is clearly kiln waste and was found in association with fragments of kiln structure of fired clay. Blake noted that there were 1500–1750 undecorated sherds, about 200 rims, 100 bases and some decorated fragments. Less than one hundred sherds can now be traced. The pottery in question was recovered from a three-metre length of ditch F2, where it was recorded as being densely packed; presumably the kiln from which this material originated lay close at hand. The pottery recovered suggests that a limited range of common forms was being produced.

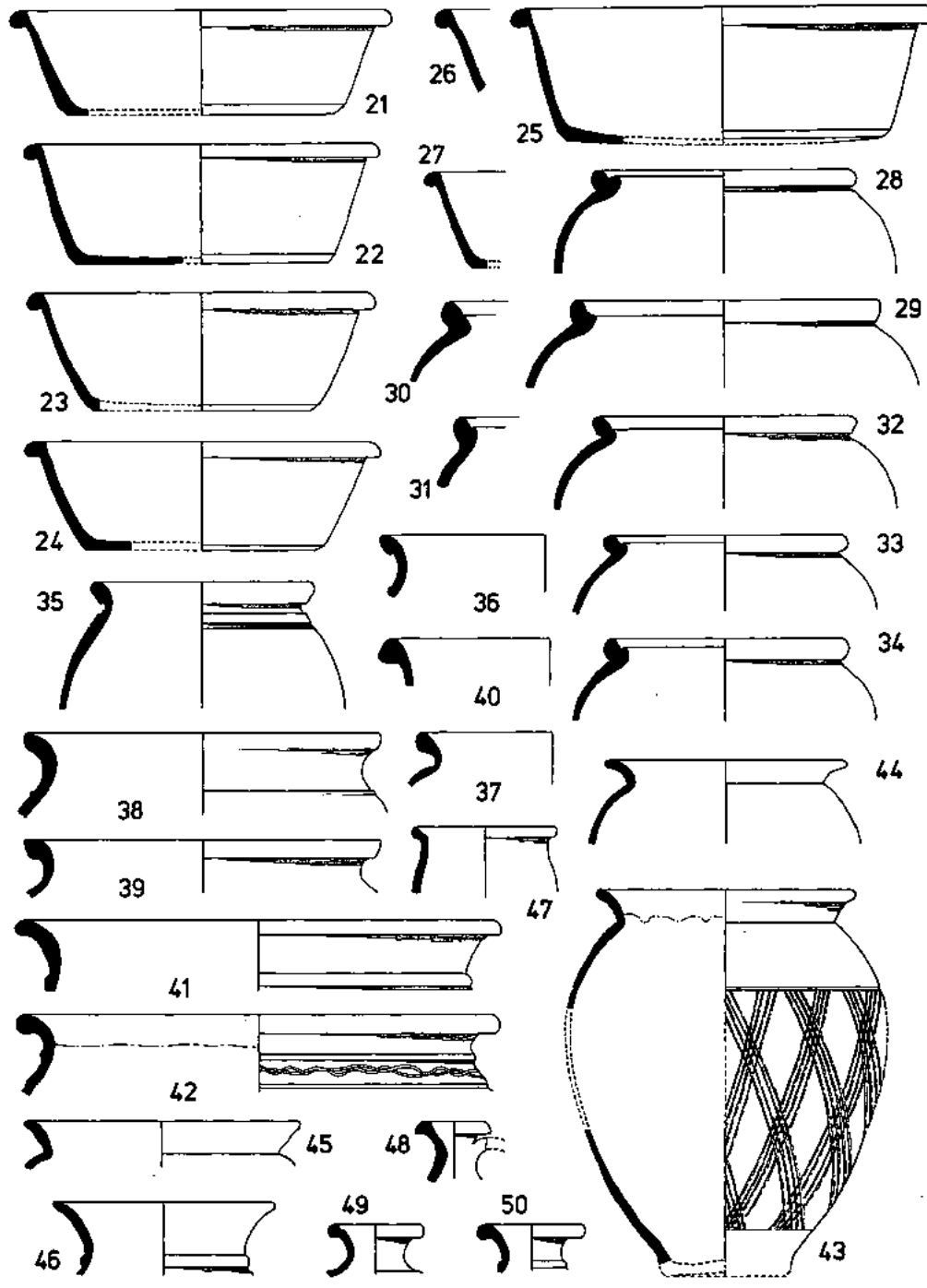


Fig. 7 Pottery from Orsett: Nos. 21–50, Romano-British Kiln Group 1. Scale ¼.

BEADED-RIM PIE DISHES

21. Fine medium-grey fabric with burnished surfaces; distorted and cracked, with a single large stone showing through the surface.
22. Similar fabric to No. 21.
23. Ditto, but with crude internal burnish-lines.
24. Similar to No. 21, but with black surfaces.
25. Similar to No. 21; distorted.
26. Dark grey burnished fabric; distinct S-curve to wall; distorted. Rim diameter 24 cm.
27. Similar fabric to No. 21. Rim diameter 19 cm.

These pie dishes are all closely similar in form and have a more-or-less rounded bead to the rim, and all exhibit a bevel at the base of the wall. They are closely comparable with some of the Type B pie dishes from the Mucking kilns.[15]

LEDGED-RIM JARS

28—34. Various profiles, all in grey-brown sandy fabric, unburnished. Rim diameter of No. 30 is 19.5 cm. and of No. 31, 17.5 cm. The vessel is of a very common type which occurs in profusion at Mucking (Type F), especially in kiln II. Blake records *c.* 100 examples from Orsett.

UNDERCUT-RIM JARS

35. Hard, medium-grey fabric with brown core; the groove on the shoulder has been carelessly cut.
36. Slightly sandy, medium-brown fabric with dark grey surfaces.

Although only represented by a few rims here, this is again a common form (Mucking Type J). It has been noted at Mucking that this form only became prolific after the zenith of the ledged-rim jar had passed.[16]

CAVETTO-RIM JARS

37. Dark grey, soft underfired fabric, now much abraded.
38. Fine light-grey fabric with a fairly smooth surface, but apparently not burnished.
39. Hard medium-grey sandy fabric.
40. Medium-grey, rough sandy fabric.

WIDE-MOUTHED CAVETTO-RIM BOWLS

41. Light-grey fabric, apparently burnished externally.
42. Fine, light-grey fabric, externally slipped and burnished, except for a reserved band on the neck which is decorated with scored wavy lines in a tangled arrangement. The extent to which the slip has 'run' inside the lip of this vessel can be clearly seen.

These fine slipped and burnished bowls are typical of vessels of Type K produced at Mucking, where the range of forms and date have already been discussed.[17] Blake records another ten examples from Orsett.

EVERTED-RIM JARS

43. Fine, lightish-grey fabric, slip-dipped and burnished externally on the rim, shoulder and base. The unburnished zone on the body is decorated with groups of scored lines in acute-angled lattice formation.

44–5. Rims of similar vessels. Blake records another 43 of this type.

The everted-rim jar occurs in the earlier kilns at Mucking (Type P) and is generally prolific on Thames-side sites.

POPPY-HEAD JAR

46. Fine light-grey fabric, burnished externally. This would appear to be the rim of a tall ovoid jar, rather than a beaker. The type does not occur in the published Mucking kiln groups, but is nevertheless not uncommon on Thames-side sites, particularly in second-century contexts.

CUPPED-RIM JAR

47. Fairly fine, medium-grey fabric, apparently once burnished, but now abraded.

This unusual jar form is not common in Essex and only a few examples have so far been recorded at Mucking, in kiln II (Type H).

FLAGON

48. Light-grey fabric, heavily abraded. The stump of a single handle remains. The sherd exhibits firing cracks and is a waster.

SMALL FLASKS

49–50. Medium-brown fabric, with dark-grey surfaces, externally burnished; cordon on the neck.

These simple flasks are well known in southern Essex, although poorly dated; they were made in small numbers in the Mucking kilns (Type O).

The vessels represented in kiln group 1 can be divided into two classes: first, the finer, burnished and often slipped wares, such as pie-dishes, cavetto-rim bowls, latticed jars, flasks and flagons; and secondly, the coarser, unslipped and unburnished jars of ledged, cavetto and undercut-rim type. This is directly comparable with the output of the Mucking potters, as indeed are the individual forms themselves. In fact there is an almost perfect correspondence between Orsett kiln group 1 and the products of Mucking kiln II, and since the latter have recently been discussed in detail it is unnecessary to repeat the parallels and dating here.[18] Suffice it to say that a date in the late second, or more probably in the early years of the third century seems most likely on present evidence.

Romano-British Kiln Group 2 (Fig. 8)

A second substantial group of pottery was recovered by Blake in 1960, from a pit in the side of the sewer trench (pit F11). No details have been preserved but the sherds evidently belong to another group of kiln waste material: many are underfired or distorted. In

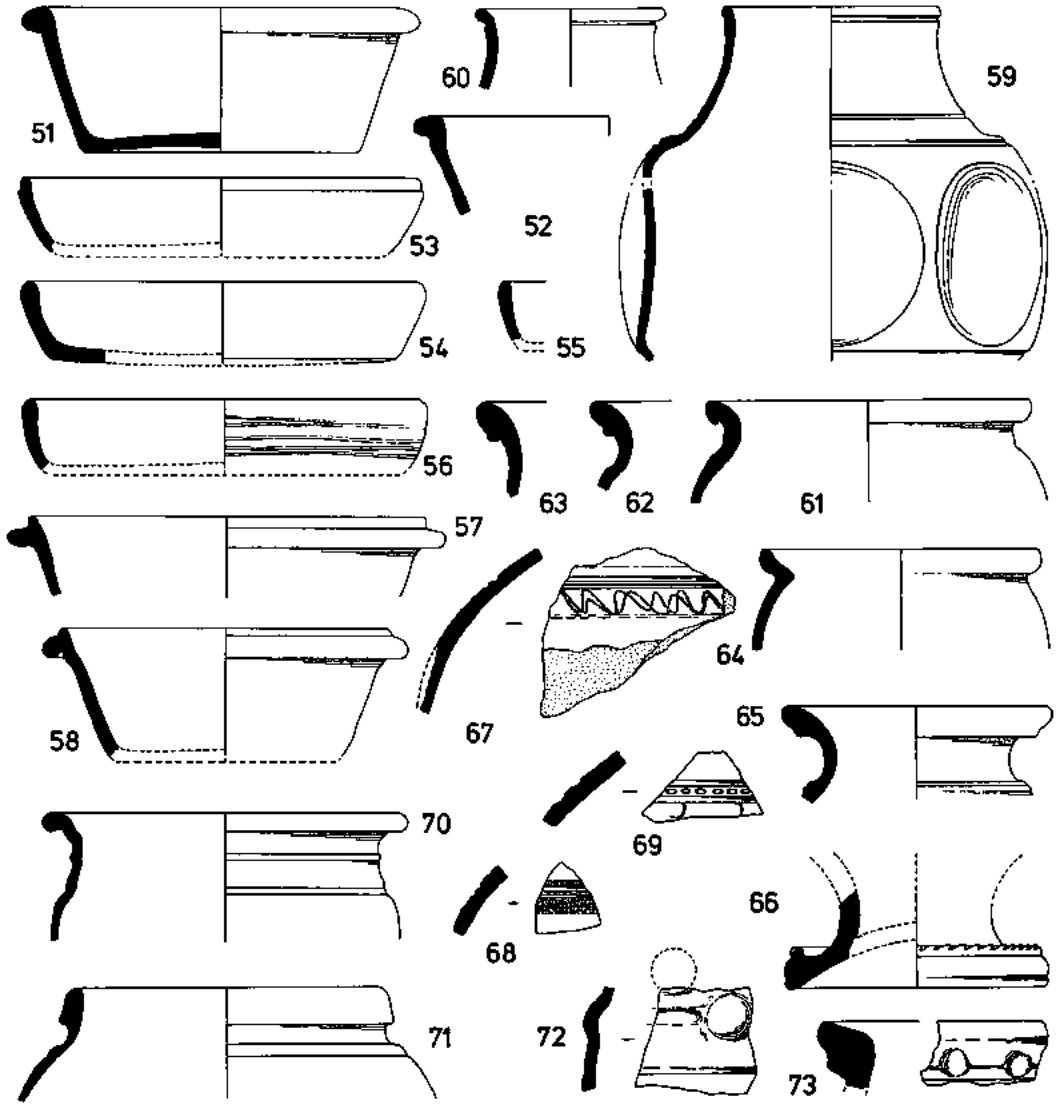


Fig. 8 Pottery from Orsett: Nos. 51–73, Romano-British Kiln Group 2. Scale ¼.

addition, there is an unlabelled bag of pottery wasters which look as though they ought to be part of the same group. The unlabelled collection also contains two fragments of fired-clay kiln walling.

BEADED-RIM PIE DISHES

51. Fine medium-grey fabric; dark-grey burnished surfaces. Underfired and cracked.
52. Similar, with a single pebble included in the fabric. Underfired and now abraded.

STRAIGHT-SIDED PIE DISHES

53–6. All in a fairly fine grey fabric, generally underfired. The rim diameter of No. 55 is 22 cm. Nos. 53 and 54, at least, were totally burnished originally, while No. 56 was burnished internally and had crudely scored horizontal lines on the exterior.

There is no evidence that any of these pie dishes had a basal bevel and the form is a well known one at Mucking (Type A).

FLANGED PIE DISHES

57–8. Fine medium-grey fabric, burnished internally and externally. Several other similar examples also found.

The form is known from the later kilns at Mucking (Type D) and is generally a common one in the second half of the third and fourth centuries.

FOLDED BEAKERS

59. This comprises three non-joining sherds of a large beaker with shallow circular 'folds' in fairly fine light-grey fabric, probably slipped. The exterior was mainly burnished on the wheel, but the folds were done by hand, using vertical strokes. The vessel is cracked and badly discoloured in patches due to a firing mishap.

60. Underfired, soft and brown; burnished externally. This rim may be from a folded beaker or from a conical-necked beaker (Mucking Type R). Folded beakers occurred in small numbers in the Mucking kilns (Type Q). Circular 'folds' are well known in the fourth century but their occurrence in the third remains uncertain.

UNDERCUT-RIM JARS

61–3. Fairly coarse, grey sandy fabric, unburnished. Several other examples of this form were present. It is the commonest late-Roman jar form in the area (cf. Mucking, Type J). Rim diameter of No. 62 is 20 cm. and No. 63 is 30 cm.

CUPPED-RIM BOWL

64. Fine medium-grey fabric, now abraded, but probably once slipped and burnished externally. This uncommon form was a speciality of the Mucking potters (Type G).

LARGE NARROW-NECKED JARS

65–6. Hard, medium-grey sandy fabric. The pedestal base is decorated with finger-nail impressions around the upstanding bead. The association of the narrow neck and pedestal base is known from the Mucking kilns (Type N), where some exceptionally large and elaborate vessels were produced. The body was often decorated with combed patterns, as exemplified on several unillustrated sherds from this group. The finer vessels were often slipped, burnished and decorated with scored wavy lines or bands of diamond rouletting (see Nos. 67–8).

67. Shoulder sherd of fairly fine medium-grey fabric, burnished externally, except for a reserved zone which is decorated with tangled wavy lines, lightly scored. Flaked through mis-firing.
68. Small sherd from the shoulder of a large jar, decorated with two bands of diamond rouletting, in fairly fine medium-grey fabric, apparently burnished externally. The rouletting is blurred and damaged but appears to be from the same roller as one used at Mucking.[19] There are several other sherds, from the unlabelled group, which are underfired and bear slight traces of rouletting.
69. Small shoulder sherd from a large jar, decorated with a row of oval stabbed impressions on a slight cordon. Below this there appears to be a row of impressed or incised semi-circles. Medium-grey fabric, fairly fine, with a trace of an external slip which was probably burnished.

WIDE-MOUTHED CAVETTO-RIM BOWL

70. Hard, medium-grey fabric containing some fine sand as tempering material. It is unusual for a vessel of this form not to be burnished, as with the closely similar bowls of Mucking Type K.

STORAGE JAR

71. Hard, medium-grey fabric, containing a little fine sand. It was apparently once slipped and burnished externally, but is now excoriated. Although storage jars in various sizes are known in this form from Mucking, they are not normally burnished (Type S).

MISCELLANEOUS

72. Sherd of Romano-Saxon ware from the girth of a large pot, *c.* 20 cm in diameter. Medium-grey fabric, rather coarse in texture, and contains a little sand. The exterior may have been slipped and burnished, but it is now too abraded to be certain. One pressed-out boss and part of a horizontally-impressed groove survive, with slight indications of another boss above. This is probably a fragment of a two-tiered decorative arrangement, as with other elaborate Romano-Saxon vessels, e.g. from Feering.[20] The sherd is wheel-thrown and poorly fired, so that there is no doubt of its belonging to the kiln group. Orsett is one of the very few sites where Romano-Saxon pottery can be tied to a kiln group: the others in Essex are Chelmsford and Inworth. There is still a great deal of uncertainty attached to the dating of this type of late Roman pottery; however, its occurrence has not been attested in the area before the fourth century.
73. Rim fragment of a very large jar (diameter *c.* 40 cm.), in a hard fired, medium-grey fabric. The top of the rim is flattened and slopes inwards slightly and the exterior is decorated with thumb or finger impressions at intervals. This looks markedly different from the remainder of the pottery in this group, and may be a stray. Whilst the rim-form is known in later Roman storage jars, the decorative treatment cannot be paralleled by the writer, in the area.

Once again, exact parallels for this group of pottery can be found in the recently published paper on the Mucking kilns. Comparison will show that the Orsett products are directly comparable (with the exception of Nos. 72 and 73) with those of kilns IV and V at Mucking.[21] The discussion on their dating applies equally to Orsett, so that kiln group 2 here may reasonably be assigned to the late third century or, more probably, to the fourth century.

OBJECTS OF FIRED CLAY (Fig. 9)

1. Fragment of a cylindrical loomweight in fine soft red fabric. There is a clear impression of a thumb on the left and three fingers on the right of the surviving fragment, showing how the weight was formed in the hand. Probably of Bronze Age date; there are some similar examples in Thurrock Museum.[22] From a posthole in the gully F14, trench 3.

Fig. 9 Fired clay objects from Orsett: No. 1, cylindrical weight; Nos. 2–4, kiln or oven furniture. Scale ¼.

2. Fragment of a fired-clay block of rectangular section, but apparently not part of a common triangular weight; grey fabric with reddish-brown surfaces. It may be part of an item of kiln or oven furniture. Unstratified; 1960 sewer trench.
3. Tapering end of a firebar in hard grey fabric with reddish-brown surfaces. There are numerous lacunae in the fabric, resulting from tempering with chopped vegetable material; in appearance it is very much like salting briquetage. The bar appears to have been parallel-sided in one plane, but tapering in the other; the end-section is roughly 5 cm. square. From ditch F10; 1960 sewer trench.
4. A small, complete 'Belgic brick', hard fired and reddish-brown, with some 'grass marking' on the surface only. There is no sign of burning or discoloration to give any indication as to how it was used in a kiln or oven.[23] It is 7.5 cm. long by *c.* 5 cm. square. Found with the cylindrical weight, No. 1, above.

DISCUSSION

Although the amount of archaeological excavation which has taken place at Orsett has been minimal and carried out under the most unsatisfactory conditions, it is nevertheless possible to reconstruct, in general terms, the broad outlines of human

activity on the site over a period of more than a millenium. It must be stressed that the conclusions presented here cannot be regarded as anything like final, since they would certainly be amplified and perhaps modified by further large-scale systematic excavation – not only of the complex of features in and around Enclosure A, but also of the adjacent cropmark complexes to which the main site is visibly linked by ditch systems. For the sake of convenience, and in view of the present lack of detailed stratigraphical and chronological sequences, the history of the site will simply be divided into three periods: prehistoric, Roman and Saxon.

Period 1 – Prehistoric

1A PRE-BELGIC

No worked flints seem to have been recovered from the site and the only pottery so far found has been in residual contexts; this includes coarse, flint-gritted fabrics, probably of the EPRIA, and a few sherds of finer wares, apparently of the MPRIA. It is quite likely that the small, faintly defined 'Celtic' fields (F6 on Fig. 2) belong to this period, and so undoubtedly do the various penannular gullies which are thinly scattered over the whole area (the possible 'hengiform' monument has been discussed in footnote 6 above). Here, the dangers of interpreting air photographs without the support of excavation are underlined, since one of the gully circles (F5) fell fortuitously near the centre of Enclosure A and from the aerial interpreter's point of view was an obvious 'association' of a hut within an enclosure. However, since Enclosure A belongs to the Roman period it is most unlikely to be related in any way to the hut. The aerial photographs show several such circles: some are 'inside' enclosures, while others are in the open, suggesting nothing more than coincidental super-imposition, which is only to be expected on a densely occupied gravel terrace. At present, there is no clear evidence to indicate that the tradition of circular timber houses continues through the LPRIA in Essex, but there is a growing body of evidence to suggest that they gave way to rectangular buildings of cill-beam construction. The very few circular timber structures which do appear in the area in the Roman period seem to have been for special, non-domestic purposes, such as temples and *mausolea*.[24] Additionally, penannular hut gullies seem to relate to an unenclosed landscape at the nearby site of Mucking;[25] and where they are known to be related to contemporary enclosures (e.g. Ardleigh) the latter are not of regular layout.[26]

1B 'BELGIC' IRON AGE (LPRIA)

With the obvious exception of the two kiln groups, the majority of the pottery from the site belongs to this period. However, whilst some occupation is clearly attested in the LPRIA (especially by the combed wares which seem to rank amongst the earlier 'Belgic' wares on other, stratified sites in Essex), it is doubtful whether any of the excavated features can be attributed to a strictly pre-Roman phase. The stratified Belgic pottery all came from contexts which also yielded the distinctive mid- and later-first-century A.D. shell-tempered ledged-rim jars.

Period 2 – Roman

2A FIRST CENTURY A.D.

There is now little doubt that the two inner ditches of Enclosure A belong to this period and, although the majority of the eastern side has not been seen, it seems probable that they delineated a regularly laid-out, double-ditched, rhomboidal enclosure. Presumably it had an entrance and this must, by elimination, have been on the east side, possibly at its mid-point, as noted above (p. 17). Equally, there is little reason to doubt that ditches F1 and F2 were other than contemporary, for which the regularity of layout, constant-width berm, similarity of profile and the fact that they are both stratigraphically earlier than ditch F10, all provide corroborative evidence. Where undisturbed by later features, the ditches exhibit an unweathered profile, with little or no primary silting and a marked absence of associated domestic debris. A short period of use is implied and the sterile gravel backfill must surely represent the original banks, thrown back wholesale into the ditches.

A precise functional interpretation of this earthwork is difficult, and since the evidence is quite incompatible with a domestic or agricultural origin, but strongly indicative of a small, short-lived defence, the latter interpretation must, for the time being, prevail. Parallels are not difficult to find, both locally and further afield, and include two other mid-first-century defensive enclosures in Thurrock, namely Mucking and Gun Hill, West Tilbury.[27] Both have been excavated and yielded comparable structural histories. All three seem to have been short-lived constructions of around the time of the Roman conquest. Gun Hill and Mucking both command strategically important views over the Thames, while Orsett lies further inland but, perhaps not without significance, on the highest piece of land for some miles around (35 m. O.D.) and is alongside a ridgeway (now the A13) at least of Roman and possibly earlier origin.

A suggested reconstruction of the original profile of the Enclosure A earthwork is given at the bottom of Fig. 4 (*Period 2A*), where it will be noted that the volume of soil derived from the outer ditch was too great to have been solely used for an inter-ditch bank. The surplus must have been employed either in the main rampart, or spread along the lip of the outer ditch, in the form of a counterscarp bank.[28]

2B LATE-FIRST TO FOURTH CENTURY A.D.

Although Enclosure A was never reconstructed in anything like its original form, it nevertheless remained a visible feature of the landscape throughout the Roman period and it would appear that its remnants became incorporated in a domestic and industrial complex, of which very little is known. In the latter part of the first century a new enclosure was constructed on the same site, with its outline apparently conditioned by the remains of the earlier earthwork. We only know the western and southern sides (ditch F3) of this construction: they lay outside and parallel to the corresponding ditches of the earlier enclosure. There may well have been an eastern side, also following the earlier alignment, but there was certainly no corresponding northern side; this is both apparent from the aerial photographs and was proven by Blake. The bank associated with the new ditch (F3) was internal and its tail apparently sealed the

backfilled ditch F2 (which has consequently yielded no Roman finds, except from its northern side where there was no later bank to seal it). How the northern 'ends' of ditch F3 terminated we do not know; perhaps they linked up with ditches of the extensive field system; otherwise the 'enclosure' must be regarded as open-sided. The simplest explanation would be to suggest that it was unfinished, but this is certainly out of the question, since the ditches were recut at least twice and maintained throughout the Roman period. The enclosure was divided in two by the east–west ditch F4 and there were perhaps further sub-divisions which have not been revealed by air photography (as hinted at by ditch F10). Both of these cut through the backfilled early ditches, F1 and F2, and seem to have terminated in the bank associated with F3. The recutting of ditch F3 shows in all sections, except section 4, where the first 'recut' is the only ditch present at this point. Elsewhere, the recuts move successively outwards from the original line, a common phenomenon with internally-banked enclosures.

A suggested reconstruction of the earthworks associated with this enclosure is shown on Fig. 4 (*Period 2B*). The ditch profiles of this phase do not suggest a defensive role; and they have yielded quantities of charcoal and pottery, indicative of domestic refuse which had been tipped into them from inside the enclosure.

There are undoubtedly associated features within the enclosure, of which nothing can be said in view of the lack of excavation: some features were certainly dug into the hollows left by the earlier ditches; thus the apparent pit which was found in one of the sections of F1 (Fig. 4, Section 2) and the second-century kiln debris which lay in the top of ditch F2 on the northern side, where there was no sealing by a bank associated with F3. The visible distortion, in plan, of the northern arm of ditch F1 by intrusive features has already been commented upon.

The wide date-range evident in the Romano-British pottery recovered from F3 (and in particular its final cut, F3c) and elsewhere suggests that domestic occupation on this site continued throughout the remainder of the Roman period (i.e. from sometime in the latter part of the first century onwards). This site is perhaps best seen at this period as one of a series of farmstead units dispersed amongst the fairly regular pattern of Romano-British fields which occupies the whole of this fertile gravel ridge.[29] Two more of these possible farmstead units may be plausibly suggested just to the south of Orsett Park (see Fig. 1) and others are known from excavation, further to the west, at Primrose Island[30] (TQ 619809) and Cherry Orchard Farm[31] (TQ 643823).

The two Romano-British kiln groups from Orsett are of particular interest for the light they shed on the organisation of the pottery industry in the Thurrock area. The similarities in details between the Mucking and Orsett groups are so close as to suggest that the same potters were at work on both sites. If the same roller was used to produce the diamond rouletting at Mucking and Orsett, as seems likely, then possibility moves more towards certainty. In general, the evidence can be seen to support the suggestion put forward in the Mucking report that professional itinerant potters moved around the countryside, constructing kilns and producing pottery wherever it was required in sufficient quantity.[32] That this was not simply a short-lived activity can be demonstrated by the fact that the two groups from Orsett are at least a century apart in date.

Period 3 – Anglo-Saxon

Single sherds of Saxon pottery have come from the uppermost fillings of ditches F1 and F3, showing that these survived as slight hollows in the post-Roman period. If the various sub-rectangular spots which appear as cropmarks in the area are *Grubenhäuser,* as seems likely, then it would appear that a Saxon village (undatable, at present) grew up on the hilltop, within close proximity of two others, Mucking and Greygoose Farm,[33] whilst there was a fourth at Gun Hill. It is interesting to observe that all four grew up alongside Romano-British sites but, however likely, a contemporaneity of occupation has not yet been proven. All were deserted before the end of the Saxon period, presumably in a phase of settlement-shift to the slightly less exposed positions occupied by the present villages. Perhaps the present Orsett village is the result of an amalgamation of the Saxon settlements at the 'Cock' site and Greygoose Farm. Significantly, these sites lie at opposite extremities of what is the largest parish in Thurrock, whilst the Medieval village is centrally placed.

GENERAL CONCLUSIONS

The 30 m. terrace at Orsett is one of the few areas of intense cropmarks in Thurrock to remain substantially intact – the two other most intense groups, Gun Hill and Mucking, have been totally obliterated by quarrying in recent years. Doubtless Chadwell St. Mary would also have yielded a fine cropmark photograph half a century ago, but this too has been lost to quarrying and building. Although there are several lesser-known cropmark sites in Thurrock, of varying importance, there is nothing to rival the main Orsett complex. Unfortunately, this expanse of fine agricultural land, which has rightly attracted the close scrutiny of air photographers in the last five years, is far from safe: gravel-extraction companies are seeking permission to quarry it on a grand scale and the plans to construct a dual-carriageway to replace the present A13 will destroy many thousands of square metres of cropmarks. Furthermore, the siting of the proposed flyover at the Orsett 'Cock' is such that it will gouge out the whole of Enclosure A. It is interesting to note that the Orsett-Purfleet gas pipeline was planned to run along the top of the ridge, but at a late stage in the operation this was changed so that the pipeline now runs close to the present line of the A13. The reason for the change was the realisation that the pipeline would hamper gravel extraction in the future. Is it not time that this sort of *positive* planning took major archaeological sites into consideration; It would not be unduly difficult to adjust the position of the proposed flyover at the 'Cock', so that it fell to the west, or possibly to the north of Enclosure A, which is, after all, a Scheduled Ancient Monument. Essex is not rich in major cropmark complexes – where else in such close proximity can we find a causewayed enclosure, a possible henge monument, several prehistoric settlements and areas of 'Celtic' fields, an early Roman defensive enclosure, four or more Romano-British farmsteads, many hectares of Romano-British field-systems and paddocks and two complete Pagan Saxon villages? Surely this is an outstanding example of an ancient landscape which could be preserved intact for future generations of archaeologists, when resources may allow it to receive the attention it deserves.

Postscript

Since writing the above (in 1973), plans have been finalised for the construction of a new dual-carriageway, to the north of the present A13, and a major flyover. The protection of the Ancient Monuments Acts has been lifted and the total destruction of the site sanctioned.

APPENDIX

Summary of Features and Finds

Ditch F1
Primary silt. One EPRIA sherd and one from the base of a sub-Belgic platter; two small grey Romano-British sherds (undatable). Finds from the charcoally layer include a few residual EPRIA sherds, some fired clay fragments and a quantity of first-century pottery, some certainly pre-Roman and some of about the time of the Conquest. A few Roman and one Saxon sherd from the uppermost silting of the ditch.

Ditch F2
Virtually barren, just three small residual EPRIA sherds.

Ditch F3
First cut (F3a). A few residual EPRIA and MPRIA sherds, some 'Belgic' pottery and a mid first-century ledged-rim jar.
First recut (F3b). Fragments of fired clay objects, EPRIA and LPRIA residual pottery and later first-century Romano-British sherds.
Second recut (F3c). A very mixed collection of residual EPRIA and LPRIA wares, fragments of fired clay objects and Romano-British pottery of all dates. The latter included first-century ledged-rim jars, grey-ware cooking pots and jars, flanged pie dishes, a rim-sherd of terra sigillata of Dragendorff form 33 (East Gaulish, late second – early third century) and a fragment of a red-ware, cream-slipped flagon of the type produced in the late second-century at Little Thurrock.[34] In the uppermost filling there was one sherd of Saxon pottery.

Ditch F4
Apparently no finds.

Features F5, F6 and F7
Unexcavated.

Ditch F8
Sterile filling, no finds.

Ditch F9
Unexcavated.

Ditch F10
A few LPRIA sherds and the end of a firebar.

Pit F11

Some fragments of fired clay kiln lining and a large collection of pottery, probably fourth century – Kiln Group 2.

Pit F12

Possibly a *Grubenhaus*, yielding a small collection of Anglo-Saxon 'grass tempered' sherds, all from the brown pebbly loam filling (Fig. 5). Thurrock Museum No. 881.

Gully F13

One EPRIA and one MPRIA sherd and several of the LPRIA.

Gully F14

One EPRIA and one MPRIA sherd, cylindrical weight and 'Belgic brick'.

Gully F15

No finds recorded.

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FOOTNOTES

1. R.A.F. Sortie No. 106/G/UK/1447/1 MAY 46. The site appears on prints 6085 and 6086.
2. See *V.C.H.*, Essex iii (1963), 165. For a basic location map of this and other sites in Thurrock see *Essex Archaeol. and Hist.*, v (1973), 7.
3. A copy is in Thurrock Museum.
4. University of Cambridge, Committee for Aerial Photography; negative numbers: K17 U 134–6; BBS 93; BBT 6; BBY 94–5, 99, 100. Photographs were also taken by Jonathan Catton for Mucking Excavation Committee: MEC/JC/14.
5. *Panorama, Journal of Thurrock Local History Society*, xiv (1971), 38, 41. *Antiquity*, xlvii (1973), 286–8. N.G.R. TQ 651805.
6. The gully-circle just west of Loft Hall is of particular interest since it clearly has two opposing entrances on a roughly north–south axis. Its overall diameter is *c.* 18 m. and superficially bears a close resemblance to a monument at Little Bromley which has been interpreted as a Class 2 henge; *Bull. Colchester Archaeol. Group*, xi (1968), 24. The diameter of the Little Bromley site has been estimated at *c.* 22 m. Both sites seem to be 'associated' (on the evidence of air photography only) with three-sided enclosures. If excavation should eventually reveal that these are externally banked monuments of the second millenium B.C., then they could be added to Wainwright's 'Hengiform' group; *Proc. Prehist. Soc.*, xxxv (1969), 112 ff.
7. For ease of reference the features have been numbered consecutively, F1 to F15. The inner, middle and outer ditches are F1, F2 and F3, respectively.
8. For example: Mucking, *Antiq. J.*, lxviii (1968), 215; and Gun Hill, West Tilbury, *Essex Archaeol. and Hist.*, v (1973), 52.
9. Unfortunately, some of the finds and records have gone astray, including Blake's main section drawing of the sewer trench. The present writer has thus only been able to incorporate the surviving material in this report.
10. Section 1 was clearly not excavated to its full extent, but only the darker central filling removed. The full profile of the ditch was revealed a few metres distant in the pipeline trench – Section 2.
11. P. J. Drury and W. J. Rodwell, 'Excavations at Gun Hill, West Tilbury', *Essex Archaeol. and Hist.*, v (1973), 71 ff.
12. C. F. C. Hawkes and M. R. Hull, *Camulodunum* (1947).
13. See *Antiq. J.*, lii (1972), 335 ff. and Gun Hill, op. cit., 88.
14. *Trans. Essex Archaeol. Soc.* (ser. 3), ii (1966), 24, Fig. 7.25.
15. M. U. Jones and W. J. Rodwell, 'The Romano-British Kilns at Mucking', *Essex Archaeol. and Hist.*, v (1973), 20.
16. op. cit., 26.
17. op. cit., 26.
18. op. cit., 38.
19. op. cit., Fig. 9, Nos. 80–2.
20. *Antiq. J.*, l (1970), 262.
21. Jones and Rodwell, op. cit., 38.
22. *Panorama*, xi (1967), 18.
23. For a brief discussion of these ill-understood objects see Drury and Rodwell, op. cit., 89.

24. And perhaps waterside fishing huts, if the old evidence from East Tilbury is still acceptable; *VCH, Essex*, iii (1963), 190.
25. *Antiq. J.*, xlviii, (1968), 214.
26. ibid. For Ardleigh see *Bull. Colchester Archaeol. Group*, xiii (1970), 1 ff.
27. See footnote 7.
28. These small, but well-defended enclosures (single or double-ditched) are now emerging as a recognisable class of monument in south-east Britain in the first century A.D. Their significance is possibly of more than local interest and is being discussed elsewhere. For a premature attempt to discuss the Thurrock examples see A. Babbidge, 'Sub-rectangular Enclosures in Thurrock', *Panorama*, xvi (1972–3), 29–31. The fourth major site in Thurrock, at Low Street, East Tilbury, was omitted from the list, whilst several other sites of smaller scale and apparently of different function were included.
29. These are an important subject of study in their own right, and are being considered elsewhere.
30. *Panorama*, viii (1963), 37 ff.
31. ibid., ix (1965), 28 ff.
32. Jones and Rodwell, op. cit., 14 ff.
33. *Antiquity*, xlvi (1972), 149. N.G.R. TQ 625809.
34. *Essex Archaeol. and Hist.*, v (1973), 118.

Chelmsford Dominican Priory: The Excavation of the Reredorter, 1973

by P. J. DRURY

SUMMARY: The reredorter of the priory, constructed post c. 1300 and probably reconstructed twice before its final demolition after the dissolution, is described, and the large range of finds, both of building materials and other items is discussed in detail. Of particular interest are the coins and jettons (S. E. Rigold), brass letters (J. Blair), coarse pottery of the dissolution period, and water pipes. Structures and objects found in building operations near by in 1938 are also reported.

INTRODUCTION

The Dominican Priory in Chelmsford[1] was founded after 1234, the year of the canonisation of St. Dominic, and before 1277, when alms were given by Edward I for food for 36 friars.[2] In 1341, the house gained a further three acres of land, and licence to construct a culvert from a spring in the town field of Chelmsford to the priory.[3] The spring is presumably the Burgess(es) well, indicated on Fig. 1A. The priory was dissolved in 1537;[4] a map of 1591[5] shows only two buildings standing on the site, a house of four bays, with a central two-storied hall block flanked by two jettied cross wings, and a rectangular stone kitchen. The former was the 'free school'; it seems, on architectural grounds, to belong to the later sixteenth century, and thus it was probably built after the dissolution. The kitchen was still standing in 1751, when it was drawn by William Stukeley.[6]

Most of the site remained undeveloped from the sixteenth century to the nineteenth, the area outside the surviving buildings being shown as an orchard on the map of 1591. However, New London Road was constructed through the area *c.* 1840, its frontage being developed soon afterwards.[7] In this low-lying area, the road was built on an embankment, frontage buildings having a basement floor close to natural ground level and a ground floor about a metre above road level. A human burial in a stone coffin was discovered in 1898, in a garden adjoining Friars Walk: it was thought at the time, and indeed as late as 1961, to be Roman.[8] In 1938, the construction of the Chelmsford Rural District Council Offices (108 New London Road) revealed stone foundations, correctly ascribed to the Priory by Wykeham Chancellor.[9] The discoveries are described below; suffice it to say here that the remains were those of the Priory kitchen and ancillary structures.

There matters rested until 1968, when Mr. D. J. Biglin and the Chelmsford Archaeological Group located the north and east walls of the choir of the Priory church, at the rear of 63 New London Road. The southern part of the Priory site, including most of the church, was by this time threatened by the construction of

CHELMSFORD Dominican Priory

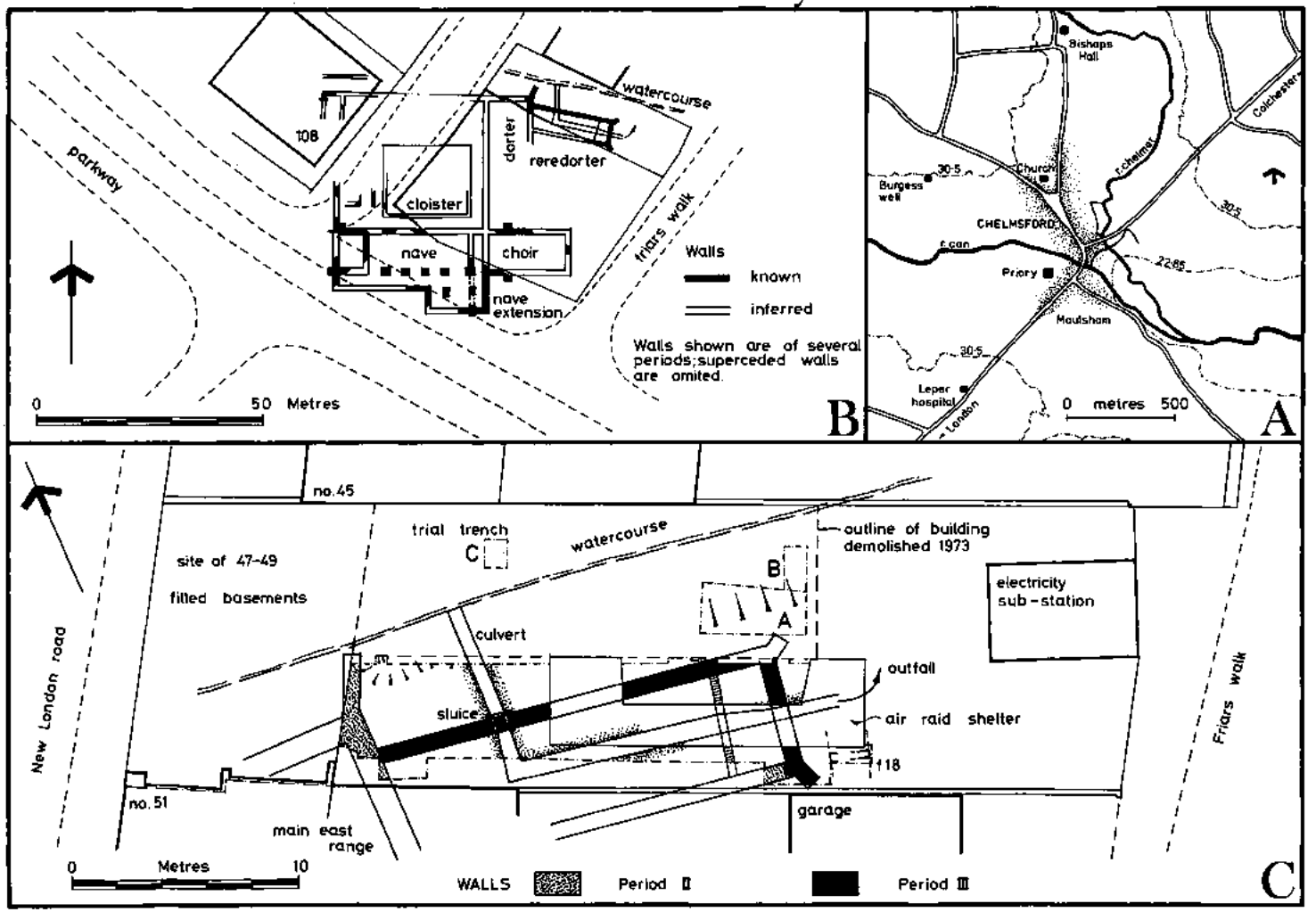


Fig. 1 a, The Priory in relation to medieval Chelmsford; b, General plan of the house; c, the 1973 excavations.

Stage II of the Inner Relief Road. Trial excavations were therefore undertaken in that area in 1969, by Mrs. E. E. Sellers on behalf of Chelmsford Excavation Committee and the Department of the Environment. Mrs. Sellers subsequently undertook extensive excavations on the church site, and observed contractors' trenches during road construction in 1970–71.[10]

In 1973, the former Eastern Electricity Board showrooms were purchased for redevelopment,[11] excavation of the site being undertaken by the writer during July and August, following demolition of the nineteenth-century buildings. The work was again under the auspices of Chelmsford Excavation Committee and the Department of the Environment. The north-east corner of the main range was located, and much of the reredorter examined. Further development proposals in the area will provide an opportunity to examine the remainder of the eastern part of the Priory within the next few years.

This report is concerned only with the 1973 season. It is envisaged that the work of 1968–71 will appear in a subsequent volume of this journal; therefore, beyond the publication of an overall small-scale plan, no attempt will be made in this paper to discuss the layout and development of the house as a whole.

THE SITE

The archaeology of the front section of the site had been severely damaged by basements, that of No. 49 being filled with weak concrete and that of No. 47 with hardcore. These, together with the presence of three- and four-storey buildings of dubious stability to the north and south respectively, made it impossible to excavate within *c.* 10 m. of New London Road. The electricity sub-station remained in use, high-voltage cables occupying the area to the west of the building. Several pass east–west through the site a few inches below the surface, within the south wall of the former back addition to No. 47, and through the basements to New London Road. Their presence governed the layout of the excavation and caused much concern during the course of the work. Excavation soon revealed a reinforced concrete air-raid shelter, partly demolished, set sufficiently deep into the ground to have destroyed all but the lower course of the reredorter channel walls. The restricted nature of the excavations dictated by these problems has produced a rather incomplete picture of the reredorter.

Over the main area of excavation and in trench A, the upper levels, down to the destruction debris, were removed mechanically, the site subsequently being excavated by hand. Trenches B and C were fully excavated by machine, and thus were not recorded in the same detail as the main area.

DESCRIPTION OF THE EXCAVATED FEATURES

Period I. *Pre-medieval activity; the substrata*

Three prehistoric flint flakes and one potsherd were found residual in Period III–V contexts; they are noted below. The earliest feature was a Romano-British ditch of slack profile, 15, whose northern lip was found within the southern edge of excavation (Fig. 2 and S3, Fig. 4). It was filled with stiff grey clayey silt, flecked with charcoal,

containing pottery of the later first century A.D. To the north of this feature natural consisted of bright orange hoggin,[12] beneath which lay blue or blue-grey clay (S3, Fig. 4); in the eastern part of the excavation, severed from the western by the air-raid shelter and culvert, the substratum was a stiff brown-grey alluvial clay, L20, possibly contiguous with the blue-grey clay found to the west, and containing in its surface a fragment of R.B. tile. It became greyer in depth, being sampled with an auger to *c.* 22.00 m. A.O.D.

To the east of the reredorter building this material appeared brownish, with a texture similar to that of the filling of F15. It was shown by the use of an auger that this material, layer 21, may be the filling of a watercourse running north–south, into which F15 could conceivably have discharged (S4, Fig. 4). Excavation of the feature was impracticable in the area available.

Period II. *Primary construction phase*

In the south-west corner of the excavation, a trench-built foundation, *c.* 0.22 m. thick (F3), was found, consisting of orange mortar with flints finished to a level surface. This rested on 0.15 m. of very bright orange hoggin, clearly distinguishable from the surrounding natural. The restriction on excavation caused by the presence of the standing buildings and the basement, and the presence of the channel, F5, produced a plan of the wall which is incapable of positive interpretation. That suggested on the plans – as the corner of the main range, with a buttress to the north – seems reasonable, however, taking into account the presence of the watercourse (see Period III below). It seems probable that the change of angle between the two sections of F3 indicates that the northern section formed a buttress to the corner of the building, and at the same time blocked the passage which would otherwise exist between the watercourse and the buildings. It is clear from the junction of the foundation 3 with the later foundation 4 that the wall rising from the southern section of the former continued upwards at the full width of the foundation for at least 0.30 m. It is equally clear that the wall rising from the northern section was offset at least 0.20 m., for the original backfill of the trench, L15 (grey clay and gravel), was still partly *in situ,* though unfortunately it was not distinguishable from L12 in S1, Fig. 3.

The foundation 19 consisted of clean orange gravel containing small patches of orange/grey clay; it was more than 0.75 m. deep below its flat upper surface shown on S4.[13] The foundation 4 made an irregular junction with this foundation, whose similarity to the sub-foundation of F3 is clear. However, no trace was found of the distinctive orange mortar associated with F3. Since F19 did not continue to the east, or turn south, there seem to be two alternative explanations of its presence; either it represents a change in technique during construction, or is the sole surviving fragment of a Period II reredorter whose walls have elsewhere been destroyed by the Period III construction. Of the two suggestions, the former perhaps seems preferable, in the absence of any trace of similar foundations under the Period III north or east walls, even where the latter is at its narrowest. The difference between the materials used for F3 and F19 might suggest that the latter is of slightly different date to, presumably later than, the main range; the difference in depth is clearly due to the change in substratum.

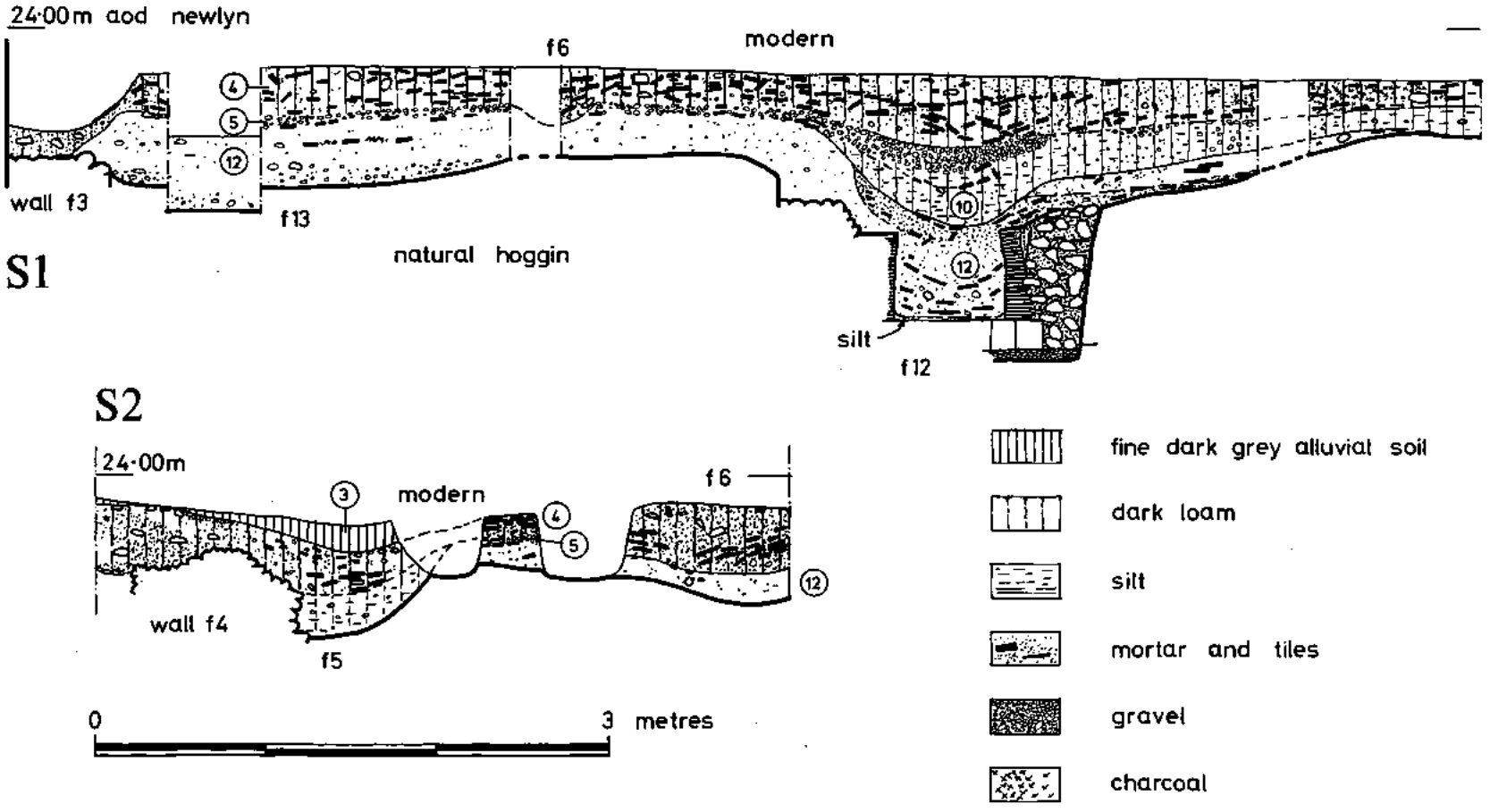


Fig. 3 Sections S1 and S2.

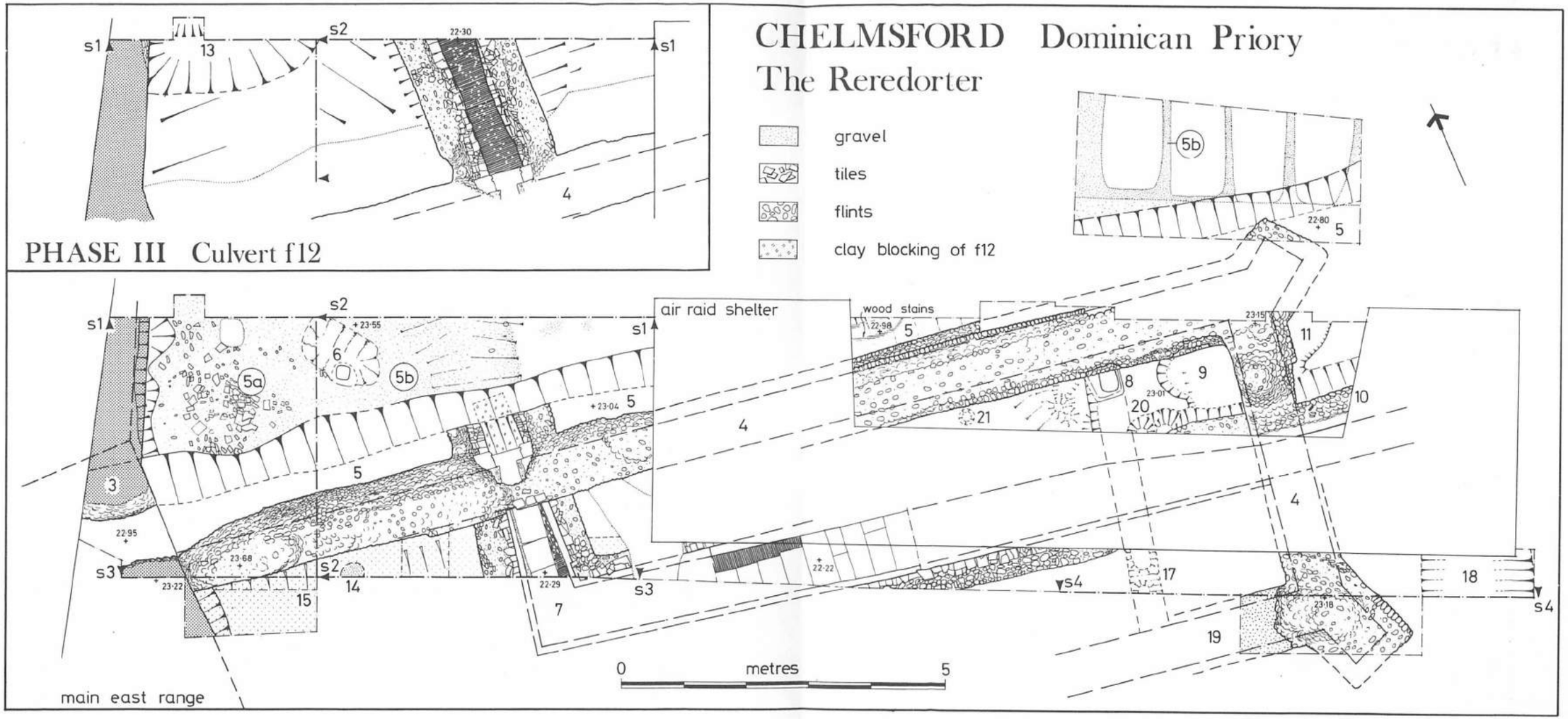


Fig. 2 Detailed plan of the reredorter.

[Facing page 42

CHELMSFORD Dominican Priory

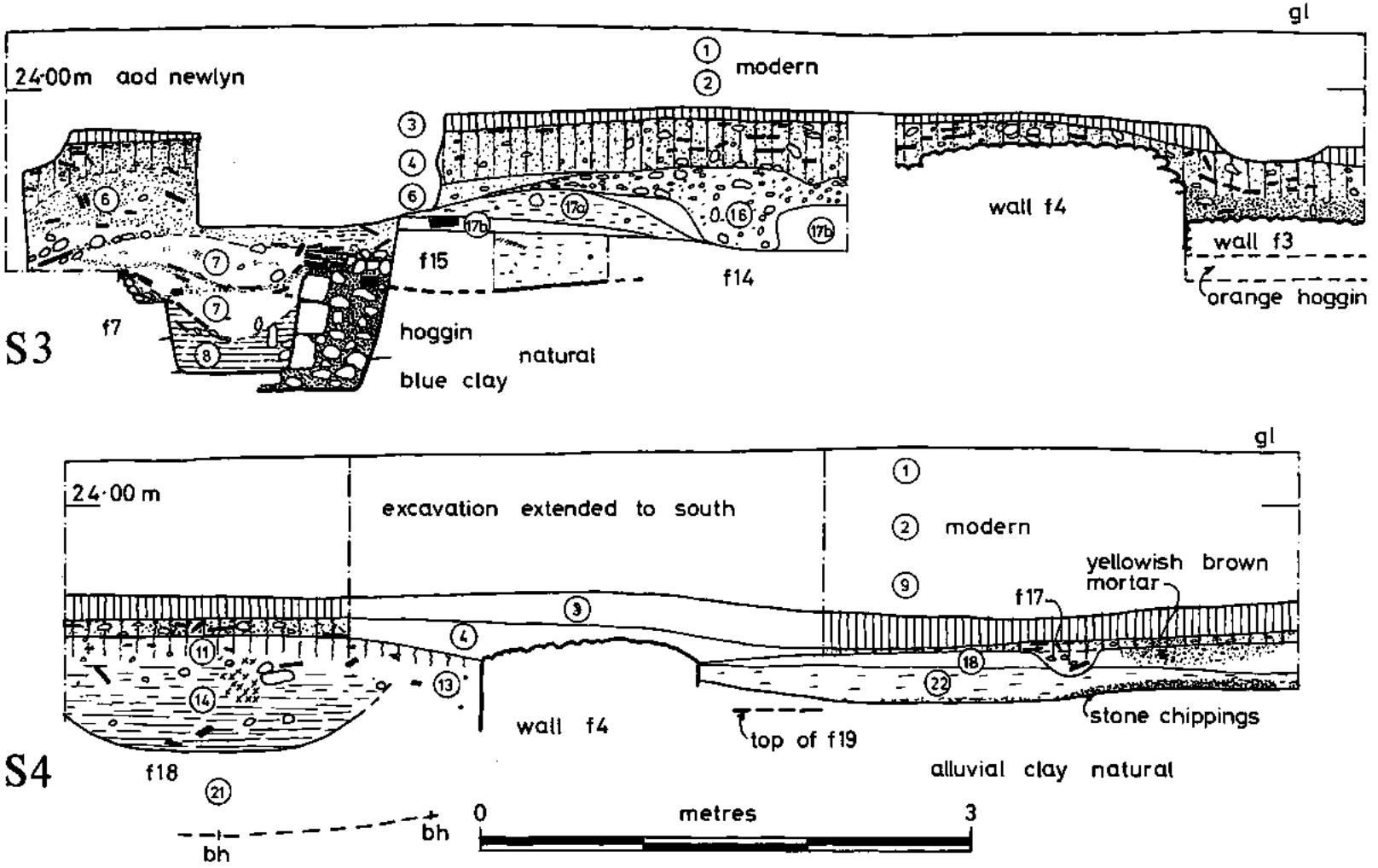


Fig. 4 Sections S3 and S4.

Only the excavation of the site to the south can show definitely whether there was a substantial gap in construction work, the south wall of the reredorter being constructed to act as the north wall of other buildings and F19 being the provision for subsequent work, or whether a change of technique during the actual building of the reredorter is indicated. In either case, however, the house would have needed a reredorter from the beginning; if it was on the excavated site it was presumably of timber and has left no trace. There was no archaeological dating evidence for this primary construction phase, though a date anterior to 1277 is perhaps likely in view of the size of the house of that date.

Period III. *Construction of the reredorter*

The foundation walls of Period III consisted of flint rubble and occasional peg tile fragments in white lime mortar. The north wall was butted against the earlier wall F3, and the south wall cut into the apparently earlier foundation 19.

Where the natural is sound, at the western end of the north wall, there seems to have been no internal offset, but the north, east and south walls had offsets on both sides in the eastern part of the site, where the substrata are poor. There are diagonal buttresses at the corners contemporary with the walls; the eastern wall is noticeably slighter than those on the north and south. Ground level falls some 0.50 m. from west to east across the site of the building; demolition had generally been carried out to that level, hence only in one small area at the western end of the north wall did the level upper surface of the foundation survive, at 23.68 m. A.O.D. Newlyn. The plan suggests that the wall above the foundation was *c.* 0.70 m. thick.

A culvert, F12, built of waste roof, floor and special tiles[14] from the Danbury kilns, set in white lime mortar, led water from a watercourse to the north into the reredorter channel. The tiles forming the bottom were set on edge, on a layer of orange gravel; those on the sides formed the facing to a rubble wall continuous with the north wall of the reredorter, F4. A crack had developed between the facing and backing of the east wall, the former bulging inwards as a result (Fig. 3, S1).

Water passed under the foundation F4 by means of an opening with a round headed arch, faced in Caen stone and floored with slabs of Purbeck marble. Occasional use of tile spacers in the masonry of the opening may indicate a partial rebuild of the southern section in Period IV, when the internal channel was reconstructed (described below); they occur only on the south, and on the internal elevation of the arch (Fig. 5). The flow of water into the building was controlled by a sluice-gate moving in rebates in the sides of the culvert, in the line of the stone plinth which can be presumed to have been provided along the reredorter wall above ground level (Plate I).

To the north of the building, the ground fell away, at first gradually, then, if F13 is not a pit of Period IV, steeply.

Further east, trenches A and B revealed a similar fall in the level of the grey/brown alluvial clay, L20, to *c.* 22.15 m. A.O.D. Above this had accumulated, in trench B, 0.20–0.40 m. of fine light-grey silt, L24, with a few oyster shells; above this, to *c.* 23.75 m. (sloping to north) lay dark-grey stony silt, L23, containing oyster shells and peg tile fragments. The level of L20 below the silt corresponds approximately with

the level of the bottom of the culvert where it enters the excavation; it is thus clear that when the culvert was in use, this lower area must have been permanently flooded, in fact forming a shelf on the edge of the watercourse proper. The latter was located only in trench C, where L23 was found from 22.85 m. A.O.D. (below modern disturbance) to 22.15 m. A.O.D., the same level as in trench B. Below this was a fine malodorous blue/grey sludgey silt, L25, clearly similar to L24 and distinctly greenish

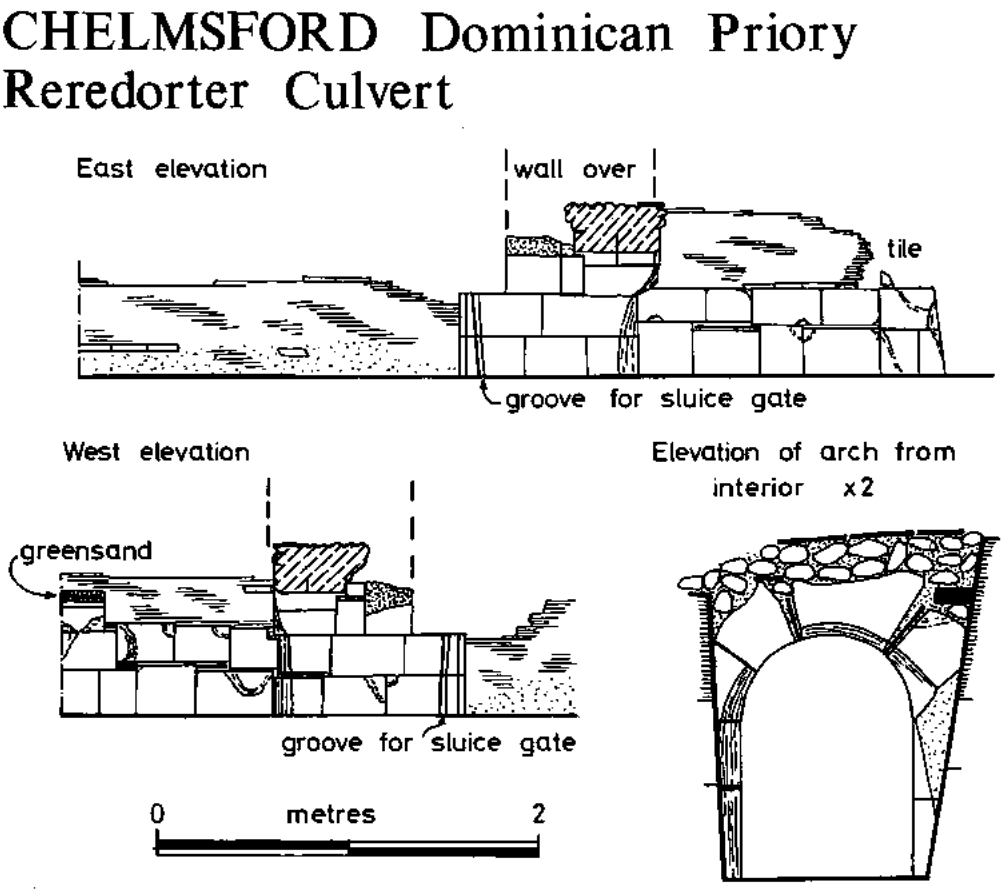


Fig. 5 Details of the Reredorter Culvert.

towards 21.50 m. A.O.D., beyond which it was impossible to excavate in the circumstances. No datable material was found in layers 24 or 25; although it is clear that the watercourse must have been open when the culvert was constructed, there is at present no certainty as to its origin. Its silting may have been the reason for the changes in Period IV, to which the upper silt deposit, L23, clearly belongs.

To the east of the building, the beginning of the outfall channel, F10, was found; it seemed to be of similar construction to the inlet, the rubble backing of the walls being continuous with the foundation F4. A roughly dug hole, F11, alongside the north-east buttress may be the result of plinth robbing; it bottomed at 22.65 m. A.O.D.

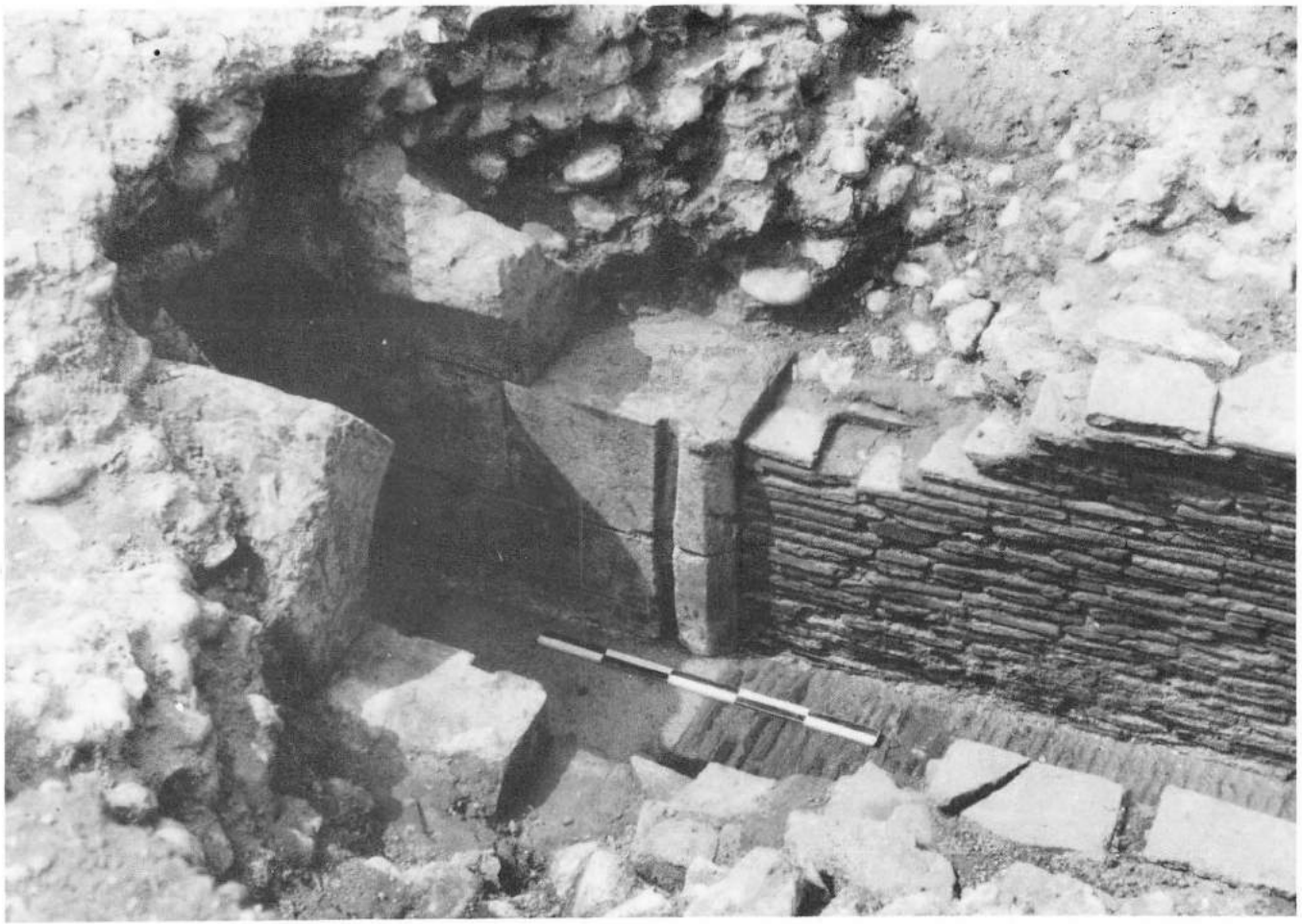
and contained mortar and flint debris. Feature 18 was a shallow ditch filled with grey silt, L14, and contained a patch of charcoal near the top; it cut L13, brickearth make-up, which overlay L21, noted above. The ditch was presumably part of the surface-water drainage system of the site.

Within and around the building, any pre-existing topsoil had been cleared before building operations began. Within the building, the ground was made up largely with brickearth, layers 17b and 18, containing lenses of other material, for example L17a, grey sandy silt, and the patch of yellowish brown mortar (possibly derived from alterations to the Period II structure) in 18. At the eastern end of the building, the lowest make-up level south of the channel, L22, consisted of grey/brown clay, presumably upcast from a foundation trench. Below this, on the cleared site surface, was a spread of Caen and clunch chippings, a clear construction level, indicating that the make-up was not laid until work was well in hand. To the north of the channel, clunch was found trodden into the cleared site surface, L20. This was covered by 0.10 m. of L19, a very pebbly yellow/grey clay; all upper make-up levels had been removed during demolition. Despite the varying nature of the lower levels of make-up, it is clear from the nature of the material levelled into the channel at the time of demolition that the principal constituent was brickearth.

Of the internal features other than the channel, the posthole 14, filled with L16, stiff brickearth and pebbles, probably represents some temporary construction during building work. It was certainly filled before the building was demolished, and its filling contained white mortar and peg tile fragments. Posthole 21 and the hollows to the east, 100–150 mm. deep, contained stone chippings and were filled with L19; they are presumably putlog holes. The slot which contained the partition, 17, showed two distinct post impressions in its southern section, and on the north was represented by a step 0.30 m. high in the cleared level of L20. It terminated against the north wall in the posthole 8, 0.30 m. deep below the lower level, and clearly intended to take a substantial post. If this wall were merely an internal partition, it would be expected to rise from the floor, and to be somewhat less than 0.30 m. thick; in fact it seems to be set deeply into the make-up, bearing in mind the depth required to keep a level floor, and surprisingly lacked a sill. It seems possible that the wall made a temporary end to the building, to enable it to be used before completion; in which case it probably retained the upper make-up levels. The possibility that it belongs to a wooden predecessor of the building is rendered unlikely by the relationship of posthole 8 with the wall,[15] and almost impossible by the fact that the slot originates *above* the make-up layers 18 and 22. (S4, Fig. 4). The slot and posthole were filled with grey clay containing tile, flint, mortar and pebbles, unfortunately sealed only by the destruction level 4; the posthole contained a few flints on the east side, probably packing.

In the north-east corner of the building, feature 9, bottoming at 22.80 m. A.O.D., was filled with destruction debris, L4. The wall face on the north had been cut away, and the sinking enlarged to the west, perhaps to assist in the extraction of whatever filled the hole. A stone cistern may be a possibility.

Dating evidence for the construction of the reredorter comes largely from the decorated floor tile wasters derived from the Danbury kilns, active *c.* 1275/85–1325/35 (see Section 11F below). Stylistic evidence, coupled with evidence



(Photo: P. J. Drury)

CHELMSFORD DOMINICAN PRIORY. The inlet to the reredorter channel from the east, showing the grooves for the sluice-gate and the tile-lined culvert, F12; 0.5 m. scale.

(Photograph by courtesy of Colchester and Essex Museum)

CHELMSFORD DOMINICAN PRIORY. Foundations discovered during the construction of the Rural District Council Offices, 1938, from the east; note the three water-pipes standing on end in the foreground.

from the kiln site, suggests that the culvert tiles were made during the latter part of its period of production, from *c.* 1300 onwards. The few fragments of pottery found in the make-up levels of the reredorter would not be in conflict with such a date for the construction.

Period IV. *Alterations to the structure*

Some time after the construction of the reredorter, extensive changes were made in its method of operation. The tile-lined culvert, F12, was blocked by a plug of grey clay, ending in a vertical face in the line of the former sluice-gate; the clay was presumably retained by boards set in the rebates for the gate. The remainder of the culvert was filled with brickearth, gravel and clay, L12, containing much building debris above a trace of grey silt; this filling extended to the west, into the hollow or pit, F13, noted above. The rapid silt filling of the watercourse, L23, must have accumulated at this time; but whether the silting of the channel was the cause of the alterations, or was merely allowed to occur afterwards, the evidence does not indicate. A spread of peg tiles and white mortar fragments, L5A, was laid on the filling 12; its plan may point to the existence of a door in the west end of the north wall of the reredorter, or it could be connected with the retiling of the main block roof.

The new water supply must be represented by the trench 5, alongside the north wall of the building. The lower filling (brown clayey silt) indicates that this feature acted as an open drain; but the battered and robbed state of the wall face exposed by the removal of the silt, and the fact that the same filling continues through the irregular gap in the wall 3, indicates that this is the result of the feature acting as a drain after something had been removed from it. There was no trace in the filling of tiles or flint, or fragments of clay pipes; and since the principal destruction debris, L4, seals the silt, the lining of the channel was presumably valuable enough to justify rapid removal. The evidence is not conclusive, but a lead pipe, or lead-lined culvert, seems likely; timber-stains, possibly from displaced framing of the latter, were found at one point. The trench as excavated had a total fall of 150 mm. over the length of the reredorter.

There was presumably a method of controlling the flow of water into the interior channel, the continuation of F5 past the end of the building providing an overflow.[16] Inside the building, the channel was reconstructed, using much of what was clearly the Period III material. The floor is of Purbeck marble slabs, supplemented by tiles set on end, possibly as a result of the channel being widened; they are set on a thin bed of mortar. The walls taper inwards towards the bottom, and are formed of Caen stone blocks, capped at varying levels by coursed tile wasters; both are backed by white lime mortar and flint walls.

These are, normally, visually indistinguishable from the Period III walls, but are butted to them (Fig. 2).[17] The stone blocks are mostly spalled, usually at the corners, presumably indicative of their having been levered from their original settings. Nonetheless, their deliberate cutting for use in a battered wall leaves little doubt that most formed part of the original channel. The upper stone in S3, however, is basically square, with a rebate cut in its upper edge which can have no significance in its present position; some of the material doubtless came from other parts of the structure. The

inclusion of a lump of Upper Greensand (Fig. 5) is significant; this material does not occur in Periods II or III. Within the channel, a deposit of grey organic silt, L8, was found, of varying thickness. This contained one whole, and many fragmentary jugs, which presumably held water for washing after using the reredorter. A tidemark on the walls adjoining the inlet indicates that at that point a minimum water depth of *c.* 50 mm. had been maintained, presumably by a sluice at the outlet. By raising the height of the barrier, a head of water could have been built up in the channel for periodic flushing. The walls of the main channel were coated with a thick brown accretion.[18]

To the north of the building, gravel metalling, L5B, covered the silt, L23, in trenches A and B; despite much later disturbance, it was clear that its surface sloped down to the north, as a result of the consolidation of the silt.

Similar metalling was found on the west, in the angle between walls 3 and 4. It was clearly laid some time after the deposition of the clay, L12, for it also sealed a layer of dark brown silty loam, 10, containing some domestic debris and much charcoal, which had accumulated in a hollow caused by the subsidence of the clay into the culvert F12 (Section 1). The fact that the metalling terminated along a crisp line on the east tends to suggest that it formed the floor of a timber building, presumably a lean-to, in the angle of the walls.

A posthole F6, which had contained a post some 20 cm. square, may mark the centre of the building; the large hollow around the 'ghost' seems to be the result of its being dug out during demolition. It contained 18 iron nails and much white mortar. A coin and a number of jettons were found scattered on the floor of the building. Outside the reredorter building on the east, a layer of dark loam, 11, developed above the silted ditch F18.

The alteration of the water supply to the reredorter seems likely to have been associated with the construction of a culvert to supply the Priory with water from the spring in the town field, for which licence was granted in 1341. It seems reasonable to assume that the work was completed by *c.* 1345/50, providing an approximate date range for the filling of the old culvert and the reconstruction of the channel (Period IV A). The formation of a layer of dark soil, 10, in the hollow caused by the subsidence of the culvert filling suggests that a considerable period elapsed before the gravel floor and metalling, L5B, was laid over the area. This is borne out by the jettons 1 and 2 (p. 54) in L10, and the coin and jettons 3–5 in L5B, which combine to suggest that the floor was laid *c.* 1380–85 (Period IV B).

The coins and jettons suggest a further phase of alteration, *c.* 1450–60 (Period IV C); if the building was partially refloored during this work, an appropriate context for these, which would have been displaced during demolition, would be provided. It is perhaps to this phase that the Flemish-type bricks and similar floor tile fragment found in destruction levels should be assigned.

Period V. *The Dissolution*

With the exception of the presumed removal of the lining of the trench F5, and doubtless other valuable items, it seems probable that the demolition of the reredorter was undertaken as a single operation. Charcoal from burnt saplings (see below), prolific

in the destruction levels, might suggest that this was not undertaken until some time had elapsed after the dissolution, say *c.* 1550–60, by which time clearance of such growth from the ruins would be necessary. The walls were thoroughly robbed of facing stone, but the channel, presumably because of its obnoxious nature, was left largely intact, being filled with floor make-up and building debris, layers 6 and 7.[19] Over the whole site, a layer of demolition debris in a matrix of dark loam, L4, was found; it contained more peg tiles outside the building to the north than elsewhere, as might be expected, and many iron nails. The dark loam matrix seems to be indicative of a period of inactivity after demolition had taken place.

Period VI. *Subsequent use of the site*

Above the debris layer was a deposit of fine dark grey alluvial silt or soil, 3, which had the appearance of being deposited by floods, or at least having been subjected to flooding. This is doubtless the orchard soil extant by 1591, on the evidence of Walker's map. It had largely been removed by later disturbances.

The nineteenth-century development of the site saw the deposition of L9, mixed upcast probably from cellars, and L2, relatively clean brickearth, in order to raise the level of the area. These were capped by L1, mixed modern debris and soil. Modern disturbances are shown only incidentally on Fig. 2, where, particularly in trench A, they materially affected the medieval features. The effect of drains can be gauged from S2, Fig. 3.

REMAINS ON THE SITE OF 108 NEW LONDON ROAD, 1938

Work began on the construction of new offices for Chelmsford Rural District Council, at 108 New London Road, in 1938. The work revealed several masonry foundations; a photograph was taken, which survives in Colchester Museum (Plate II), but so far as is known no plan was made. The foundations have been plotted from the photograph, on to the foundation plan of the Council offices;[20] the results are shown in Fig. 6, and in context on Fig. 1B. From the latter it is clear that wall B follows the alignment of the north wall of the north range, wall A presumably defining an additional room to the north. Neither walls C or D line up exactly with the west end of the church, though D is nearest to the line. Wall C, like wall A, presumably defined an additional room to the west of the main range. All the walls appear to be of flint rubble, *c.* 0.75 m. wide; no floor levels are visible in the photograph. Wall D terminated abruptly within the 1938 foundation, possibly suggesting that work of one period had been robbed, whilst that of another had not.

A stone coffin had been built into wall C in the position shown; this, together with other stonework, was deposited in Chelmsford Museum, where it remains. Its position and condition suggest that it had been reused as part of a conduit.[21] Earthenware water-pipes appear from the photograph to have been found in the immediate vicinity; though proof is lacking, it seems probable that they carried water from the hole in the interior (head) end of the 'coffin'. The exterior (bottom) end of the 'coffin' was not visible on the photograph; as removed to the Museum, much of it

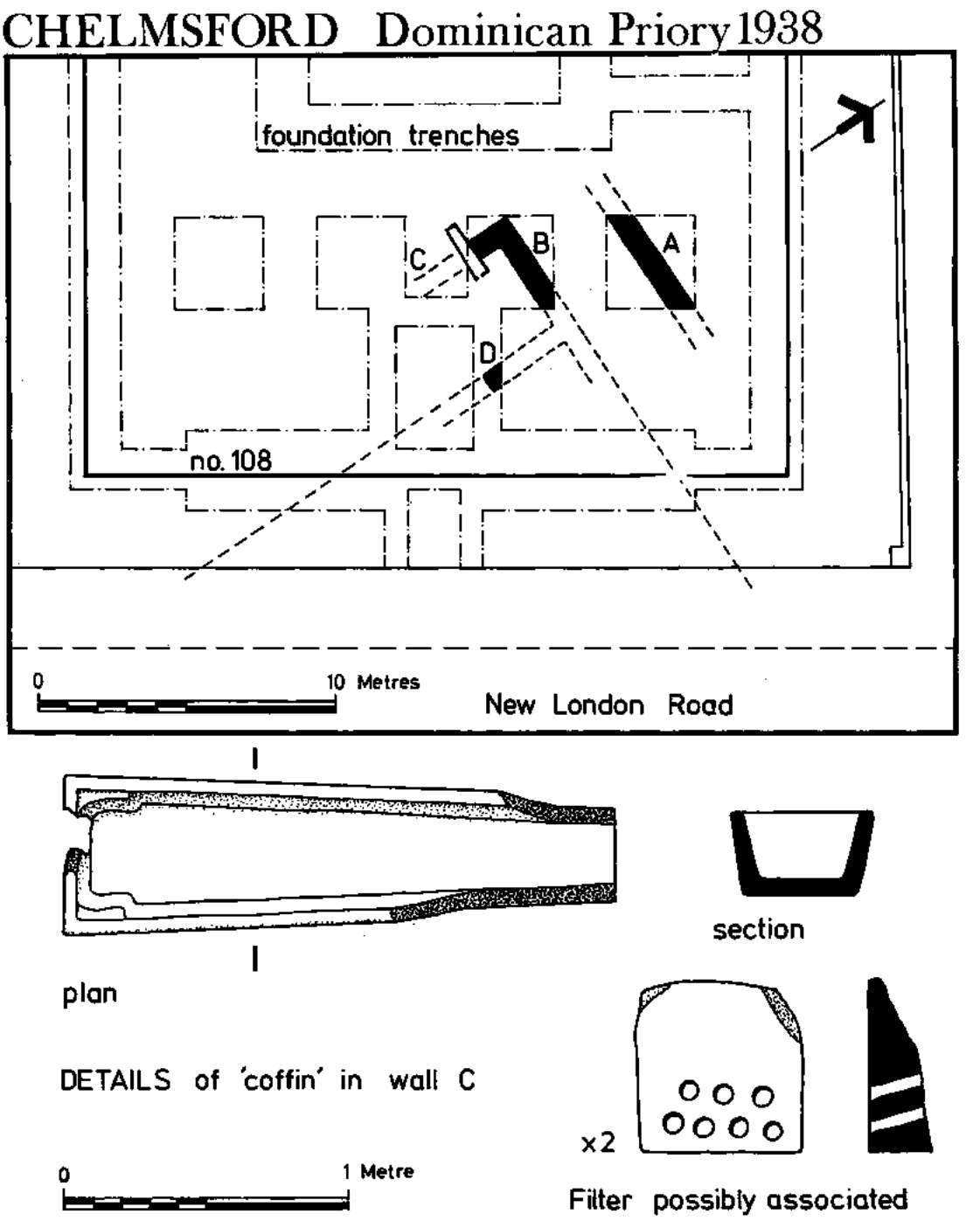


Fig. 6 Plan of features found during the construction of 108 New London Road in 1938, and details of a re-used coffin and other stonework from the site.

was broken away. However, tentatively associated with the coffin in the Museum collection is a stone through which seven holes had been bored; this would fit the bottom end of the coffin, and would act as a filter. Since a coarse filter of this type would only be required where the water supply first entered the house, it seems likely that the culvert from the Burgess Well spring entered the Priory at this point at the north-west corner. It would then enter the 'coffin', from which water could perhaps be drawn, and pass on, in pipes, inside the main north wall of the north range.

Its outlet into the reredorter, at the opposite (north-east) corner, has already been noted. If the correlation with the new water supply is correct, the re-use of the coffin, and the water-pipes, though not necessarily the walls, ought to date from *c.* 1341–50.

During the excavations for the 1938 foundations many oyster shells were found, together with fragments of two stone mortars, which survive in the Museum. These, together with the fact that the water supply probably entered the building at this point, suggest that the Priory kitchen occupied this north-west corner of the house, bearing out the usual attribution of the structure shown on Walker's map (1591) and drawn by Stukeley in 1751. It seems likely that the building which survived until the eighteenth century originally formed the north-west corner of the main range, to the east of wall D and the south of wall B.

THE FINDS[22]

A. Pre-Medieval

1. *Prehistoric.* Three flint flakes, from Layers 2, 4 and 14, will be included in a specialist report on the flints from the excavations in Chelmsford 1968–73, to be published in due course. A single sherd in a grey flint gritted fabric retaining traces of a brown surface, much abraded, was found in L17. It is presumably of Bronze Age or Early Iron Age date.

2. *Romano-British.* The Period I ditch F15 contained eight unabraded sherds of coarse pottery, including the base of a jar in a soft brown fabric with black surfaces, and a sherd in a grey granular fabric. This material is consistent with a date for the silting of the ditch during the later first century A.D. A small sherd in a grey fabric with purple colour coat is probably intrusive.

The make-up layers 17 and 18 included a few sherds of first to third century date, and L7 (displaced make-up) contained a soft white sherd of an early flagon. The ditch F18 contained two coarse sherds, and the gravel metalling 5b a fragment of a first-century carinated bowl, *Cam.*[23] f. 120A. From destruction levels came the rim fragment of a mortarium, buff fabric with pink and white grits, from the Oxford kilns (Fig. 12.1; from F6), and two fourth-century triangular jar rims, one in a flint gritted fabric similar to that produced at Rettendon[24] (from L4).

Some fragments of burnt clay, containing straw impressions, but no wattle marks, from L17, are probably RB; they may be from an oven structure. Several fragments of Romano-British tile were present. A fragment of *tegula* was found in the surface of the alluvial clay, L20, near F20, and two small fragments were found in the make-up L22.

These, like the RB pottery, are presumably residual, but three fragments from L4; F7, L7, and F12 structure, the last with a tall narrow (late) flange, retained traces of mortar and had clearly been used in the medieval buildings. All were abraded.

The ditch 15 produced an unabraded fragment of an *imbrex*, and L22 two more, probably burnt. An abraded lump of *bonding tile* 30 mm. thick came from the destruction level L4 but bore no traces of mortar.

Layer 12 in F12 produced a substantial lump of *opus signinum* more than 50 mm. thick.

B. Medieval

1. COINS and JETTONS, S. E. Rigold, M.A., F.S.A.

Period IV Contexts

1. *French official jetton,* earlier small size (20 mm.), common in England (? because close in size to 'sterling' jettons). Moor's head, AVE MARIA:GRACIA:PLENA, double crosslet stops/quadrilateral cross-flory, lys in centre, cinqfoils in angles, +A/VE/M/AR. Third quarter of 14th cent. From L10.

2. *French official jetton,* 23 mm., same group as 6. Crown, three voided trefoils on band, AVE MARIA:GRACIA:P, double crosslet stops/rev. as 5. 1380s or near. From L10.

3. *Edward III,* London groat, 'post-Treaty' coinage, final issue (mid-1370s); ..ANGLIE:Ɨ:FRANCIE, saltire stops, small pellets beside central fleur of crown. Almost mint condition: lost *c.* 1375–85. In top of floor L5B.

4. *French official jetton,* early large size (29 mm.), rare in England. Enthroned king between branches (generalised, not quite like any of the gold coins of Philip VI), AVE MARIA:GRACIA PLEI, double quatrefoil stops/cross-flory in quadrilobe, legend as obv. but ends PLENA. cf. Barnard,[25] Pl. V, 25. Third quarter of 14th cent. or possibly a little earlier. In top of floor L5B.

5. *French official jetton,* 25 mm., later group without full rev. legend, common in England. Dolphin, LE:NOBLE:ET:FIER:P (for poisson), annulet on T, double crosslet stops (later the dolphin type uses Ave Maria . . .)/elaborate cross-flory in quadrilobe, A V E M between crosslets in spandrels. 1380s or near. In top of floor L5B.

Period V Contexts

6. *Henry VI,* Calais penny, 'annulet' coinage (1422-7). Considerably worn: lost *c.* 1450 or even later. From L4.

7. *French 'derivative' jetton* (these may be official, but show an increasingly slovenly but consistent execution), 27 mm., unusually thick, neater and presumably earlier than most. Crown, three pierced cinqfoils on band, cross i.m., garbled legend AIAVS ꝑ ASTVAISAI/ plain cross-flory in quadrilobe, Lombardic A's on cusps and in spandrels. A difficult series to date – *c.* 1450? From L4.

8. *Jetton of 'unplaced central group'* (made somewhere near Franco-German border, possibly Sedan, rather than Nuremberg; distinguished by S's, not very common) 20 mm., thin as usual. Shield in tressure (something serrated in chief, two six-pointed stars in base), garbled legend/ fancy cross-flory, S's and sixfoils alternating in border. Dates probably middle or second half of 15th cent. From L4.

9. *Early Nuremberg jetton,* 20 mm. Shield in reversed trilobe (spread-eagle, dimidiated, impaling bendy, ? schematic for Bavaria), garbled Lombardic legend/Reichsapfel in trilobe, OSOS . . . *c.* 1490–1500. From L4.

10. *Early-middle Nuremberg jetton,* 24 mm. 'Normal' type (Reichsapfel in trilobe, three crowns and three lys), garbled Lombardic legend. Typical of Dissolution contexts: 1530s or '40s. From F7, L7.

Period VI Contexts

11. *Flemish imitation of official French jetton* (not Tournai and not official), rare in England, 26 mm. Shield with lion of Flanders, 4 pellets above, 3 each side, six-pointed star i.m., VLAENDREN LEW/ plain cross-flory in quadrilobe, R I A D between pairs of pellets in spandrels. Date perhaps as 7: the rise of the Tournai industry (? 1440s) may suggest a lower date for both. From modern levels.

Discussion (S.E.R. and P.J.D.)

These coins and jettons fall into three groups. Nos. 1–5, from beneath and in the floor L5B, combine to suggest that the floor was laid *c.* 1380–85. A second group, from destruction contexts, comprises Nos. 6–8 and No. 11; all are probably derived from a single deposit dating from soon after 1450, say *c.* 1450–60. The final group comprises Nos. 9 and 10, which probably represent casual losses during the sixteenth century, No. 10 at or near the date of the dissolution.

The absence of any coins or jettons of post-dissolution date from the destruction levels may confirm the suggestion that demolition took place soon after the dissolution, though their absence could be due to the distance of the site from contemporary commercial areas.

2. SILVER

Fig. 7.1 Length of curved wire, possibly part of a bracelet, from L4.

3. COPPER ALLOY

Fig. 7.2 Needle, one of two from L4.
Fig. 7.3 Needle of different pattern, also from L4.
Fig. 7.4 Pin with Wrythen head, from L4; pins with plain heads occurred in L4 (3, 21–32 mm. long) and L11 (1, 35 mm. long).
Fig. 7.5 Buckle, from F5.

Fig. 7.6 Fine strap end or book-cover fitting, from L4.
Fig. 7.7 Fine strap end, from L3.
Fig. 7.8 Fine strap end or book-cover fitting, from L4.
Fig. 7.9 Fragment of fine sheet bronze binding, from L12. Other fragments of thin sheeting, not pierced, and mostly off-cuts, came from L4 (13); L12 (1); F12, L8 (1).
Fig. 7.10 Object, from L4.
Fig. 7.11 Object, from L10.
Fig. 8.12 Object cut from thin sheet, from L4.
Fig. 8.13 Disc bearing a stamped crown, possibly a reckoning counter, from L4.
Fig. 8.14 Decorated ferrule, from L4.
Fig. 8.15 Floriate ferrule, with stubs of two iron fixing pins (hatched), from L4.
Fig. 8.16 Roughly finished ring, one of two, from L4.
Fig. 8.17 Ring similar to 7.16, from L3.
Fig. 8.18 Part of a bell, from L10.
Fig. 8.19 Loop of twisted wire, from L4.
Fig. 8.20 Small nail, from L4.
Fig. 8.21, 22 Upper-case Lombardic A and R respectively, from L4.

W. J. Blair writes:

> These letters belong to the 'Main Group' series, which was used on about ninety per cent of known brasses and indents during the period *c.* 1300–1350. Within this period, only the letter L can be dated more closely. 'Main Group' letters seem to have been made in one workshop, and were produced, with a few exceptions, to almost completely stereotyped patterns. Three size-groups were used (of which the R belongs to the medium, and the A to either the medium or the smallest group: between connected inscriptions the distinction between sizes is clear, but variations are too great for it always to be possible to classify isolated letters with complete certainty), and the thickness of 2 mm. is almost invariable. The letters are cast in an open mould, the edges usually being subsequently filed to a slight bevel. The A (36 mm. high) is of standard form, and may be compared with a slightly larger A (standard size II) from the Oxford Greyfriars to be published in the forthcoming report, a slightly smaller (standard size III) example at Dean, Beds., and two others in the British Museum. This A is the third letter noted which is intermediate between sizes II and III; it is possible that a distinct fourth size was produced. The R (45 mm. high) is of standard size II, but its shape, with a small step under the bow of the letter, is extremely unusual and so far as I am aware only occurs on one other extant letter. This is an R from Basingwerke Abbey, Flintshire, now in the museum of University College, Bangor; the two letters, though not from the same mould, are very closely related.

Not illustrated: Bronze bar, 8.5 x 2.5 mm. in cross-section, 220 mm. long, one end intact, the other broken; from L4.

Lace ends, all plain without tags, 25–35 mm. long, from L4 (12); L3 (6); L11 (1), F5 (1); F7, L7 (1).

Bronze wire, 0.2 mm. dia. – many fragments.
1.2 mm. dia. – from L12; F5.
1.7 mm. dia. – from L4 (2 lengths).
3.0 mm. dia. – with sharpened point, 35 mm. long, from L3; with hooked end, 9 mm. long, from F5.

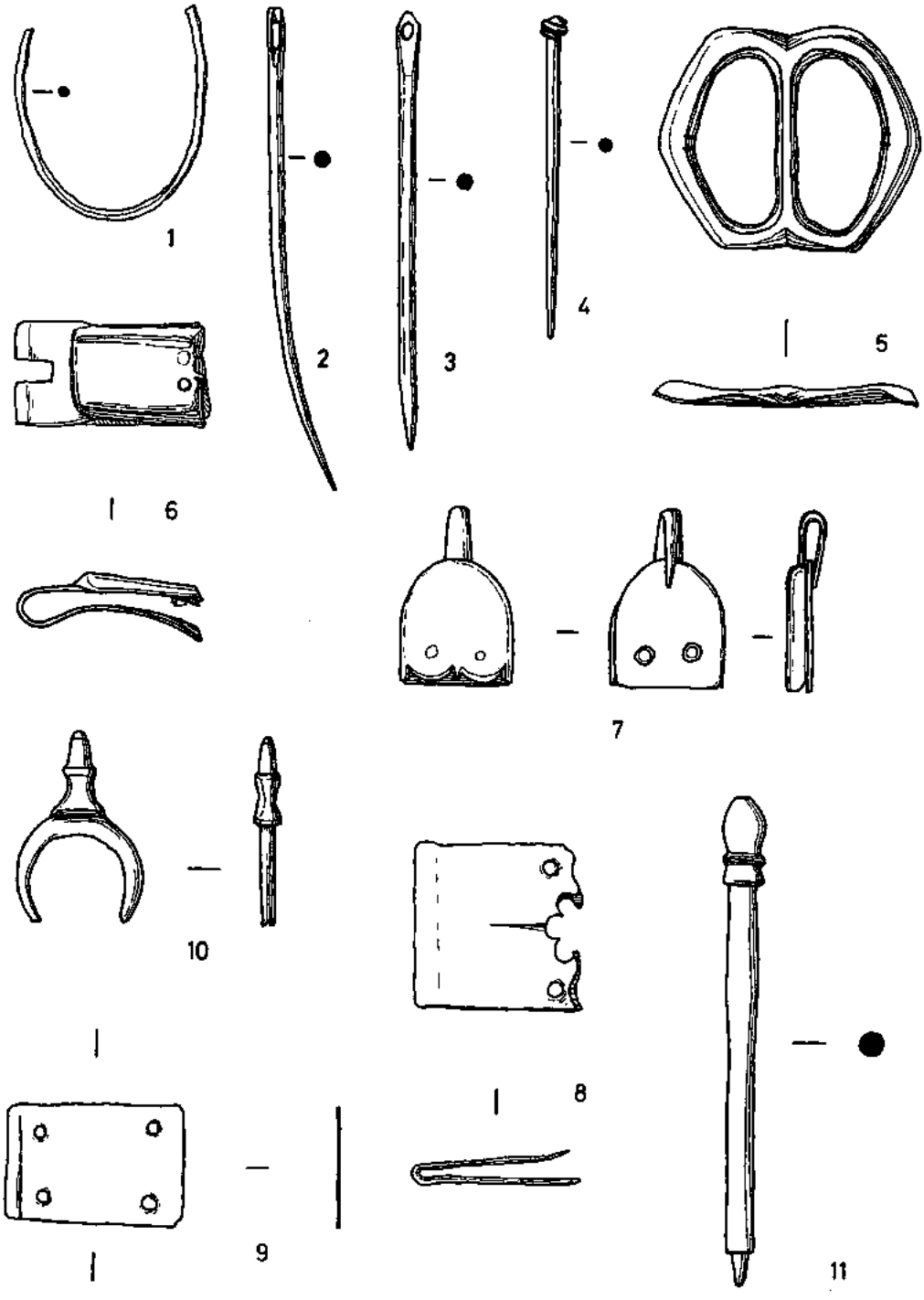


Fig. 7 Silver (1) and Copper Alloy (2–11) objects; Scale 1:1.

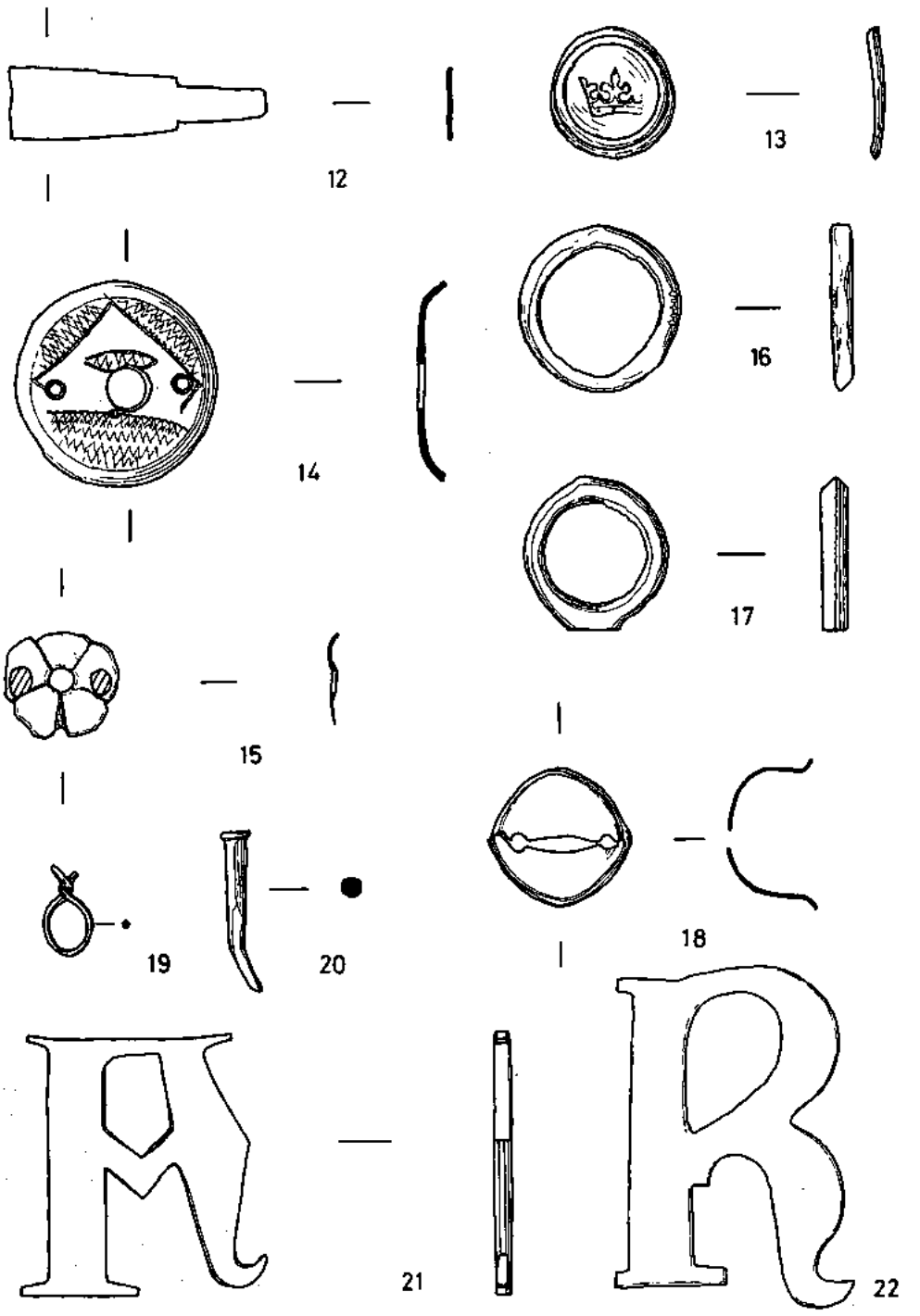


Fig. 8 Copper Alloy objects (12–22); Scale 1:1.

4. IRON

Fig. 9.23 Part of door latch, from L4.
Fig. 9.24 Nail, clenched over after driving. Nails were common in the destruction levels; all had square shanks and heads, and varied from 60–100 mm. in length.
Fig. 9.25 Staple, probably intended to be driven into a wall or heavy timber to act as an anchor for a rope. From F7, L8; two others from F7, L7.
Fig. 9.26 Spike, probably intended for driving into a masonry wall to enable a timber or fitting to be fixed. From F16.

Not illustrated: Fragment of knife blade, 18 mm. wide, from L3; fragment of thin strip, 35 mm. wide, 50 mm. long, from L14a; ring, 60 mm. diameter, formed of 7.5 mm. diameter metal, from F6 (L4).

5. LEAD (excluding window cames)

Fig. 10.27 Object cut from sheet lead, from L4.
Fig. 10.28 'Lead' pencil, from L4. The metal is harder than lead, and is probably a pewter type of alloy. Cf. examples in Caen Museum, noted by Gerald Dunning.[26]

Not illustrated: Fragment, probably of a pewter vessel, from L25, trial trench C.

6. ANTLER

Fig. 10.29 The head of (probably) a riding-crop, formed from the lower part of an antler. The carving (similar on both sides) conveys the whimsical effect of a long-beaked bird, with the crown suggesting a cleric's tonsure. From F7, L8.

7. GLASS

A. Window Glass and Cames

Plain window glass 2–4 mm. thick, in natural green metal, was found in the final destruction levels, and also in layers 10 and 12. Some was still embedded in the lead cames, e.g. Fig. 11.30, from F7, L8. Similar I-section cames occurred in layers 3 and 5a, and a fine version 3 mm. wide was found in L4. The variant, Fig. 11.31, occurred only in layer 4, and thus may be later than the simple type.

Decorated window glass was as follows:

1. Red paint on natural green glass: Fig. 11.33, 34, from L4; other fragments from layers 5a, 5b.
2. White (as surviving) paint on natural green glass: Fig. 11.35, from layer 5a.
3. Glass with raised rib, natural green: Fig. 11.36 from L4.
4. Plain wine red glass: fragments 3.5 mm. thick from L4.

Virtually all the window glass was severely corroded.

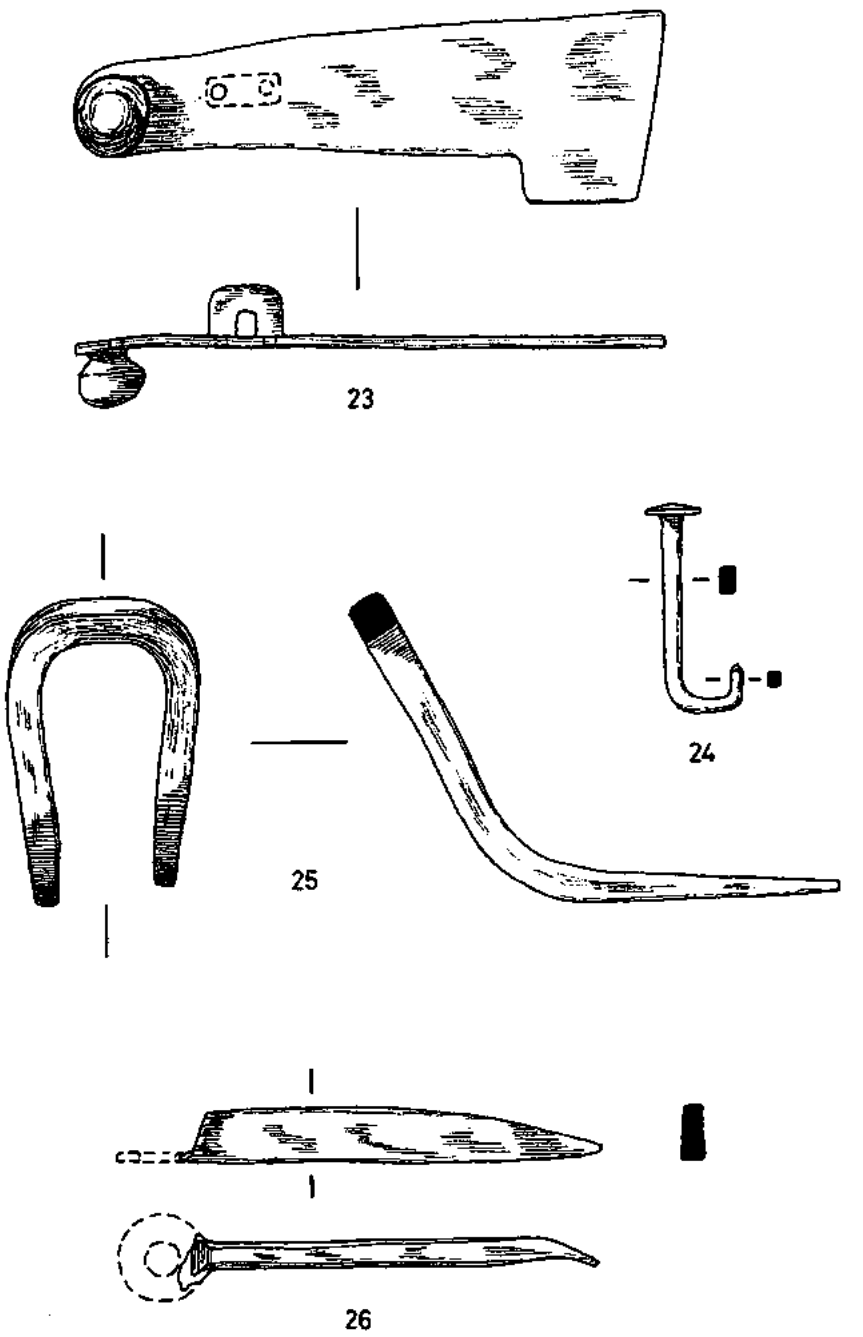


Fig. 9 Iron Objects (23–26); Scale 1:2.

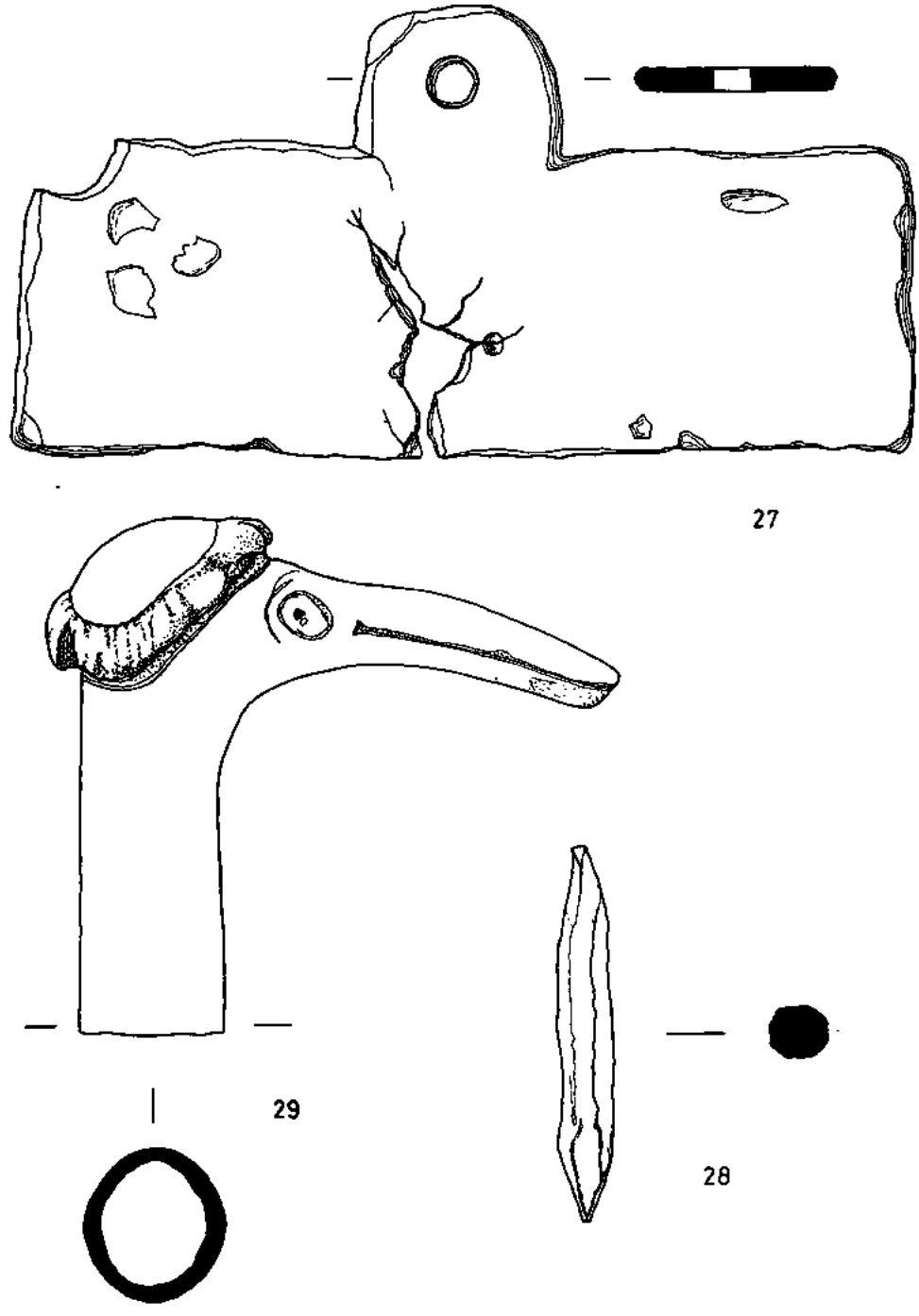


Fig. 10 Lead (27, 28) and Antler (29) objects; Scale 1:1.

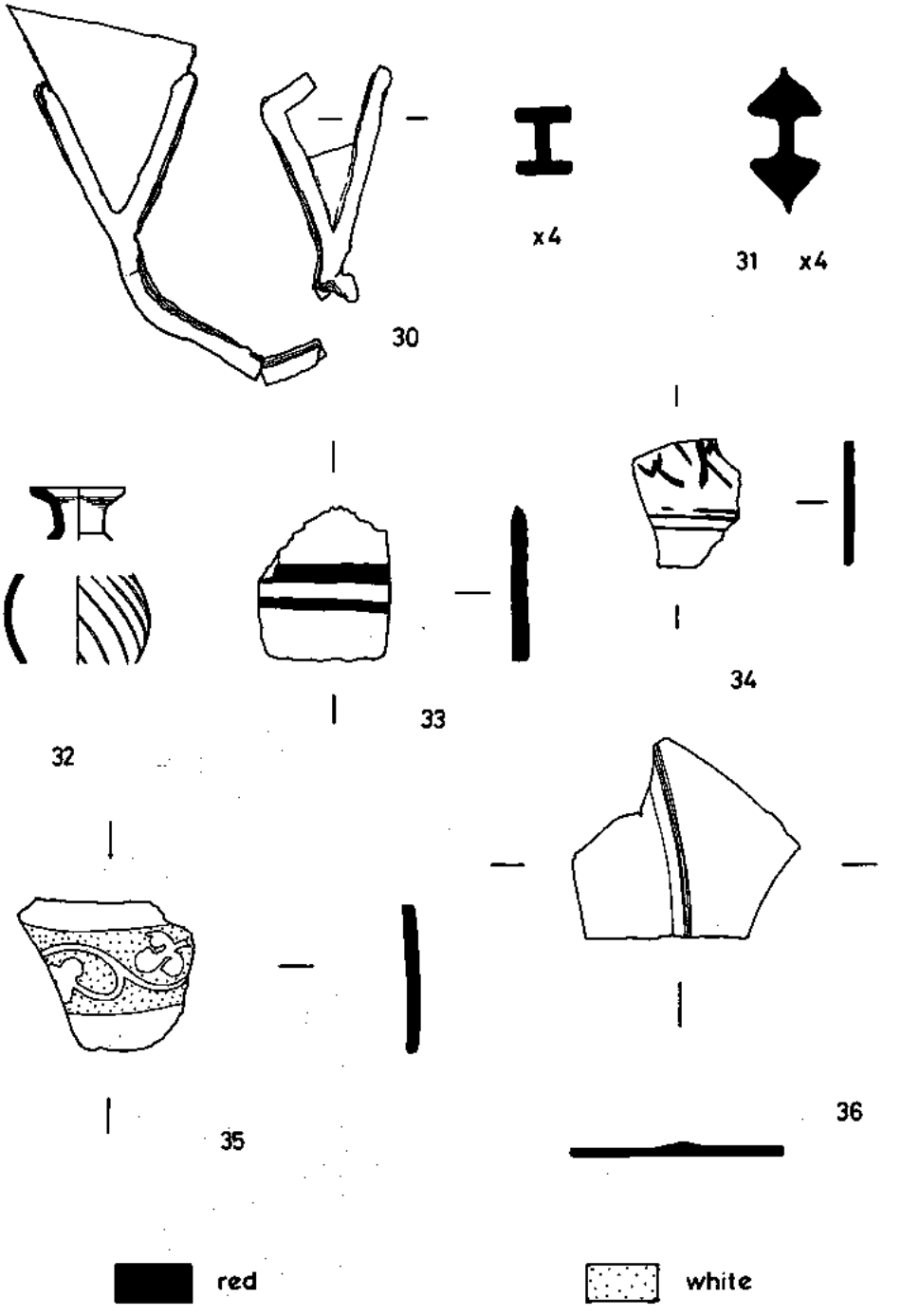


Fig. 11 Glass (30, 32–36), Scale 1:2, and Lead Cames (30, 31), Scale 2:1.

B. Glass Vessels

Several fragments of a small bottle in uncorroded natural green metal, Fig. 11.32, were found in F5; though the fabric (probably a lead glass) suggests that it may be Roman, the wrythen form mitigates against this.

Fragments of wine bottles with domed bases, all too small for illustration, were found in the destruction levels 4 and F7, L8, and in the buried soil above, L3. Fragments of a thin-walled (1 mm.) natural green glass vessel in reasonable condition were found in the destruction layer 4 and the disturbed L9.

8. POTTERY

Period II None found.

Period III After *c.* 1300

The make-up levels contained very little pottery. From L22 came three sherds of a jug in an orange-brown sandy fabric, slightly micaceous, with a grey cortex and core and orange-red surfaces. One showed a single patch of white slip decoration, another a splash of green glaze. The vessel is similar to Writtle,[27] Fig. 53.20, Fabric G, Period Ib. The rim of a similar jug, represented by three sherds in L17B, in an orange-brown sandy, slightly micaceous fabric, with a grey core, is illustrated as Fig. 12.2. The Writtle context suggests a date in the second half of the thirteenth century, or in the early fourteenth century. Layers 16 and 17b produced a few sherds of brown and grey sandy fabrics which would not be out of place in that period.[28]

Period IV A, c. 1341–50

Fig. 12.3 Jug rim, hard orange-red sandy fabric, patches of grey in core; traces of white slip externally. From the silt in the crack between the tile facing and rubble backing of the east wall of the culvert, F12. Similar sherd with brown glaze from L12.

Fig. 12.4 Light brownish-grey sandy fabric, grey-black surfaces. F12, L12. A base/body sherd, showing the edge of a sagging base of this or a similar vessel, came from the same context.

Period IV B, c. 1350–1380/85+

Fig. 12.5 Jug neck in fine hard red fabric, crushed into many small sherds; L5a, probably deposited whilst the floor was in use, post *c.* 1380–85.

Fig. 12.6 Fabric as 12.4, a very similar vessel, L10.

Fig. 12.7 Dark grey fabric tempered with fine sand, smooth surfaces except on top of rim. L10.

Fig. 12.8 Jug rim, hard grey sandy fabric, red external cortex, dark reddish-brown surfaces with band of white slip, L10. Similar sherds from L5a, L12 (with sporadic green glaze).

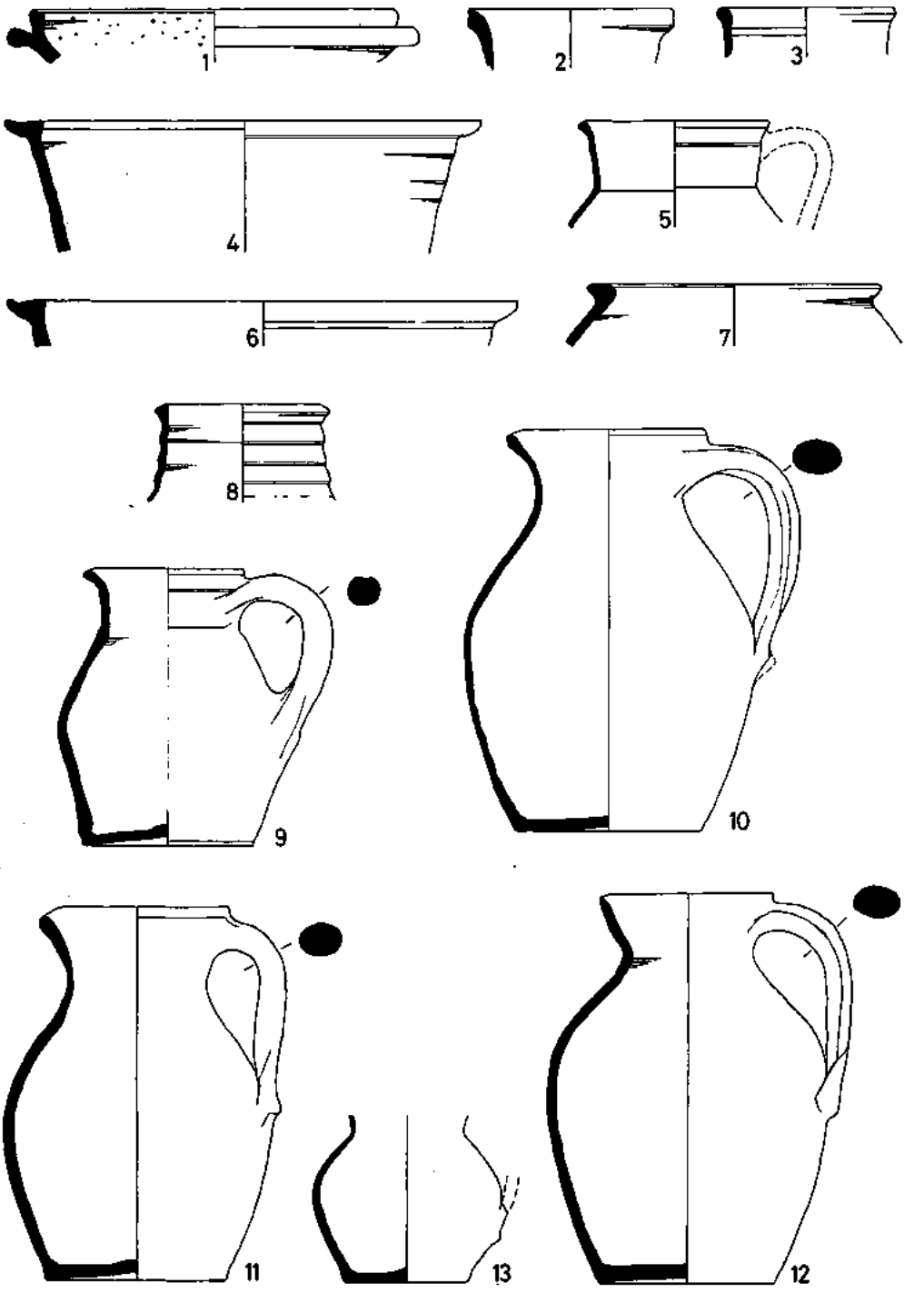


Fig. 12 Pottery of Period I (1), Period III (2), Period IV (3–8) and Period V (9–13); Scale 1:4.

Not illustrated: Soft red jug neck sherds, from L10.

On external evidence, the material as a whole should belong to the fourteenth century, 12.5 probably late in the century or early in the following one. A jug at Writtle, Fig. 54.51, of similar fine angular form and fabric but slip decorated, belongs late in Period II, before *c.* 1425.

Period V, c. 1537–40 (12.9–13.23) and later

A useful group was found in the silt in the reredorter channel, F7, L8. This consisted mainly of jugs; fragments of at least 20 were present, the range being illustrated by the following:

Fig. 12.9 Hard red fabric, rather coarsely finished. The upper part of the exterior has been fired to a dark bluish-brown colour; there are spots of accidental glaze on the base. Found intact, in the arched opening through the wall F4.

Fig. 12.10 Soft underfired brown fabric, reddish interior surface.

Fig. 12.11 Hard red fabric, white lime incrustation internally.

Fig. 12.12 Red fabric fired with brownish patches externally.

Fig. 12.13 Slightly brownish-red fabric, brown surface patches; dark brown glaze in patch under (missing) spout. The vessel reconstructs complete as far as the drawing shows, the top edge being abraded; thus it seems to have been used in antiquity after the upper part had been broken away.

Fig. 13.14 Fine orange-red fabric.

Fig. 13.15 Hard orange sandy fabric, rilled neck. Thin lime incrustation internally.

Fig. 13.15a Rather underfired orange-red fabric, rilled neck.

Fig. 13.16 Hard orange fabric, large splash of brown glaze below (missing) spout, as far as carination. Unusual, elegant form.

Fig. 13.17 Hard red fabric, grey cortex and surfaces, white slip externally with splash of green glaze centred under (missing) spout.

Fig. 13.18 Fine, fairly soft brown micaceous fabric, cream slipped on the upper part and inside the rim, with a splash of mottled green glaze under the spout.

Fig. 13.19 Red fabric, orange exterior surface decorated with white slip bands, brown interior surface.

Other vessels:

Fig. 13.20 Cup in hard orange-brown fabric, thinly glazed internally, heavily glazed externally trailing off towards base. The vessel is coated and stained from lying in the channel. The form suggests the copying of a metal prototype.

Fig. 13.21 Hard thin white, somewhat sandy, fabric the upper part covered with a mottled deep green glaze – 'Tudor Green'. The base also carries glaze-spots. Clearly a money-box, the slit being visible high on the side of the body. These vessels are normally wholly enclosed, the top being surmounted by a finial – cf. examples in Shrewsbury Museum (probably found in that area) and the City Art Gallery, Manchester (unprov.).[29]

Fig. 13.22 Shallow bowl in a brownish-red fabric, with a thin glaze on the lower part of the interior.

Fig. 13.23 Jar in a fine brown fabric, tending to a greyish colour on the exterior, which is heavily, if sporadically, blackened with soot.

From the upper filling of the channel, L7:

Fig. 13.24 Costrel, of the flattened spherical type,[30] in a good orange-red fabric. The diameter in either direction is uncertain.

Fig. 13.25 Jug in a hard bright red fabric, dark red/purple patchy surfaces; glazed over a substantial area below the (missing) spout.

Not illustrated: Three fragments of sixteenth-century stoneware.

The association of jugs with the reredorter is an obvious one, and this, together with the fact that 9–13 were complete, if, apart from 9, much broken, strongly suggests that the jugs were old ones disposed of at or around the dissolution in 1537. Of the other vessels, 21 and 23 were largely complete, and should fall into the same group. There is little doubt about 20 and 22 since only relatively small fragments were found, though the coating on 20 suggests that it found its way into the channel at, or prior to, that time. It should be remembered, however, that though the vessels were in use at that time, some, particularly 17–19, may have been many years old. These seem more in sympathy with material from Writtle Period III (down to *c.* 1521) than does the remainder of the group. The remainder of the Period V material comes from the destruction debris, L4, probably deposited by *c.* 1560:

Fig. 13.26 Sgraffito ware, hard red fabric, rather patchy cream slip, all over glaze. A single sherd, probably residual; fourteenth to early/mid-fifteeth century at Writtle (Fabric K).

Fig. 14.27 Body fragments of jug in Frechen stoneware; grey fabric, yellow/brown interior, brown glazed exterior. A sherd of a frilled base from a similar vessel was also found. Form similar to Writtle, Fig. 56.92, late fifteenth to early sixteenth century, Siegburg.

Fig. 14.28 Hard red fabric, thick cream slip decoration under a good even glaze, continued over the interior of the neck.

Fig. 14.29 Vessel, probably a large jug, in hard red fabric with dark-brown exterior carrying white slip decoration.

Fig. 14.30 Sagging base, possibly of a jug, in a fairly coarse red sandy fabric with thick mottled green glaze on the sides; heavy lime incrustation internally. The finger impressions around the base are quite functionless; if their distribution was approximately even there would have been four groups each of three impressions. It looks residual but may simply be of poor quality.

Fig. 14.31 Sagging base in fine red fabric with brown glaze internally; some blackening of the exterior walls but not of the base.

Fig. 14.32 Jar in fine hard red fabric, dark patchy exterior.

Fig. 14.33 Jar rim in hard red fabric, glazed brownish externally.

Fig. 14.34 Bowl in hard deep red fabric, light brown-red surfaces.

Fig. 14.35 Bowl in hard red fabric, with (probably accidental) spots of green glaze on the rim.

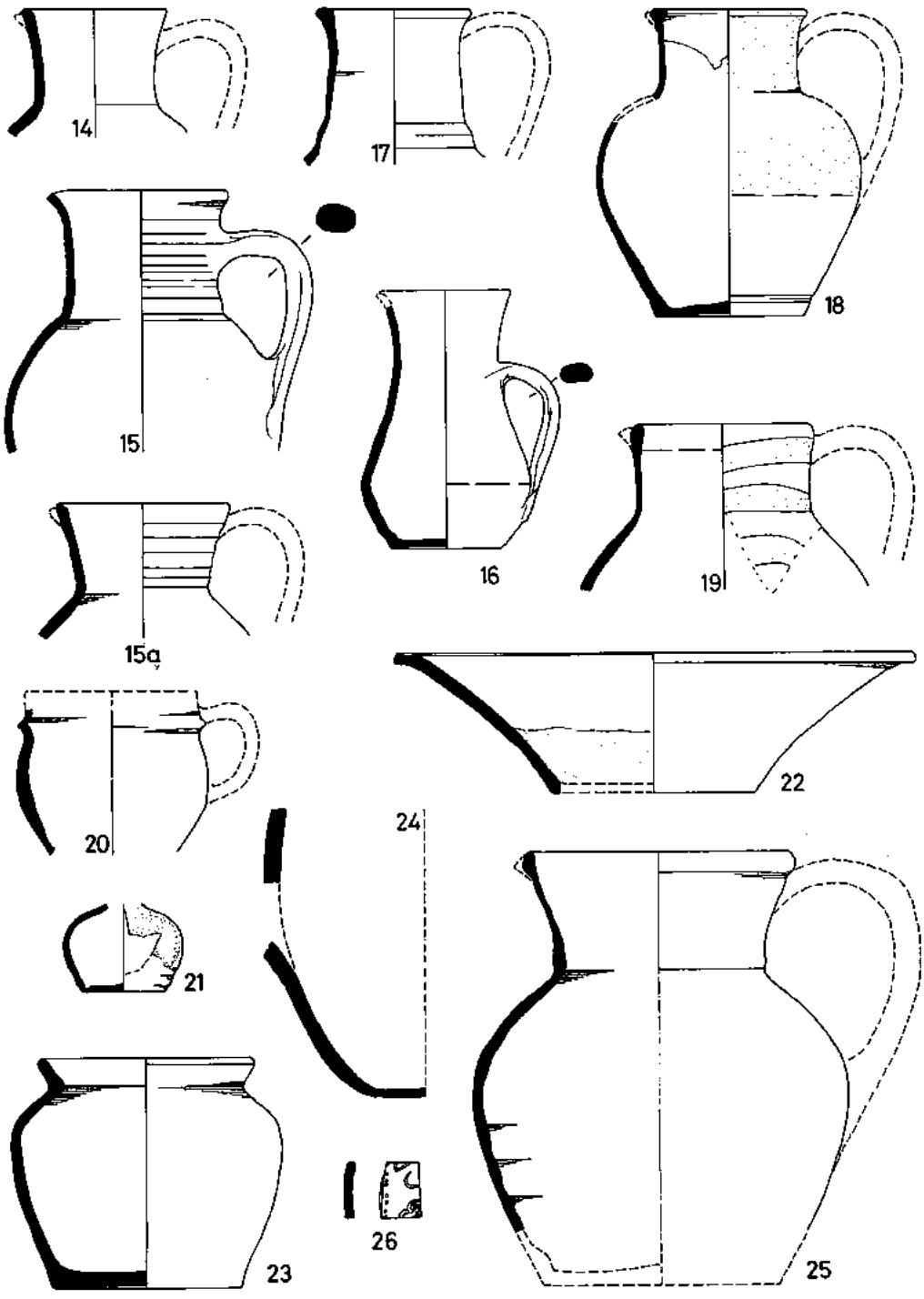


Fig. 13 Pottery of Period V (14–26); Scale 1:4.

Fig. 14.36 Lid in hard red fabric with darker surfaces, blackened in patches after breakage.

Not illustrated: 'Tudor green' sherds; sherd of a large red ware storage jar with a bung hole. With the possible exception of 14.28, there is little to suggest that the group is later than the mid-sixteenth century; indeed much of it may be material in use at the period of the dissolution.

Period VI

A little material was found in the buried soil, L3:

Fig. 14.37 Base of an *albarello* (Norfolk House Type 2),[31] pinkish fabric, white glaze, blue painted decoration. Southwark delftware, probably early/mid-seventeenth century.

Fig. 14.38 Bowl in hard red fabric, brownish surfaces glazed internally. Late sixteenth to seventeenth century.

Fig. 14.39 Jug base in hard red fabric, white slip, accidental flecks of light brown glaze on base. Lime incrustation internally. Probably derived from L4, from which one sherd came.

Not illustrated: Base of a black glazed tyg and a few other black glazed sherds; sherds of hard red fabric with a thick greenish-brown glaze; sherd of a cup similar to, but finer than, 8.20.

The material clearly extends down to the seventeenth century; substantial sherds are hardly to be expected from orchard soil.

From a modern disturbance:

Fig. 14.40 Hard brown fabric with many fine white flecks; white slip inside and out, with a patch of clear glaze flecked with green internally. The rim of a post-medieval Spanish amphora?

9. CLAY PIPES

An early stem fragment *c.* 20 mm. long was found in L3, and two bowls in the nineteenth century make-up. One belonged to the period *c.* 1650–1680 (from L2), the other being *c.* 1680–1700 (from L9).[32]

10. ROOF TILES

A. Peg Tiles with two circular, irregularly spaced holes

i. In a hard red fabric, 150–170 mm. wide, 12–15 mm. thick; one 273 mm. long (170 mm. wide). Very common, from L4: 15a; F7 structure and L8; F12, L12. Periods III–V. Some, if not many of these are from the Danbury kilns.

ii. In a softer sandy orange-red fabric, including small pebbles, 180–190 mm. wide, 12–17 mm. thick, 265–275 mm. long. From L14; F7 structure; F12, L12. The contexts suggest that these belong to Period III or earlier.

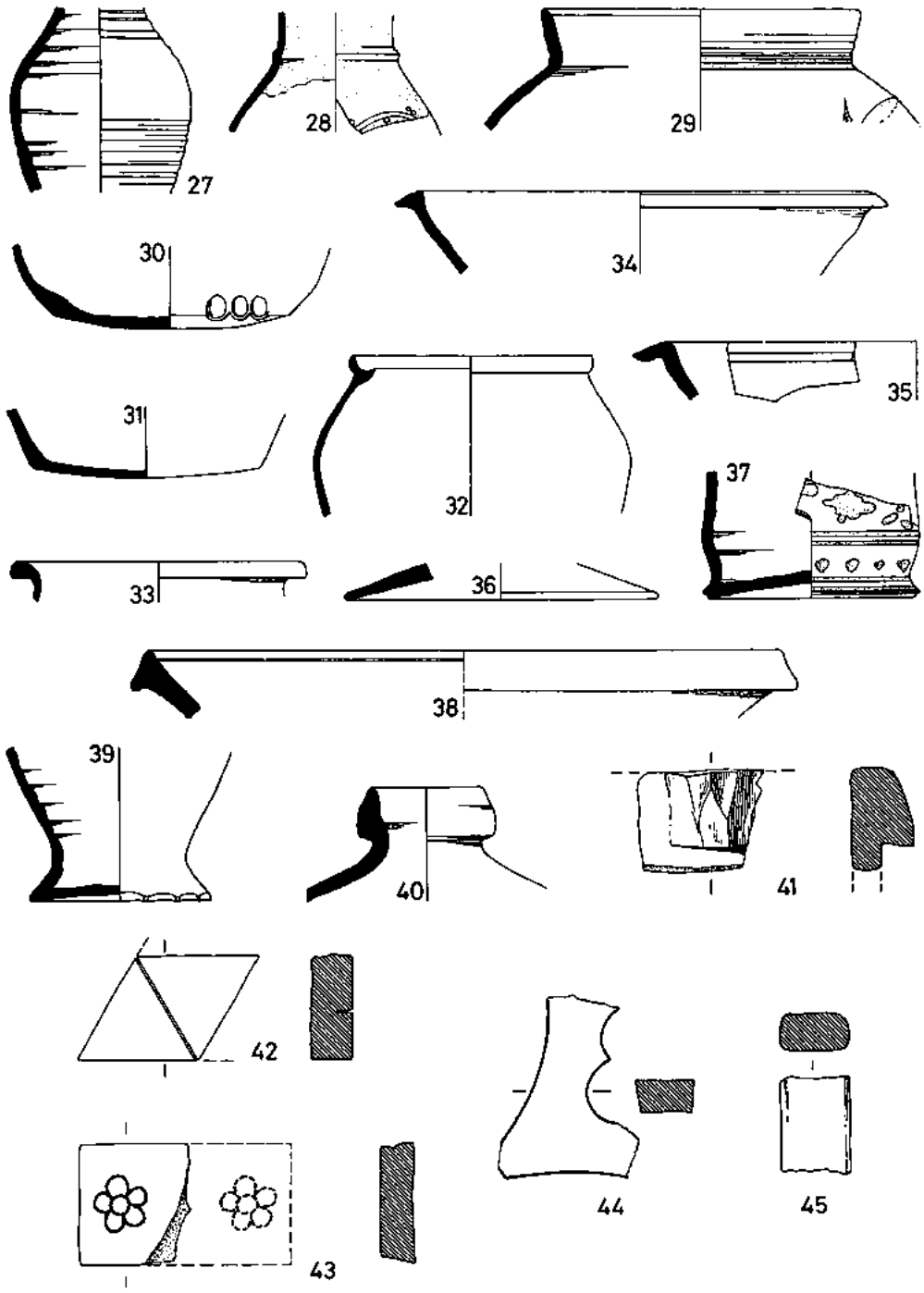


Fig. 14 Pottery of Period V (27–36), Period VI (37–39) and Unstratified (40); Tiles (41–44) and stone object (45); Scale 1:4.

B. Glazed Peg Tiles, otherwise as *A*

i. Hard, usually overfired, with a grey core; size as *A* i. The glaze appears very dark brown and thick, with a high gloss, and covers approximately the lower 110 mm. of one face. From F7, structure and layers 7 and 8; F12, L12; L4. From the Danbury kilns: many are wasters used initially in F7, Period III.

ii. Softer, orange sandy fabric; the glaze appears brown flecked with green. Size 210 mm. wide, 17 mm. thick, more than 170 mm. long; it is possible that some are lug tiles rather than peg tiles – see *D*, below. From F7, layers 7 and 8, and possibly F12 structure. Probably early; II–III?

C. Ridge and Hip Tiles

i. Fragments of hip tiles in a hard red fabric, 10–15 mm. thick, with a square hole, came from L4.

ii. Ridge tiles, similar fabric, each angle *c.* 120 mm. long, came from F7 structure; F12 structure; layers 4 and 14. Some at least of these are probably from the Danbury kilns; a ridge tile from the kiln site was 270 mm. long, the same length as peg tiles in groups *A* i and *B* i.

D. Lug Tiles

A fragment of a tile with an applied lug was found in F18, and is illustrated in Fig. 14, No. 41. The fabric is hard, sandy, with a grey core, red cortex, and brownish-red surfaces. It bears flecks of glaze, and may equate with group *B* ii, above.[33]

E. Pantiles

A fragment of a black glazed pantile 150 mm. thick came from L3, in the subsidence hollow above F5.

11. FLOOR TILES

A. Plain square, white slipped and glazed. All badly worn.

i. 130 mm. (5 in.) square, in fine orange-red sandy fabric, bottom smooth and sandy, edges very slightly splayed; 20 mm. thick. Glaze occasionally tinged with green. From L4; F7, L7; (2 ex.).

ii. 160 mm. (6¼ in.) sq., 23 mm. thick, otherwise as i. from L4; F7, L8 (complete tile).

iii. 130 mm. (5 in.) sq., 19 mm. thick, buff/pink/red fabric with some sand and red grog grains; often with a grey core. The base is deliberately smoothed and the edges are splayed; *unglazed.* From F7, layers 7, 8 (4 ex.) and L4. Probably from the Tyler Hill Kilns,[34] near Canterbury, Kent; *a distinctive fabric.*

B. Plain square, 'black' glazed. All badly worn.

i. 130 mm. (5 in.) sq., fabric as *A* i but tending towards a grey core, 20–25 mm. thick. Thick dark greenish-brown glaze. From L4 (3 ex.); F7, L8; F5; and one unstratified.

ii. 110 mm. (4¼ in.) sq., in a hard red sandy fabric, sometimes with a grey core. Smoothed base, square edges, 20 mm. thick. Dark green glaze, appearing near black on a reduced surface. Probably products of the Tyler Hill Kilns. From F7, L7 (2 ex.); L4 (3); L22.

C. Assorted plain types

i. Fragment 27 mm. thick in a dark red coarse sandy fabric, glazed brown, with heavily splayed edges, worn, from F7, L7.

ii. A fragment 35 mm. thick, in a hard purple fabric with sand and grog tempering similar to bricks of type *B* v, covered with a dark greenish glaze. The fragment is also a waster, bearing the mark where another tile has adhered to it in the kiln; none the less, it shows signs of wear. Probably fifteenth to early sixteenth century, on the evidence of its similarity to the bricks, and a parallel from Writtle in a Period III context (*c.* 1425–1521; p. 112, no. 9). From L4.

iii. Two fragments of a tile 23 mm. thick, red fabric with grog and sand tempering, slightly splayed edges, very worn surface. There is no trace of glaze or slip on the edges and it may be part of a plain quarry; from F7, L8.

D. Shaped, Mosaic, and Line-Impressed Tiles

A group of tiles 18–22 mm. thick in a red sandy fabric, usually with a reduced core, and having roughly finished undersides cast on sand, seem likely to be from a single source, though in view of the similarity of many tile fabrics, this cannot be regarded as certain. In all cases, the glaze, and slip where present, was applied before the edges were knife cut. Four types were present:

i. Triangular tiles based on 140–150 mm. squares, scored and snapped after firing. The edges are acutely splayed, and the poorly finished top surfaces are covered with cream slip. Two, from F7 structure and L8, have a poor green glaze; one, from F7, L7, has a clear glaze producing a yellow tile. All appear to be unworn rejects.

ii. Mosaic fragment, Fig. 14.42, scored for breaking into triangles and itself broken from a lozenge tile with almost square edges. Clear glaze over a cream slip, very worn; from L3 above F5.

iii. Two fragments stamped with floriate designs, Fig. 14.43, both broken after firing from a scored tile *c.* 140–150 mm. square. Slightly splayed edges, very dark green glaze, heavily worn, from F7, L8; L4.

iv. Mosaic fragment, cut to shape before firing, with slightly splayed edges. It has a deep green glaze showing no sign of wear, and retains a mark where it adhered to another in the kiln. From L4. Fig. 14.44.

The wear on tiles of types ii and iii shows that they had formed part of a pavement or pavements, but those of types i and iv appear to have been rejects. The type i tiles all

appear originally to have been built into the Period IV reconstruction of the channel; the type iv fragment has no mortar adhering, and the reason for its presence in layer 4 is uncertain. All four types appear to have been intended to form part of a line-impressed mosaic pavement; many other fragments have been found in the church area, and it seems likely that the worn fragments are derived from there, or at least another part of the house.

The fragment iv is clearly part of a tile which filled the space between four abutting circles, its centre being cut away to accommodate a quatrefoil, probably in a contrasting colour and carrying a line-impressed motif. Three pavements with such designs survive, or did so until recent times, within 50 miles of Chelmsford: at St. Nicholas Chapel, Coggeshall (Essex); in Prior Craudens Chapel, Ely (Cambs.), and in the chancel of Meesden Church (Herts.).[35] The technique is, however, widespread, as Keen has recently noted. The tiles of types i–iii can all be envisaged in association with such pavements. Tiles produced with the same stamp as iii have been found at Little Dunmow Priory and are extant in Little Easton Church.[36]

The pavement in Prior Crauden's Chapel at Ely was laid during the period 1321–42; Keen considers that it was laid by 1324–5 when the chapel was apparently complete. The Meesden pavement seems to belong to the first quarter of the fourteenth century, probably before 1313. The context of the type i fragments suggests that reject tiles were available when the channel was reconstructed, *c.* 1341–50. If, like the Danbury tiles, they were reused from the previous phase, they would date from after, probably soon after, *c.* 1300; but equally, they might be derived from some later structural context, or a pavement could have been laid around the time of the Period IV reconstruction. Their absence from the structure of F12 seems, however, to militate against the first of these possibilities, leaving the two latter to suggest a probable date range of *c.* 1310–1350 for the use of line-impressed mosaic at the Priory.

E. Inlaid Tiles (Fig. 15)

Three fragments of inlaid tiles were found. The fabric was hard, red, and sandy, containing a little grog, the tiles being 20 mm. thick, with square edges and smoothed under-surface. The cream inlay was shallow, and the tiles were covered with a brownish glaze. Two designs were represented, a six-foil within two concentric circles (46) on tiles 115 mm. (4½ in.) square, and part of a multi-tile pattern (47) on tiles of unknown size. Two examples of the former came from L4 and F7, L7; one of the latter from L4, all very worn. They are products of the Tyler Hill kilns, Canterbury; variants of both designs were found in the church. It seems probable that the reredorter was paved with Tyler Hill tiles, mostly plain (types *A* iii and *B* ii, above) but with some decorated panels, during the Period IV reconstruction; the other plain types may have been used in combination with these, or introduced later.

F. Floor Tiles and Kiln Furniture from the Danbury Factory

The patterns of the decorated floor tile wasters used in the construction of the culvert F12 indicate that they were made at the Danbury factory, some three miles east of

Decorated Floor Tiles

TYPE	CONTEXT	TYPE	CONTEXT
A1	F1	C22	F7, L7(2); F1
A2*	F7 Structure	C23	F7, L8; F7 Structure; L4(2)
A4	F7, L8		
B2	F7, L8	C27*	F7 Structure
B15	F7 Structure	D1	F7 Structure
C1	L4	D3	F12 Structure; F7, L8
C3	F7 Structure (3), L8; L4		
C4*	F12 Structure	D6	L4
C9	L7	D10	F12 Structure
C10	F7, L7	D18	F12 Structure (2)
		D22*	L4
C15	F7 Structure	D11	F7 Structure (2)
C18	F7 Structure	E5*	F7 Structure
C20	F1	F2*	L4
C21	F7 Structure		

* Occurs only in the Priory group; no examples found on the kiln site.

Plain Floor Tiles

	TYPE	SIZE	CONTEXT
White slipped and glazed	T4a	115 mm. sq.	F7 Structure, L7.
	T4e	110 x 35 mm. segments	F7, L8; L11.
	T4g	150 mm. sq.	F12 Structure
Glazed brown	T4a	110 – 115 mm. sq.	F7 Structure (2), L7 (2), L8 (3); F12 Structure; L3; L4; L6; L12.
	T4g	150 mm. sq.	F7 Structure
	T4j	150 mm. square, scored across both diagonals for splitting into triangular segments — F7 Structure.	

Kiln Furniture

TYPE	CONTEXT
T7	F7 Structure (4), L8; F12 Structure (6)
T7C	F12 Structure (4)
T7D	F12 Structure (2)
T8B	F7 Structure
T9C	F12 Structure
T9D	F12 Structure
T9 fragment	F12 Structure

Chelmsford. Of the 26 patterns present in the culvert structure or derived contexts, 20 occurred at the kiln site, and the remaining six were so similar in fabric, form and concept that they were clearly derived from the same source. The decorated tiles doubtless formed part of a consignment of assorted tile wasters obtained for the construction of the culvert. The vast majority of tiles in this consignment were, as might be expected, peg tiles, though ridge tiles, plain floor tiles, and kiln furniture were

included. No Danbury tiles showed any signs of wear in use. The tilery at Danbury was excavated in 1974 under the direction of the writer and Mr. G. D. Pratt.[37] In view of its importance as a group of contemporary products of that site, the decorated and special tiles are to be fully published in the Danbury report. It must, therefore, suffice to note here those Danbury patterns and types which occur as wasters on the reredorter site. Type numbers refer to the Danbury report.

Type 9C and 9D – structural tiles with splayed edges – did not occur on the kiln site, though an example of T9D has been found forming part of the foundation of a fourteenth century timber building excavated on the Marks and Spencer site, High Street, Chelmsford.[38] The foundation was largely composed of peg tile wasters also probably derived from the Danbury kilns.

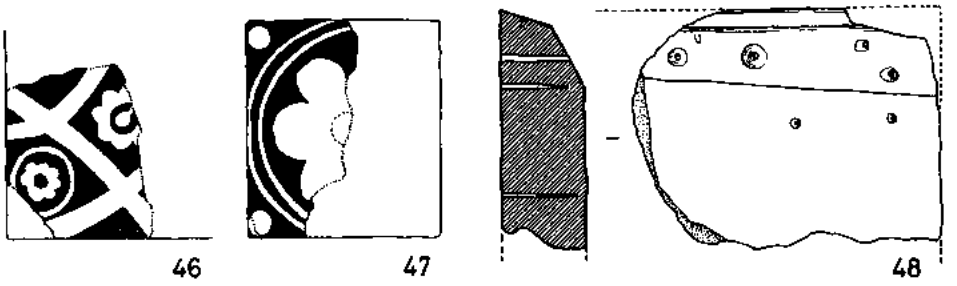


Fig. 15 Decorated tiles and medieval brick (46–48); Scale 1:4.

12. BRICKS

A. 'Great' Bricks

Several fragments of bricks 30–40 mm. thick, 215 mm. wide, possibly square, were found, in a rather granular fabric ranging in colour from orange to (overfired) deep purple. All were moulded on a sand bed; the edges may be left as from the mould or knife trimmed to produce a slight splay. One fragment was built into the wall F4 above the internal face of the arched opening of F7; others from F5, L4 (2 ex.). A variant, similar in fabric and technique, is 110 mm. wide, 35 mm. thick, and more than 100 mm. long; it is represented by a single example from F7, L8. A fragment of an unusual brick 450 mm. thick, (Fig. 15.48) with one edge splayed, cast on a sand bed and stabbed from the back before firing, was found in F7, L7. The fabric was fine, dense and hard, with some sand and grit inclusions; the interior was largely reduced grey, the surfaces being orange-red. Off-white lime mortar adhered to the fragment, which had been broken before use. Possibly a Coggeshall product.[39]

B. 'Flemish' Type Bricks

Flemish type bricks were relatively rare, and shared common dimensions: *c.* 240 mm. long, 110–120 mm. wide, 50–55 mm. thick. All were moulded, generally on a sand bed, but fabrics varied considerably, as follows:

i. good orange sandy fabric, well finished;
ii. as i, cast on coarse sand containing mostly grey and white flint grits;

iii. very soft, brown/grey to orange-red fabric, containing pebbles up to 20 mm.; cast on a rough bed, possibly of organic material;
iv. fairly coarse, soft, very sandy orange fabric, well made, containing chalk and stone particles;
v. overfired bricks, dark purple-grey colour; in one case the end is fired to such an extent that a green 'glaze' has developed.

Despite the apparent disparity, it is possible that all come from the same source, i, ii, and iv being facing bricks, v dark facing bricks for decorative effects, and iii being intended as place bricks. The differences between i, ii, and iv are principally of inclusions and/or moulding bed material, and could easily occur in the course of manufacture over a period of time. An association with a probable reconstruction *c.* 1450–60 is suggested elsewhere.

13. STONE

A. Stone Objects

*1. HONE fragment (Fig. 14.45), of dark grey, hard micaceous sandstone, fine grained. From L3, Period VI.
2. QUERN fragments, of Andernach or similar lava (not illustrated), from L4 and L18.

B. Building Stone

The following stones were found:

A.	Reigate Stone (Upper greensand)	From F7 Structure; F7, layers 7 and 8; L4.
B.	Clunch	From F7, L8; L4; L22; on L20.
C.	Metalliferous Slag[40]	Single lump, F7, L8, with mortar adhering.
*D.	Caen Stone	From layers 4, 9, 12, 14, 22; F7, L7 Channel walls and arched opening, F7.
*E.	Portland Stone	From F7, L8 (label moulding).
*F.	Bath Stone (Box Ground)	From F7, L8 (large irregular lump).
*G.	Purbeck Marble	Channel paving slabs, F7.
H.	Flint nodules	Generally, and in wall foundations 3, 4.

* Identified by Dr. F. W. Anderson, Institute of Geological Sciences.

C. Architectural Fragments (Fig. 16)

53. Window mullion, Stone D, fragment 110 mm. long, external surfaces hardly weathered. From L4.
54. Window jamb, Stone D, with sawn edge. Fragment 140 mm. long, burnt orange brown/grey; mortar adhering indicates re-use in rubble wall or similar context. From L3.

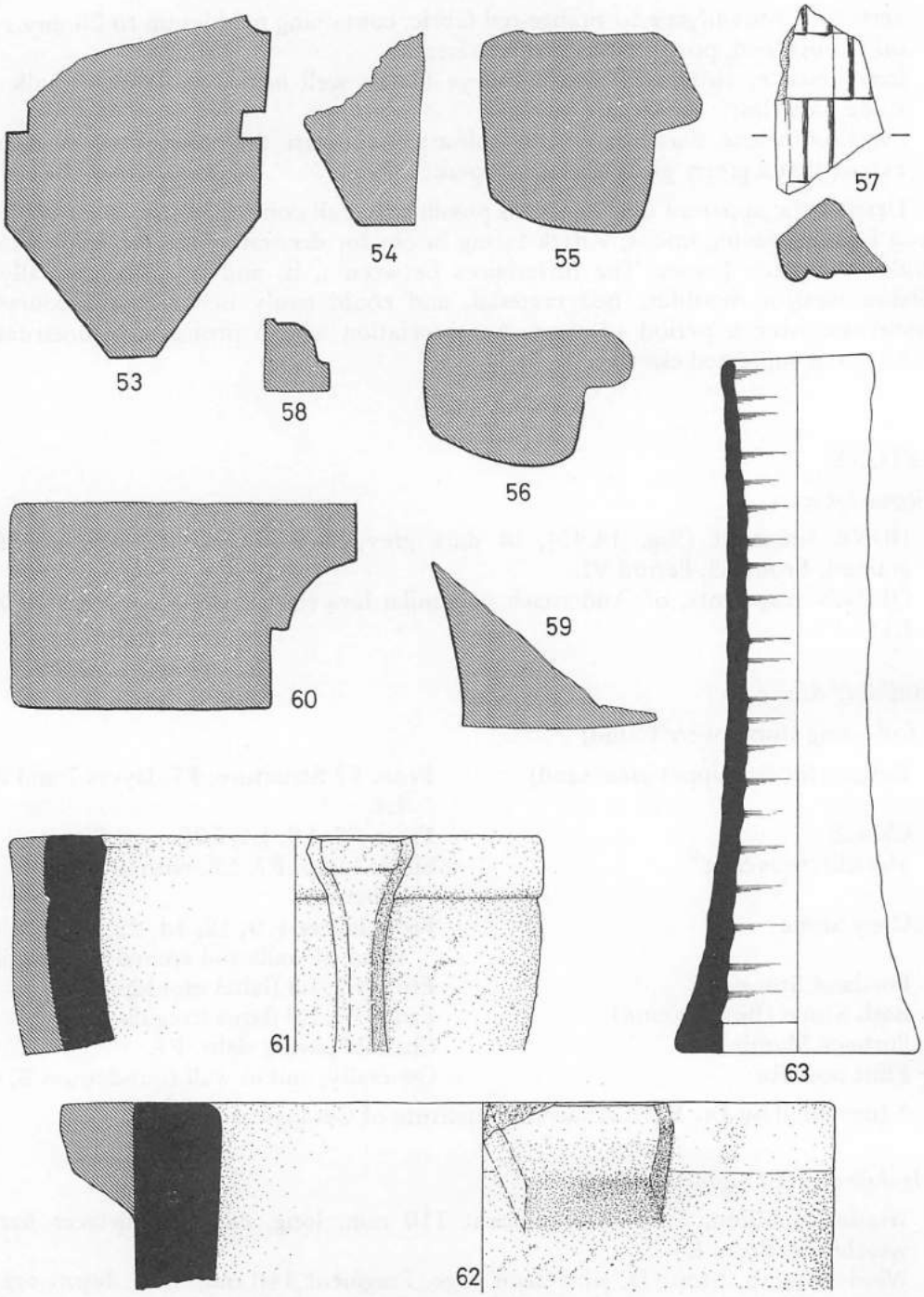


Fig. 16 Architectural fragments (53–60); Stone mortars (61, 62); Earthenware water-pipe (63); Scale 1:4.

55. Label moulding, Stone D, 140 mm. long (intact) from F7, L7; another from a period VI disturbance, and another in Stone E from F7, L8, all of almost identical profile.
56. Label moulding, Stone B, fragment 140 mm. long, partly blackened by burning. From F7, L8.
57. Fragment with relief decoration, Stone B, from L4.
58. Small moulding, 67 mm. long (intact), Stone D, from a Period VI disturbance.
59. Fragment 160 mm. long with concave weathered face, Stone D, from L3.

Not illustrated: Sawn slab, fragment 63 mm. thick, more than 700 mm. deep, Stone D. The edge is finely finished.

14. CHARCOAL AND WOOD[41]

Much charcoal occurred in the destruction layer 4, and the channel silt F7, L8. This was mostly twiggy material, 10–70 mm. in diameter, of the following species: hornbeam (*Carpinus betulus*), oak (*Quercus* sp.), birch (*Betula* sp.), hawthorn type (*Crataegus/Pyrus/Malus* sp.), blackthorn? (probably *Prunus Spinosa*). In addition, fragments of willow? (probably *Salix* sp.) and birch branches, and a fragment of a large timber of oak, were found in the samples submitted for expert identification.

An unusually wide range of species is present considering the small size of the samples. This might suggest that the charcoal originated from trees and shrubs growing on the site, perhaps in the ruins of the buildings, and burnt at the time of demolition, together with odd fragments of structural timber not worth salvaging.

Layer 10 contained much charcoal of oak, from large timbers, possibly intended for structural use. In other contexts, charcoal occurred only as occasional fragments and was not submitted for specialist examination.

In the channel F7, just south of the arched opening through the wall F4, traces of three planks *c.* 0.50 m. long, were observed lying flat in the lower silt, L8. The central plank was about 150 mm. wide. Lying obliquely across them was a section of plank about 400 mm. long and 100 mm. wide, though there was no evidence that it had been attached to the underlying timbers. It seems probable that the timber was part of the superstructure above the channel. A sample of the lower planking was identified as oak (*Quercus* sp.). Many other small fragments of timber were noted in the channel filling, all much rotted.

15. ANIMAL BONE AND SHELL

It is envisaged that a specialist report on the animal bones from the Priory as a whole will be included in a future report; as might be expected, such material was relatively scarce on the reredorter site. The demolition debris L4 produced a quantity of animal and bird bones, and small groups were also recovered from L10 and F7, L8. Other levels produced only fragments, apart from several horse long bones from F5.

Oyster shells were found in Layers 4, 5a, 5b, 10 (substantial quantity), 11, 12, 14, 17 and 22, and Features 7 (layers 7 and 8, in the latter in quantity), and 12, L12. Whelks occurred in Layer 5b(1), Layer 10 (many), and Feature 7, L8 (1).

16. FINDS FROM THE PRIORY KITCHEN AREA, 1938

In addition to the stonework illustrated in Fig. 16, the following items survive in Chelmsford Museum (Fig. 16):

Fig. 16.60 Moulded stone block, probably intended to flank a recess, 115 mm. long, complete, in stone D. The surfaces are sporadically pink due to its having been burnt after removal from the structure. Chelmsford Museum, accn. no. 1938:6.

Fig. 16.61 Fragment of a Purbeck limestone mortar. The exterior is more finely tooled on the rim and rib than the body; the interior is worn smooth by use. 1974:262.

Fig. 16.62 Fragment of Purbeck limestone mortar; the exterior is finely tooled at top, the interior is worn smooth by use. 1974:263.

Fig. 16.63 Earthenware tapered water-pipe, one of many found and two retained. The fabric is hard, grey and sandy, with reddish external tinges. It has been thrown in the manner of a pottery vessel, the 'base' having afterwards been cut out with a knife. There is no trace of mortar adhering to the ends, thus the jointing material may have been clay. 1938:6; presumably *c.* 1341–50.[42]

Not illustrated: Part of the top of a monument in Purbeck marble, with moulded sides, one of which carries a two-line inscription in Lombardic capitals. This is clearly derived from the church, and was presumably reused in late alterations to the kitchen area. It will be published by Mrs. Sellers, with other sepulchral fragments from the church excavations, in due course.

DISCUSSION

The scatter of prehistoric material is consistent with the pattern which has emerged from excavations in Chelmsford generally, and probably indicates no more than that the site lay within an area cultivated in the Late Bronze Age or Early Iron Age. In the Roman period too, the site lay within an agricultural area on the fringe of *Caesaromagus*; the form of the ditch (15) and the paucity of artifacts in its filling suggest that it was a field ditch, possibly discharging into a much larger natural watercourse.

Agricultural activity is further suggested by the scatter of sherds spanning the Roman period recovered from other contexts on the site. The problems of the topography of the low-lying areas around the Roman town will be discussed in detail in forthcoming excavation reports.

The excavation of the reredorter indicated a number of phases of activity, each more or less accurately datable and characterised by the use of different materials and

foundation techniques, which may be of general application to the Priory complex. These may conveniently be summarised as follows:

Period	Date	Foundations	Materials
II	Prob. *c.* 1250–75	flint rubble in orange mortar on rammed hoggin base	Prob. lug tiles
III	post *c.* 1300	flint rubble in white lime mortar	Caen, clunch dressings; Purbeck marble; Danbury tiles (wasters); peg tiles glazed and plain.
IV A	*c.* 1341–50	flint rubble in white lime mortar	Reigate stone (Upper Greensand); ? Floor tiles from Tyler Hill, and line impressed mosaic tiles.
B	*c.* 1380–85	–	Timber framing on gravel floor.
C	*c.* 1450–60	–	?'Flemish' type bricks and glazed floor tiles type C ii.

It is germane to consider whether or not the channel which provided water for the flushing of the reredorter in its first phase was natural or artificial. It seems likely, in view of its position in relation to the River Can, that it was artificial, constructed to provide a water supply and serving the kitchen at the north-west corner of the house first, and the reredorter at the north-east corner last, the foul water being returned to the Can. The reasons for the replacement of this source of water by the culvert from the town spring, *c.* 1341–5, can only be suggested: perhaps the channel tended to silt rapidly, because of sluggish flow, or perhaps the river-water had become too polluted to be potable. There is evidence from the excavation to support the former suggestion, and the latter is at least likely. Once the new supply was available, the channel could be allowed to silt, and later be filled in, only the section providing an outfall from the reredorter being retained. The working methods of the reredorter have been discussed in detail above.

The size of the building suggests that the ridge of the roof ran along its longitudinal axis. A mass of peg tiles in the demolition debris on the north side indicates a tiled roof, and thus a roof of substantial pitch. The foundations of the east wall are relatively slight compared with those of the north and south walls, reflecting the fact that the former bore little or none of the weight of the roof. Whether the east end was finished as a gable or hip, it is impossible to say.

The walls were doubtless carried up in a flint rubble with dressings of Caen (externally) and clunch (internally). The possible existence of an external door in the west end of the north wall has been noted, possibly opening into a lobby since the channel does not begin close to the west end of the structure. There is unfortunately no clue to the fenestration. During subsequent reconstruction, the walls were probably partially rebuilt incorporating greensand (Period IV A) and brick (Period IV C).

Internally, the walls were probably plastered and the floor tiled, largely with plain tiles but probably including some inlaid Tyler Hill designs from Period IV A onwards.

Fragments of timber framing in the channel might suggest that the seats above were of timber rather than stone. The windows were probably glazed, though some permanent ventilation, through unglazed lights or roof vents, would probably have been provided.

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FOOTNOTES

1. N.G.R. TL 709 065.
2. C. F. R. Palmer, *The Reliquary*, n.s. III (1889), pp. 141–143.
3. P.R.O., Patent Rolls, June 20, 1341: C66/204 m45.
4. *Transactions of the Essex Archaeological Society*, n.s. X, p. 16.
5. By John Walker, Essex Record Office D/DM.
6. Bodleian Library, MS Top. Gen. e. 61, f. 40.
7. The Chelmsford Institute, no. 60 New London Road, is dated 1841.
8. *Victoria County History of Essex*, vol. III, P. 66, quoting *Essex Review*, vii, p. 203.
9. Report in *Essex Chronicle*, May 21st, 1937.
10. I am grateful to Mr. Biglin and Mrs. Sellers for making available information arising from their excavations. Interim notes have appeared in *Medieval Archaeology*, XIV (1970), 166; XV (1971), 158; and XVI (1972), 173.
11. By Trackrail Limited, to whom my thanks are due for their co-operation.
12. A cohesive mixture of clay, sand and pebble.
13. The bottom was not reached in excavation, due to the restricted area available.
14. Other examples of the deliberate use of floor tile wasters for constructional purposes may be cited, for example in the late-fourteenth-century kitchen at Kenilworth Castle (P. K. Baillie Reynolds, *Kenilworth Castle*, D.O.E., 1973). However, the site provides the only definite example known to the writer of tile wasters being brought more than about a mile to the site where they are found. Some caution would seem to be necessary in the interpretation of the presence of floor tile wasters on a site as evidence that a kiln was set up there or nearby for their manufacture, particularly in stoneless areas.
15. In fact the wall foundation was cut away slightly adjoining the posthole, but this may have occurred when the post was removed. The upper filling contained a few sixteenth-century redware sherds, possibly suggesting that a filling of stone, to prevent subsidence, had been removed at the time of robbing. This upper loamy filling was quite distinct from the lower filling noted in the text, and was similar to the destruction debris, L4.
16. Any culvert was presumably carried over the trimmed offset of the foundation of the north-east corner buttress.
17. The upper part at least of the wall backing the tiles on the south side of the channel was laid dry, or rather, using brickearth in place of mortar; all Period IV backing walls contained more tile than those of Period III.
18. Mr. Leo Biek, of the Ancient Monuments Laboratory, examined a sample of this material, and reports as follows:
'From its general appearance and chemical constitution, it is clear that the material was deposited "naturally" over a period of years, in the circumstances suggested by the context. The precise nature of this material, and related samples from other sites, is the subject of a wider study to be reported elsewhere. Infra-red spectroscopy, carried out by John Evans at the North-East London Polytechnic, has indicated an overall general resemblance to soil organic matter. There are, however, significant differences, especially in more or less pronounced absorption peaks at wave numbers around 1400 and 870, which seem to have a more specifically "cess" association.'
19. Layer 6 was grey-brown loose clayey filling containing mortar and tile fragments; Layer 7 was brickearth containing tile, brick, stone and other debris.
20. I am grateful to Mr. Wisbey of the Technical Controller's Department, Chelmsford District Council, for making available the deposited plan (04776); Mr. D. T.-D. Clarke of Colchester and Essex Museum for making the photograph available; and Mr. D. L. Jones of Chelmsford and Essex Museum for making the finds deposited there available for study.
21. A stone coffin in a similar situation exists in the frater undercroft at Haughmond Abbey, Shropshire (D.O.E. Guardianship site). Excavations by W. H. St. John Hope and H. Brakspear are reported in *Archaeological Journal*, LXXI, 1909, pp. 281–310.
22. All finds have been deposited in Chelmsford and Essex Museum.
23. C. F. C. Hawkes and M. R. Hull, *Camulodunum*, 1948.
24. J. Tildesley, 'Roman Pottery Kilns at Rettendon', *Essex Journal*, VI, 35.
25. F. P. Barnard, *The Casting Counter and Counting Board, 1916.*
26. To whom my thanks are due.
27. P. A. Rahtz, *Excavations at King John's Hunting Lodge, Writtle, Essex, 1955–57*, 1969, p. 94 ff.
28. I am grateful to Mr. S. R. Bassett for his comments on the earlier pottery in the light of material from his recent excavations at Pleshey and Maldon.
29. For an interesting account of these vessels, including English examples, see *Bonner Jahrbücher*, 159, 1959, pp. 155–7.
30. As defined by G. C. Dunning in *Winchester Excavations 1949–60*, I, p. 126.

31. B. J. Bloice, 'Norfolk House, Lambeth; Excavations at a Delft Ware Kiln Site, 1968', *Post-Medieval Archaeology*, V, 1971, p. 99 ff.
32. Dating based upon L. S. Harley, *'The clay tobacco pipe in Britain with special reference to Essex and East Anglia'*, Essex Field Club, 1965.
33. The form of the lug is exactly similar to examples, including wasters, extant among the exposed foundations of Leez Priory, Little Leighs, seen by the writer in 1974.
34. Unpublished excavations. I am grateful to Mrs. E. S. Eames for her advice on the floor tiles and for identifying the products of these kilns.
35. For Coggeshall (destroyed in 1860), see J. S. Gardner, 'Coggeshall Abbey and its early brickwork', *Journal of the British Archaeological Association*, XVIII, 1955, 31–2; for Ely, see Gardner, plate XIV, and W. Wilkins, 'An account of the Prior's Chapel at Ely', *Archaeologia*, XIV, 1803, plate XXVIII and other references cited by L. Keen in 'A fourteenth-century tile pavement at Meesden, Hertfordshire', *Hertfordshire Archaeology*, 2, 1970, 75-81. See also E. S. Eames, *Medieval Tiles*, British Museum, 1968.
36. A tile from Little Dunmow is in the British Museum, BM 1440; those at Little Easton are reset around the Bourchier tomb in the chancel, and were recorded by the writer in January 1975 in connection with the Census of Medieval Tiles in Britain.
37. Report forthcoming in *Medieval Archaeology*, XIX.
38. Excavations by the writer, 1972–3; report in preparation.
39. See note 36 above.
40. This has been examined by Mr. L. Biek, of the Ancient Monuments laboratory, who writes: 'At first sight, the red and light brown surface colorations, as well as the dark chocolate brown to bluish lustrous black vesicular interior, all suggested a generalised "iron slag", of "crystalline-fayalite" type. The high density of the specimen, however, suggests the presence of a much heavier metal.'
41. Identifications by Mrs. C. A. Keepax of the Ancient Monuments Laboratory.
42. For general note on water-pipes, see G. C. Dunning, 'Medieval pottery roof fittings and a water-pipe found at Ely', *Proceedings of the Cambridge Antiquarian Society*, LX, 1967, I, pp. 86–9. Tapered examples in glazed ware, also thrown, are there dated to the late thirteenth century, towards c. 1300. The Chelmsford examples are clearly of the same general type, which seems to be earlier than those which have a flange near the narrow end, for example those from Griff manor house, Warwickshire: *Journal of the British Archaeological Association*, XXXI (1968), 90 Fig. 5, F, and others from Ticknall, Derbyshire, in Derby Museum, DM 908:1968, the latter there dated to the fourteenth century. I am indebted to Dr. Dunning for drawing my attention to the Ely and Griff examples.

Drainage Trenches at All Saints' Church, Cressing, Essex. June 1974

by JOHN H. HOPE

In a recent article,[1] Mr. Warwick Rodwell rightly deplored the needless destruction in and around Essex churches of artistic, archaeological, and architectural features, destruction caused largely by ill-advised restorations. He concluded his statement with the alarming warning that when the results of a pilot survey of churches in the Archdeaconry of Colchester are published in 1975 they will reveal a sorry tale of avoidable damage. One such church is All Saints', Cressing, where the opportunity for rescue excavation was lost when open drainage trenches were cut around the church walls in June 1974, in an attempt to halt rising damp. Owing to lamentably short notice after digging had actually commenced, the writer was able only to clean one of these trenches, to photograph with a poor-quality camera, and to take basic measurements, before archaeological features were utterly destroyed by the laying of concrete on polythene. Nevertheless, even so exploratory an investigation of these features proved sufficiently interesting to merit a report.

The parish of Cressing lies some 2½ miles SE. of Braintree, off the B.1018, and some 4½ miles NNW. of Witham. Though the timber barns of Cressing Temple, about one mile closer to Witham, are well known, the village of Cressing has, until recently, had no archaeological significance. It now appears that a potentially valuable site exists around the church, indicated in the first place by sherds of Iron Age, Belgic, and Romano-British dating appearing in the back-fill of recent graves. The parish does not appear in the Domesday Book, but the lands of the present parish, comprehended under the name of Witham, were, during the reign of Edward the Confessor, held by Harold Godwinson,[2] and upon the overthrow of Harold, became part of the royal demesne of William I. It is interesting to note that in Edward's reign the neighbouring parishes of Stigestede (=Stisted) and Coggashaele (=Coggeshall) were granted by Godwine and Wulfgyþ, possibly Godwine's mother, with the consent of the king, to Christ Church, Canterbury.[3] It would seem, therefore, that this part of Essex comprised part of the vast Godwine estates before Godwine's expulsion in 1051, and while Harold was still Earl of Essex.

The name Cressing is derived from O.E. caerse > M.E. cerse, = water-cress. The '-ing' suffix is therefore not in this case a patronymic, but indicates a place where cress grew.[4] This is confirmed by well-authenticated local tradition, which remembers a thriving local trade in the brown cress which until recently grew on the small stream which once formed the boundary between the parishes of Cressing and Rivenhall, but which has no recorded name.[5] Cressing is variously referred to as Kirsing, Kyrsing, Kyssing and Curssing in the oldest manuscripts. The oldest extant reference to the

parish is transcribed in the Newport Repertorium of 1690–1710, and provides us with our first historical reference to the church:

> Memorandum quod Elphelmus de Gore et Lenelek, uxor sua, fundaverunt capellam in Kyrsing, et idem Elphelmus dedit viginti acras terrae ad sustinendum dictam capellam imperpetuum, et ad inveniendum omnia necessaria in capella praedicta. Et rector ecclesiae de Witham recepit dictas viginti acras terrae in quodam campo vocato 'scolhousfeld'.[6]

The 'memorandum' goes on to tell us that 'post haec' King Stephen granted the Rectory of Witham to the Canons of St. Martin's, London. What is significant is that this grant is quite distinct from the Evreux Charter of 1136, in which Matilda granted the manor of Cressing, with the advowson of the church, to the Knights Templars,[7] and from the grant of the manor and half-hundred of Witham to the same order at some date between 1138 and 1148. This latter grant, made by Eustace of Boulogne, significantly excluded the church estate of Witham, of which Cressing Church was a part, but that some element of doubt as to the exact status of Cressing Church resulted therefrom is suggested by the history of controversy between the inhabitants of the parish and the vicars of Witham.[8] These disputes seem to have centred around responsibility for the maintenance of the church fabric and for the appointment of chaplains to Cressing. Judgements, confirmed by the Archdeacon of Colchester and by arbitrators chosen by the Dean of St. Martin's, were always given against the vicars of Witham, until definitive sentence about the premises was pronounced in the Courts of Audience on 27 January, 1449.

The existing church shows evidence of considerable reconstruction over the centuries, but the phases are not as clear as the official accounts would suggest. It has been stated[9] that the nave probably dates from the 12th century, the walls being further raised in the first half of the 15th century, and that the chancel was rebuilt in 1230, with the south wall subsequently restored in the early 16th century. At about this time the bell-turret was added. In the early 19th century the church was restored, when the east wall was rebuilt, along with the addition of the vestry on the north side. In point of fact, the cutting of the drainage trenches obliges a reassessment of the whole history of the church, though in the absence of rescue excavation it is possible now to advance only tentative suggestions, based on the writer's own observations.

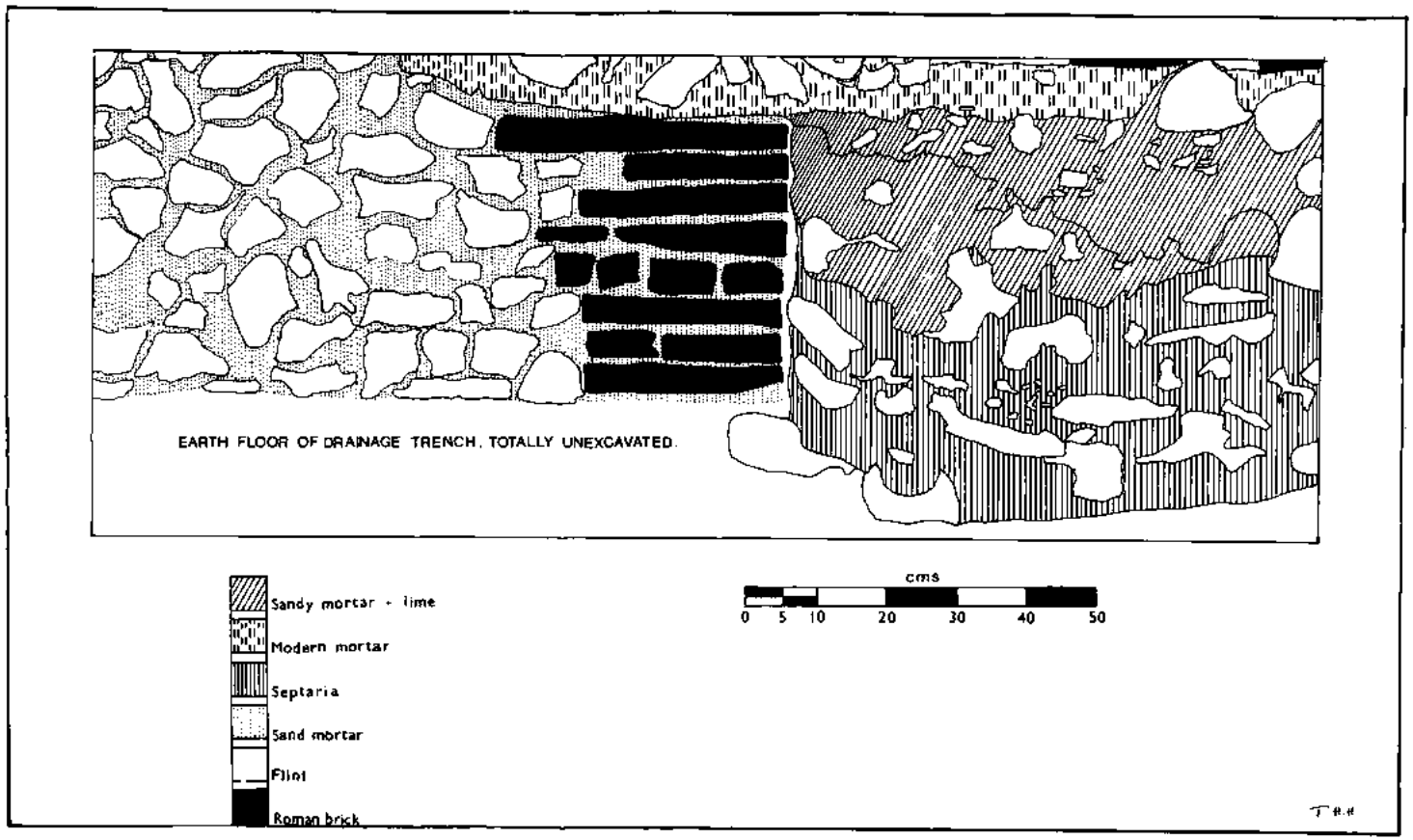
It was seen that the buttresses which form a continuation of the west wall on the north and south sides of the church, and which, like the west wall, are comprised of flint rubble and Roman tile, stand on circular foundations of large flint blocks, septaria, and sandy lime mortar, and that these foundation plinths protrude westward beyond the wall of the church. What is particularly interesting here is that neither plinth is keyed into the foundations of the west wall (Fig. 1). It would seem that the whole west wall is built on a much older foundation – the flints of this foundation are laid in a much neater and more regular pattern than those of the wall above, which itself pre-dates the 15th-century window. It also appears that this foundation was interrupted at some stage for the construction of the plinths, the broken ends of the foundation being neatened off with Roman tile (Fig.1). One cannot help wondering whether these plinths are all that remains of an earlier flint tower, a fact already suspected by Mr. Warwick Rodwell from the arrangement of green sandstone blocks in the west wall.[10] However, as the builders' drainage trenches were only 46 cm. deep, and

extended only approximately 0.75 m. from the church wall, and in the absence of proper excavation, it is impossible to advance this idea with any certainty.

Most interesting of all was the spread of large flints extending southwards beyond the south wall of the church. These were discovered at a depth of 31 cm. from the ground surface, and extended from 7.09 m. E. to 16.17 m. E. (Fig. 2). It seems unlikely that these comprised the footings of the existing church on several different counts. The size of the flints is much greater than those of the lowest part of the wall, and they extend for just over half the length of the existing nave. Most especially, whereas the existing axis of the church is at 34° N. of East, that of the flint spread is at 31°, which at its widest extent – at 14.44 m. E. – amounted to an off-set from the wall of approx. 0.40 m. In fact, it seems that the existing nave is built on the foundations of an earlier structure on a slightly different alignment, and with an apsidal ending, which returns under the south wall at approx. 16.17 m. E. (Fig. 2). Once again, however, a lack of proper excavation prevents a definite assertion of this idea, which can now only be confirmed or refuted by some future excavation within the church walls. However, it is not unreasonable to conjecture that if the regular courses of flint in the lower parts of the south and west walls represent the 'capella' of Elphelmus de Gore, which we know pre-dates the Evreux Charter of 1136, the apsidal structure must be very early Norman or even late Saxon.

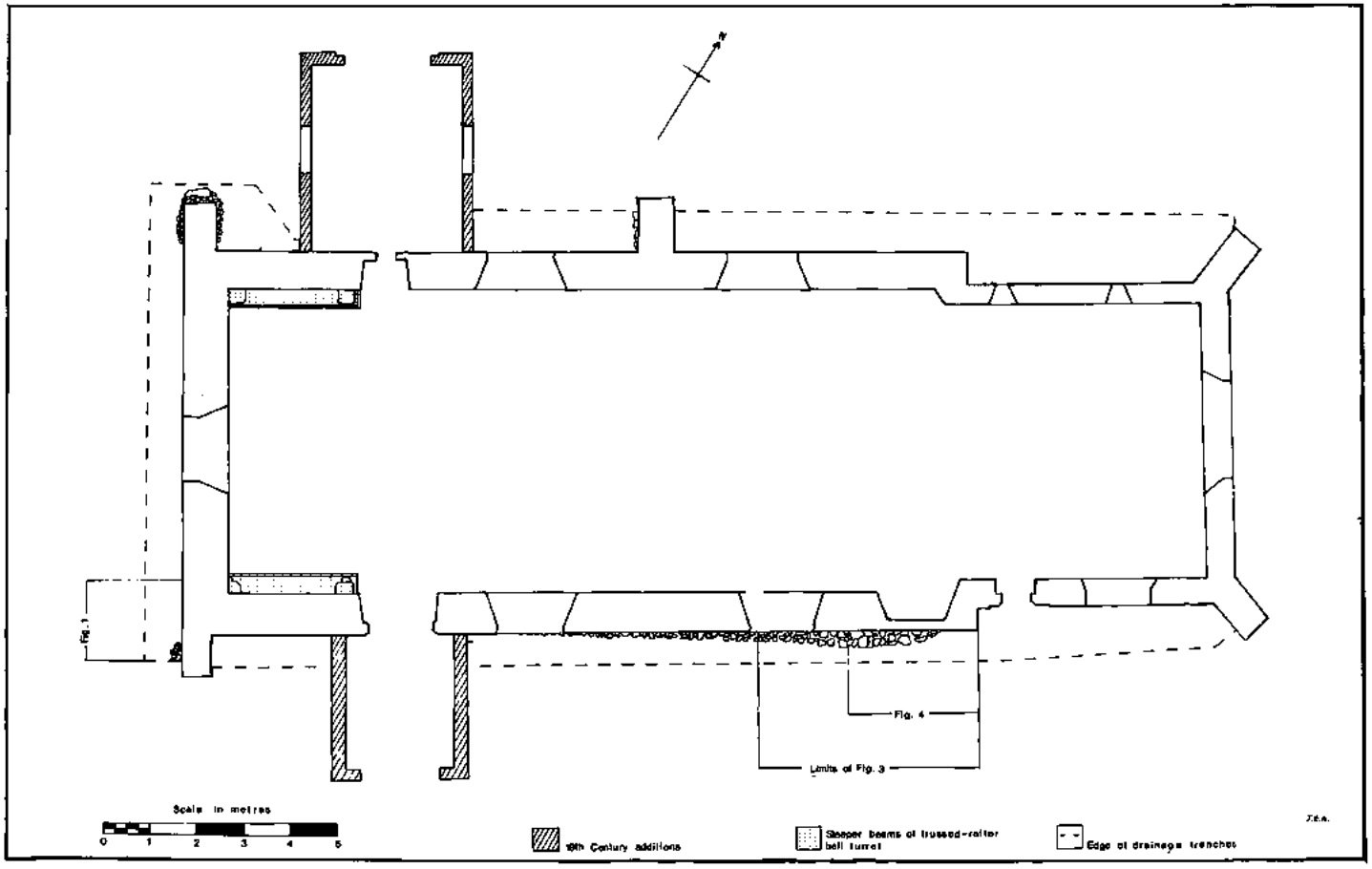
It is therefore possible to supplement the official account of the history of Cressing Church.[11] On the foundations of an early apsidal structure, a subsequent building was erected, possibly the 12th-century chapel of Elphelmus de Gore, which extended only as far east as 13.7 m. This is suggested by the five rows of neatly placed flints at the bases of the south and west walls, and which contrast vividly with the cruder flint-rubble and Roman tile in the higher courses. There is also a marked contrast with the large, coarse lumps of flint which form the footings of the easternmost parts of the nave (Fig. 3). It seems likely that the nave was extended eastwards at some early date, possibly in the 13th century, when the chancel was rebuilt.[12] This is apparent also in the bonding of the junction between the older footings and the coarse flint footings with Roman tile, some of them still with thick wedges of opus signinum sandwiched between (Fig. 3). The extended nave terminated in green sandstone quoins (Fig. 4), still visible, but much worn, just west of the existing limestone quoins. There is also evidence in this part of the nave of an east window in the south wall. A two-centred arch of green sandstone is still just visible (Fig. 4), as is also the outline of the aperture. The arrangement of the flint filling suggests that the window was subsequently converted into a doorway, possibly when the existing easternmost window of the nave, with trefoiled ogee lights and tracery, was inserted in the first half of the 14th century. In this case, it seems feasible to postulate that this door was finally blocked when the present doorway was added in the late 14th century.[13] It is interesting to note that traces exist in the arrangement of the flintwork of an equivalent blocked window in the west end of the north wall of the nave, but, unlike its southern counterpart, it was never converted into a doorway, and no internal evidence remains.[14]

The two existing northern windows, each of which contains two cinquefoiled lights, fragments of early stained glass, and tracery in a two-centred head, date from



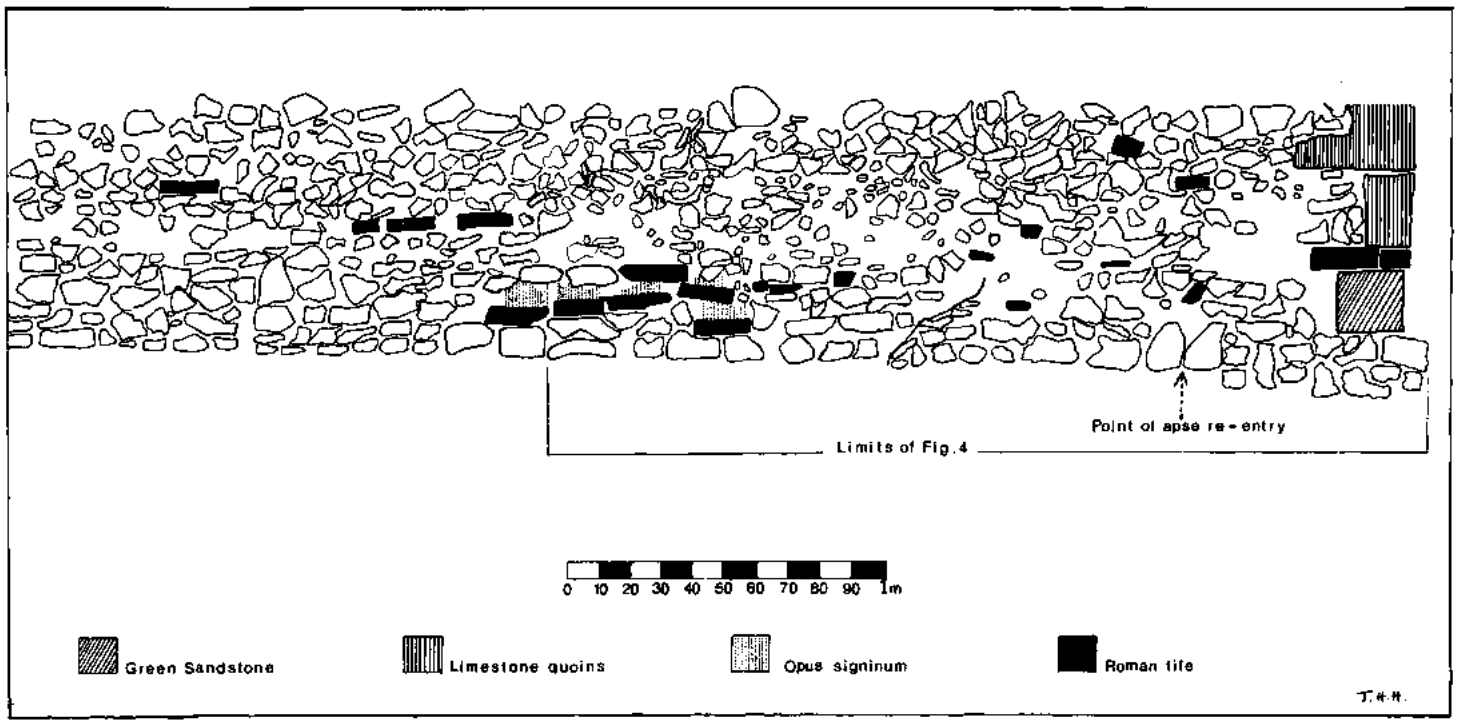
ALL SAINTS', CRESSING

Fig. 1 South-west buttress foundation, as viewed from west end of nave, showing nave foundations neatened with unkeyed Roman tile.



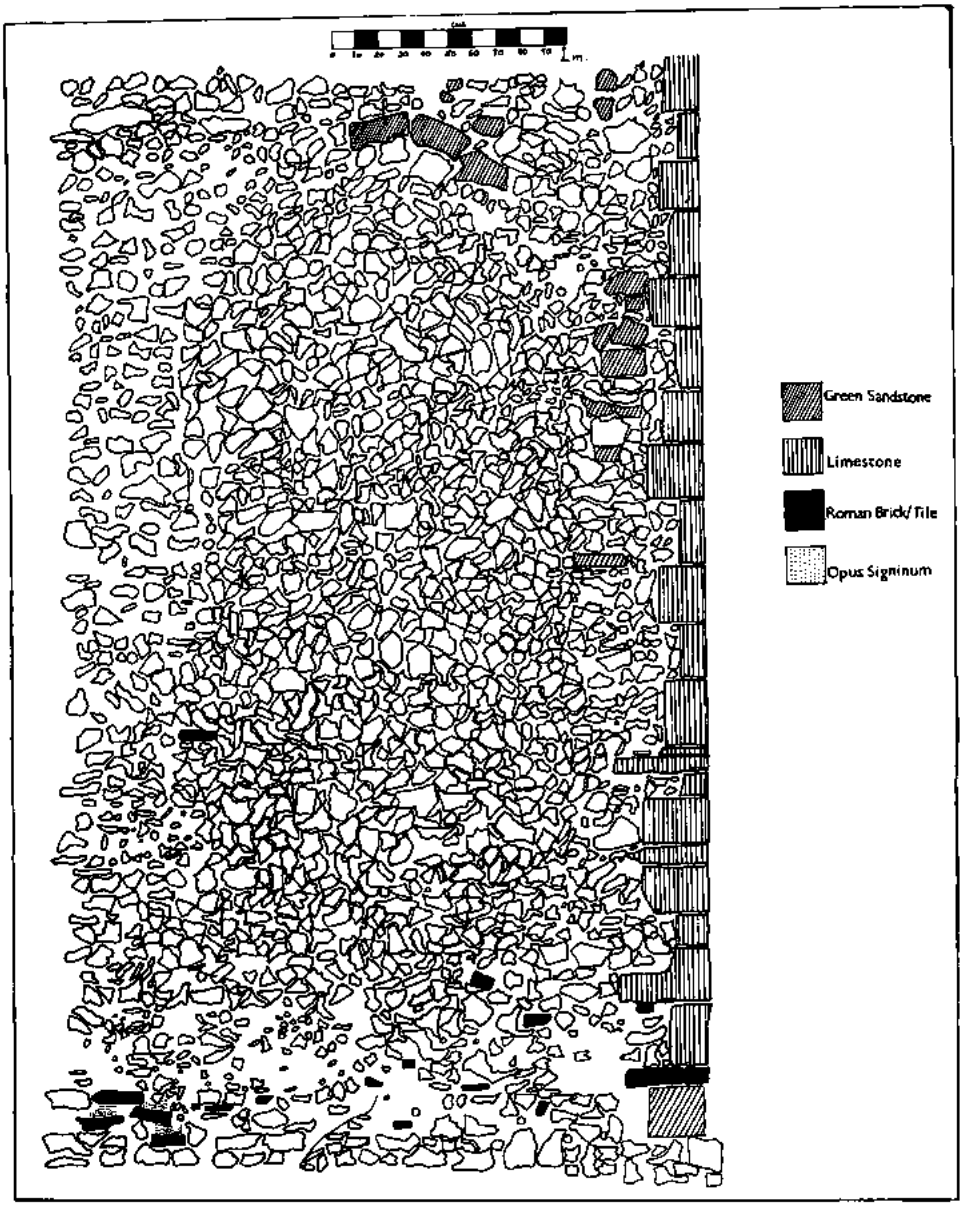
ALL SAINTS', CRESSING

Fig. 2 Plan showing foundations of apsidal chapel, buttress plinths and drainage trenches.



ALL SAINTS', CRESSING

Fig. 3 Base of south wall of nave, showing bonding between earlier western and more recent eastern structures.



ALL SAINTS', CRESSING

Fig. 4 South-east corner of nave, showing blocked window/doorway, surviving green sandstone quoins, and 19th-century limestone quoins.

the first half of the 15th century, as does the more westerly window in the south wall.[15] Though the windows were built of green sandstone, they have been protected by an outer covering of cement, probably when the church was restored in the 1830s. At this time the east window of the chancel was completely restored, but in the recent cutting of the drainage trenches, the contractor's labourers unearthed part of a

cinquefoil light from this area, though the circumstances of its discovery again render it impossible to state with any certainty that it in fact formed part of an earlier east window.

Though the north wall of the chancel belongs to the 1230 reconstruction of the chancel already mentioned, and contains two interesting lancet windows, the south wall was rebuilt early in the 16th century, at the same time that the trussed-rafter bell-turret was erected. The wall, which contains a window of cinquefoiled and quatrefoiled lights in a four-centred head, is constructed of flint-rubble with bonding courses of early Tudor brick. If the crude and shallow foundations which the drainage trench revealed at this point were the foundations of the original south wall, it is not surprising that rebuilding was required!

My thanks are due to the Vicar of Cressing, Rev. A. A. Sandeman, to his P.C.C., and to the Essex Records Office for the facilities afforded to me.

The Society is grateful to the author for a grant towards the publication of this paper.

FOOTNOTES

1. Rodwell, W. J. 'Archaeology and the Church'. *Essex Archaeological News.* Essex Archaeological Society; Winter, 1974.
2. Holman MS. (1719–1720); Essex County Records Office. It is interesting to note that this MS., and the Church Notes of the County of Essex, 1790–1799, in which the church is mistakenly mentioned as being dedicated to St. Mary the Virgin, are in the main derived directly from the Newport Repertorium.
3. *Early Charters of Essex,* ed. Cyril Hart.
4. Ekwall, E. *Oxford Dictionary of English Place-Names.* (1960)
5. Information kindly provided by A. L. Cullen, Esq., M.C., of 'New House', Cressing.
6. Newport Repertorium (1690–1710); Essex County Records Office.
7. *Victoria County History,* 'Essex', III (1963).
8. Newport Repertorium.
9. *Royal Commission on Historial Monuments,* 1922. (Hereinafter: R.C.H.M.)
10. Mr. Rodwell mentioned this fact to the writer in course of conversation.
11. R.C.H.M.
12. Ibid.
13. Ibid.
14. Further evidence for the southern blocked window/doorway is provided by the existence of a recess on the interior face of the south wall (Figs. 2 and 4). The height of this recess is not as great as that of the external green sandstone arch (Fig. 4), but it does correspond with that of the base of the inverted-V design formed by the primary filling of the aperture, as visible on the external face. The additional fact that this internal recess extends right down to floor level would help support the supposition that we have here a blocked doorway.
15. R.C.H.M.

The Riddles of Bures

by J. ENOCH POWELL [1]

At the Reformation the Benedictine priory church at Earls Colne, Essex, contained a series of monuments of the Vere family, earls of Oxford, and hereditary Great Chamberlains, extending over four centuries and rivalling any mausoleum then in Britain. Practically all that remains of those monuments after a series of fearful vicissitudes has since 1935 found a decent resting-place in a thirteenth-century chapel a half-mile to the north-east of Bures, Suffolk (Plate VIIa). The account of those vicissitudes is to be found in the article by F. H. Fairweather in *Archaeologia*, 1935, and need not be repeated; but they have bequeathed certain puzzles not hitherto posed, of which the solution helps to restore a little more of the history of the vanished series. I work from west to east in the chapel.

I. The only unproblematic monument is the fragmentary slab of Aubrey de Vere (d. 1141), so inscribed, in the south-west corner of the chapel, which was found in the water-garden of the nineteenth-century 'Priory', whose grounds include the site of the ancient priory.

II. In the north-west corner of the chapel is a freestone tomb-chest on which rests a battlemented plinth, on which in turn rests a cross-legged freestone effigy, with feet on boar and head on cushions, borne up by angels (Plates Ia, II a, b). By style and armour the effigy has, no doubt rightly, been identified as Robert, the fifth earl (d. 1296). The effigy, the plinth (which appears too large for the effigy) and the chest all belong to different tombs, but it is evidently the monument which was drawn in 1653 by Daniel King[2] in the chancel of Earls Colne parish church (Plate IIIa), was moved against the north wall of the chancel in the earlier part of the eighteenth century and drawn there by Tyson (Plate IIIb) in the 1760s,[3] was placed about 1880[3a] in the gallery at the 'Priory', and was finally brought to its present position in 1935.

The tomb-chest (of which the head abuts on the west wall of the chapel and is invisible) had three deep niches on each side and one at the foot. The niches are semi-hexagonal in plan, so as to accommodate three figures each, of which there are faint traces to be seen. Above each niche were two shields in the spandrels. On either side of each niche was an arch containing a figure, of which nine survive, severely mutilated.

King's drawing is inaccurate in that it shows the niches as holding, and as designed to hold, only two figures each.

The original chest, if oblong, would have contained 24 smaller and 12 larger figures in all, which might be identified as the 24 elders (*Revelation* iv, 4) and 12 apostles. However, what is remarkable is that King's drawing clearly shows the chest as having a pedimental head, which would have comprised two niches and four arcades, with six smaller and four larger figures. Now, in fact four such arcades, undoubtedly

belonging to this chest and still containing their original figures, do exist to this day, built into the gate pillars of the 'Priory' stable-yard, which form part of a flushwork wall bearing no resemblance to the rest of the present 'Priory' buildings.

The conclusion is unavoidable that the chest originally did have a pedimental head as King's drawing shows it, and that this was cut off to shorten the tomb when it was still in the parish church (cf. the treatment of Tomb IV, below), the arcades thus removed being built into a gateway at the 'Priory' of the time, just as happened to one of the arcades in Tomb IV (below, p. 94). This would account for the tomb being placed with its head flush to a wall in the chapel (as in the 'Priory' gallery previously): the chest already had its missing head end against a wall in the parish church even before it was removed to the 'Priory' gallery, as shown in the late-eighteenth-century drawing, Plate IIIb.

The painting on the shields, now completely effaced, was visible in the seventeenth century, and the charges appear in King's drawing. Fortunately, we are able to ascertain that King's drawing of the arms, and the description of them which accompanied it and passed successively into the possession of a Mr. Lethieullier and of Horace Walpole and is now in the British Museum,[4] were also inaccurate; for a description of the arms made in September 1640 by Richard Symonds[5] is confirmed by another made by Holman in 1722.[6] This enables the arms to be identified as follows:

head:	Vere
	Vere(?) impaling Bolebec(?) (a)
sides:	Warenne (b)
	Mowbray (c)
	Vere
	Wake (d)
	Vere with label of five points azure
	Vere with bordure engrailed sable
foot:	Vere
	Sandford (e)

The alliances with Vere of the other families here represented are as follows:

(a) Isabel Bolebec married Robert, the *third* earl (d. 1221).[7]

(b) William de Warenne married Joan, daughter of Robert, the *fifth* earl (d. 1296). William was son and father to earls of Surrey.

(c) John Mowbray (d. 1322) married in 1298 Aline de Briouze, sister of Maud de Briouze mother of Margaret Mortimer who was married (bethrothal 1268) to Robert, the *sixth* earl (d. 1331).

(d) Hawise de Quency, who before 1268 married Baldwin Wake (d. 1282), was niece to another Hawise de Quency, who married after 1223 Hugh, the *fourth* earl (d. 1263).

(e) Alice Sandford married (by 1257) Robert, the *fifth* earl (d. 1296).

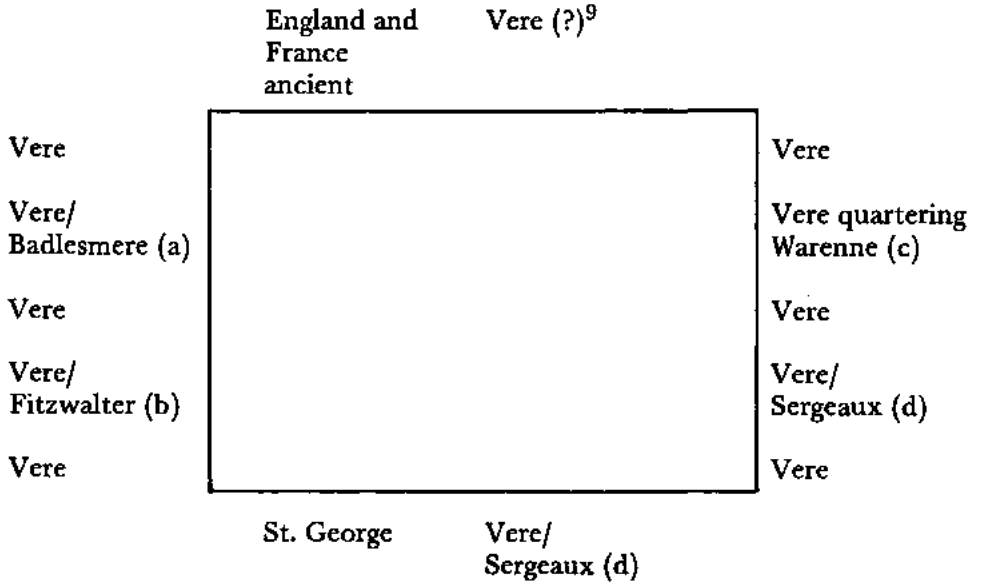
Evidently the date is later than 1298, because of the Mowbray alliance. On the other hand, Vere with bordure engrailed sable is for Hugh, second son of Robert, the fifth earl (d. 1296), and this Hugh died without issue in 1319. Consequently the tomb cannot be that of Robert, the sixth earl (d. 1331); and it would follow that he, and his

son Thomas (d. *v.p.* 1329), are represented respectively by Vere, and Vere with label, on the sides. The person to whom the tomb-chest would naturally be ascribed is the countess of the fifth earl, Alice Sandford, who survived him and died in 1312, or possibly 1317.[8]

A panel, with the arms of Bohun in bas relief on a shield, has been set in the north wall of the Bures chapel above this monument. Joan, sister of (and coheir with) Hawise de Quency (see (d) above), was the second wife of Humphrey de Bohun (d. 1265), son of Humphrey, earl of Hereford and Essex (d. 1275) and father of Humphrey, earl of Hereford and Essex (d. 1298). His first wife was Eleanor, sister of (and coheir with) Maud de Briouze (see (c) above). The panel could therefore well be the sole remnant of the tomb-chest of Robert, the fifth earl (d. 1296).

III. In the centre of the chapel is a magnificent alabaster tomb-chest, bearing alabaster male and female effigies (Plate IVa). On the long sides are five angels bearing shields of arms, with the charges in bas relief, separated by transomed panels with two upper and two lower arches having trefoiled heads. When the tomb was in the chancel of the priory church at Earls Colne, there were, as the King drawing made in 1653 shows, two angels and shields at the head and two at the foot, with similar panels between and on either side of them (Plate IIIc); but when the tomb was reassembled on being brought from the 'Priory' to Bures, the sides were interchanged, so that the original right was on the left and vice versa. It was also put together with only one shield-bearing angel at the head (Plate Va) and one at the foot – likewise interchanged – and the other pair was used to provide the head and foot for Tomb IV (below). This latter pair, however, differ slightly from all the rest, and the charge on their shields was not in bas relief but only scratched preliminary to painting (Plate Vb).

There is, however, no doubt about the original arrangement:



The relationships denoted by these charges are as follows:

(a) Maud Badlesmere married (before 1336) John, the *seventh* earl (d. 1360).
(b) Alice Fitzwalter married Aubrey, the *tenth* earl (d. 1400).
(c) As (b) on Tomb II (above).
(d) Alice Sergeaux married (1406 or 1407) Richard, the *eleventh* earl (d. 1417).

There is no doubt that the male effigy is that of Richard, the eleventh earl. It wears the Garter, to which Order he was admitted in 1416. Naturally, the ninth earl, Robert, Duke of Ireland (d. 1392), and his father Thomas, the eighth earl (d. 1371), and Thomas's wife, Maud Ufford, were omitted. The eleventh earl did not inherit through them, for his father Aubrey, the tenth earl, was the son of John, the seventh earl. In any case, the Duke of Ireland was not a kinsman for any Lancastrian to boast of! The relationship with Warenne, to which evidently the Veres attached value, was much more distant than the others, and this is presumably why it was denoted by quartering rather than impaling.

The royal arms were not infrequently placed at the head of tombs of royal officers – for instance, that of Chief Justice Sir William Gascoigne (d. 1419) at Harewood, Yorkshire. In that case as in this the royal arms were those quartering France ancient (fleurs-de-lis semé). It is not clear when these were officially replaced by those quartering France modern (three fleurs-de-lis), but they are found well into the fifteenth century.

There is, however, a peculiarity which reveals the early story of this tomb. This is that Sergeaux appears twice – once as a relative, and once in the position identifying the female figure as Earl Richard's wife, Alice Sergeaux. The clue is provided by the slight difference, already noted, between the angels and shields which were originally at the woman's head and foot and all the rest, and by the fact that the effigy of the woman is not only four inches longer than that of the man but wears the tall double-peaked hair-style not used before the middle of the fifteenth century. What happened is evidently as follows.

The earl was buried *c.* 1417 in a single tomb, consisting of the existing sides and of the present head and foot. The tomb of Ralph Green (d. 1417) and his wife at Lowick, Northants. (Plate VIIb), of which we happen to have the original specification proving that it was made at Chellaston, Derbyshire, is so similar that it is tempting to suppose both to be from the same workshop.[10] The countess survived the earl, and in 1421 married Nicholas Thorley, who died in 1442. The countess did not die until 1452; and when she did, or in preparation for that event, the earl's tomb was extended into a double tomb to receive her by the addition of an appropriate new shield and panel at head and foot and of her effigy in the style of the day. Doubtless the same workshop did the work, and the instructions were sufficiently precise for them to produce an excellent but not quite perfect match. The difference was the reason why those who reassembled the tombs at Bures in 1935 chose the countess's new shields to use for Tomb IV.

IV. Nearest to the altar the alabaster effigy of a knight with the Vere arms in relief on his surcoat lies on an alabaster tomb-chest (Plate Ib). From the style there is no difficulty about identifying the effigy as Thomas, the eighth earl (d. 1371). The

tomb-chest supporting this effigy was recorded in the parish church at Earls Colne from Weever (1631) onwards, but in King's drawing it is clearly shown with three arcades at each end matching the six on each side (Plate VIc). Each arcade contained two figures. All the figures in the surviving arcades still exist except one in the fourth arcade on the south side, which was already missing when the tomb was drawn by King.

After the seventeenth century the tomb was contracted by eliminating one of the three arcades at each end 'because it projected too much into the chancel',[11] being situated in the south-east of the nave under the pulpit. The remaining end-arcades were dispensed with later, probably when the tomb was removed to the 'Priory' *c.* 1880. This was why they were replaced, as explained above, on the occasion of the reassembly at Bures in 1935, by the pair of end-panels from the tomb of the eleventh earl and his countess. One of the eliminated arcades, however, was at some time built into the garden wall of the 'Priory', a stone doorway (possibly also of material from the parish church), with a feature above it to accommodate the alabaster arcade, being inserted into an existing brick enclosure wall. It is still to be seen there, much weathered (Plate IVb).

This tomb-chest has been wrongly attributed to Thomas, the eighth earl (d. 1371), who lies on it, or to John, the seventh earl (d. 1360). The natural implication of the original size of the tomb is that it was designed for three figures. Neither the seventh nor the eighth earl was married more than once. Indeed, apart from Richard, the eleventh earl (d. 1417) (Tomb III), the only earls of Oxford after the early thirteenth century to be married twice were John, the thirteenth earl (d. 1513), and John, the fifteenth earl (d. 1540). The style of the monuments is fully consistent with the early sixteenth century. In fact, A. Gardiner, *Alabaster Tombs of the Pre-Reformation Period in England* (1940), p. 16, assuming the tomb to be that of the eighth earl, observed that 'the grouping of weepers in pairs beneath broad ogee canopies' on this tomb is a 'method which does not again become common till the end of the following century'; and his illustrations (nos. 60-62, 69) show pairs and trios of weepers, etc., in the sixteenth century, but none earlier. Both the dress of the weepers, originally numbering 48, who typified the various classes of society, and the style of the arcades point to early Tudor.

The tomb cannot have been intended for the thirteenth earl (d. 1513); for the effigies mentioned by Weever (p. 615) and drawn by King in a damaged state at the ruined priory (Plate VIa) were clearly those of this earl and his first wife Margaret (Neville) (d. 1506–8), because the male figure wore the Garter, which no other pre-reformation earl had except the Duke of Ireland and the eleventh (Tomb III). His second wife, Elizabeth (Scrope), whom he married in 1508–9 and who did not die until 1537 (after the Dissolution), was buried, in accordance with her will of that year, beside her first husband, Viscount Beaumont (d. 1507), in Wivenhoe parish church, where the brasses of both exist.[12]

There remains the fifteenth earl (d. 1540), and it seems probable that the tomb was intended for him. When he succeeded to the earldom in 1526 he either had just lost or else lost in the succeeding twelvemonth his second wife, Elizabeth (Trussell). There would be good reason for him, therefore, to prepare at Colne Priory a triple

tomb, which might well be incomplete at the Dissolution. Then, on his own death in March 1540, his executors, instead of moving to Castle Hedingham the now archaic, incomplete and cumbrous triple monument, provided for him the single, modern-style, black marble tomb which is there today. The fact that the tomb in the priory was incomplete at the Dissolution would explain why no effigies accompanied it to the parish church and why it was thus available to accommodate there the effigy of the eighth earl (d. 1371) (see above).

King's drawing (Plate VIc) shows two oddments simply standing on the tomb-chest along with the effigy. One, a helmet with cap of estate and boar crest, was presumably a helm once suspended over an Oxford tomb and is (not surprisingly) no longer extant. The other object still exists, in the possession of Mrs. Sybil Sherwood at Prested Hall Chase, Kelvedon, by whose kind permission I was able to examine and photograph it (Plate VIIc). It is an alabaster helmet and crest, on which the head of an effigy once rested, the crest being a human head, with long hair parted in the centre and bound with a fillet and long six-pointed beard. This so-called Saracen's or Soldan's head was the crest of the Bourchier family, and is to be seen, amongst other places, on several of their tombs in Halstead parish church, three miles from Earls Colne. It seems overwhelmingly probable therefore that the Earls Colne oddment was from a Bourchier monument; and how and whence it went adrift can be explained.

Four generations of Bourchiers were buried at Halstead:

(A) John (d. *c.* 1330);
(B) Robert, chancellor in 1340 (d. 1349);
(C) John (d. 1400); and
(D) Bartholomew (d. 1409).

The remains of four monuments are in the Bourchier aisle or south chantry of St. Andrew's parish church, Halstead.

M1 A knight and lady, with four bedesmen at their feet and canopies over their heads, in a granite or gritstone. The style is consistent with a date about 1330, and these are presumably John (A) and his wife, Helen, of Colchester. A wooden shield painted with the Bourchier arms has been fixed to the knight, but does not belong.

M2 Three portions of two sides of a limestone tomb-chest with 'weepers' and shields which represent alternately Bourchier and Prayers. One of these fragments is separate; the other two have been cemented together to form the front of the base which supports M1. These fragments must be the remains of the tomb of Robert (B) and his wife, Margaret Prayers.

M3 A lofty canopied tomb with battlemented pinnacles and tomb-chest, on which, but not belonging to it structurally, rest the effigies of a knight and lady. Under the knight's head is a crested helm closely resembling that at Kelvedon. The canopy and the damaged chest display the Bourchier arms supported by an angel and a dragon. One angel panel in the front appears to have a scallop (cockleshell for Coggeshall?). If so, the tomb must have been made for John (C) and his wife, Elizabeth Coggeshall.

M4 A brass of a knight and two ladies. They are undoubtedly, though the inscription preserved in Weever (p. 619) is lost, Bartholomew Bourchier (D) and his wives, Margaret Sutton (whose shield is above) and Idonea Lovey (whose shield is lost). The portion of brass representing the helm and crest is lost, but the matrix shows that the crest was a Saracen's head of the same shape as that shown on the Garter stall-plate (Wagner, *Heraldry in England*, Plate vi) of Bartholomew's son-in-law, Lewis Robessart (d. 1431), who was Lord Bourchier in right of his wife, Elizabeth, Bartholomew's daughter and heir.

The stray alabaster head ought to belong to the missing Bourchier effigy; but it seems too late in style for Robert (B) while the effigy under the canopy tomb seems too early for 1400, and does not wear the Garter, as it would have done if it were John (C). Probably, therefore, the knight and lady under the canopy belonged to M2 and are Robert and Margaret Prayers, while the Kelvedon Saracen's head is the only surviving part of the otherwise lost alabaster effigies of John (C) and Elizabeth (Coggeshall) which were originally under the canopy of tomb M3.

If we ask how the Saracen's head came to be detached and go on its travels, an interesting theory suggests itself. Such effigies as these were not portraits, so that the only identifications were the crest of the helmet and the armorial bearings carved or painted on the knight's armour or surcoat. A pair of effigies could thus be appropriated by repainting the coat and replacing the helmet. If an Oxford provided himself with a pair of effigies for his tomb at Earl's Colne by appropriating them from Halstead, that would explain how a spare helm with a Bourchier crest was available at Earl's Colne when the Oxford mausoleum in the priory was deserted after the Dissolution and some of the tombs from it removed to the parish church.

The Bourchier connection with Halstead ceased after Elizabeth Bourchier (Robessart's widow) died in 1433 and the junior branch, whose own seat was at Little Easton, rose to eminence with Henry Bourchier (d. 1481), viscount 1445 and Earl of Essex 1461. Any time after the middle of the fifteenth century there was nobody to mind too much what happened to a Bourchier tomb at Halstead. But who was the appropriator?

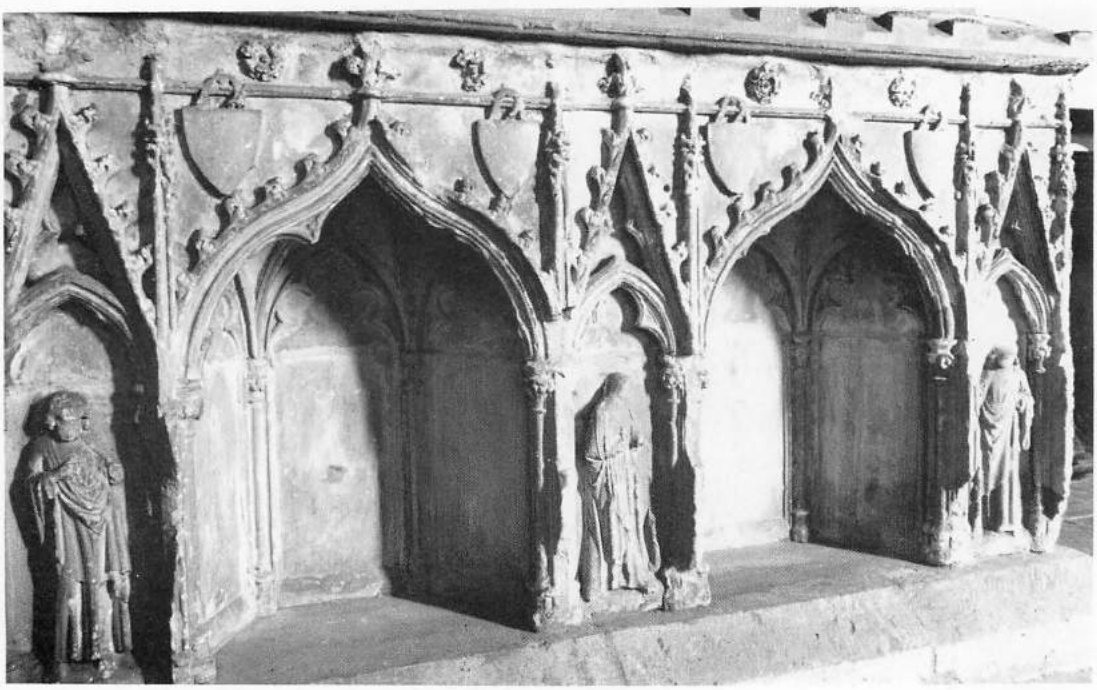
Weever (l.c.) mentions seeing in Halstead parish church the much damaged tomb of a George de Vere. Now, a George de Vere was the younger brother of John, the redoubtable thirteenth Earl of Oxford. When John died childless in 1513, George was already dead and so was George's elder son, another George (d. 1498). The earldom therefore went to the younger son, John, who entered into possession of the Oxford estates, including the family mausoleum at Earl's Colne priory. His elder brother George was long since buried at Halstead, but he may have decided to provide his father, George de Vere, and his mother, Margaret Stafford, with a slap-up tomb in the priory by removing John Bourchier and Elizabeth Coggeshall from M3 at Halstead to Earls Colne where the armorial bearings were repainted and a helm with the Oxford boar substituted for the helm with a Saracen's head. They would then be replaced with the effigies of Robert Bouchier and Margaret Prayers, whose own tomb (M2) may by then already have been broken – disturbed perhaps by structural alterations in the church. Thus, shortly before the Dissolution, there would have been at Earls Colne a

PLATE I

a

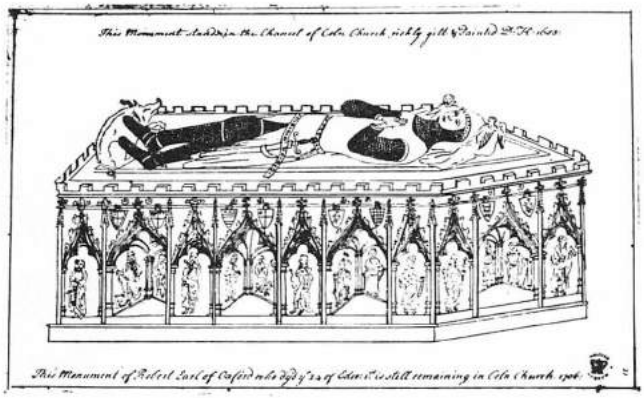
b

THE RIDDLES OF BURES
a. Tomb II. b. Tomb IV.

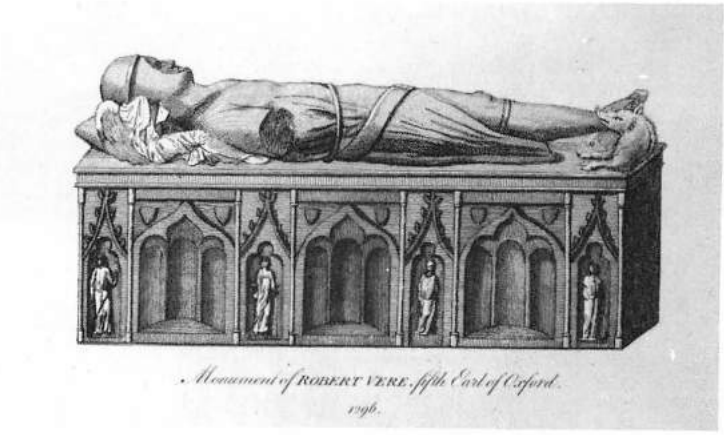


b

THE RIDDLES OF BURES
Details of Tomb II.



a



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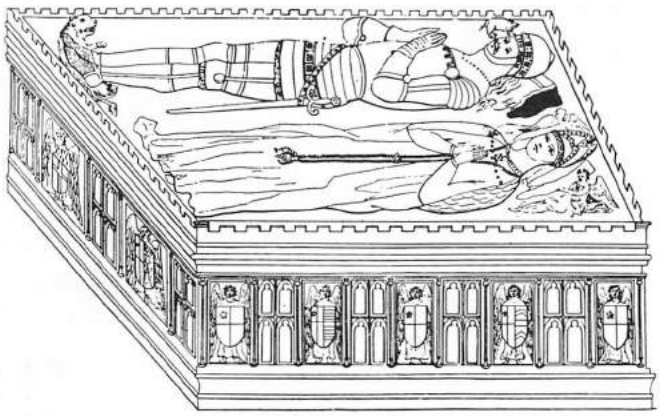
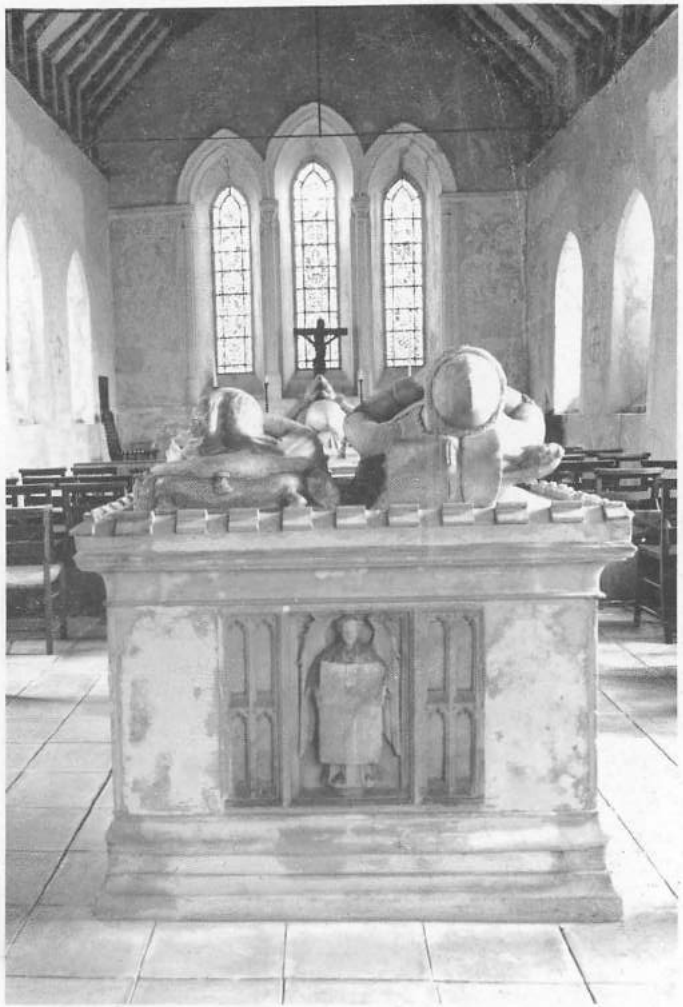


c

THE RIDDLES OF BURES

a. Tomb II after Daniel King, 1653. b. Tomb II after Tyson, *c.* 1760. c. Tomb III after Daniel King, 1653.



a

b

THE RIDDLES OF BURES
a. Tomb III. b. Panel in the wall of Colne Priory.

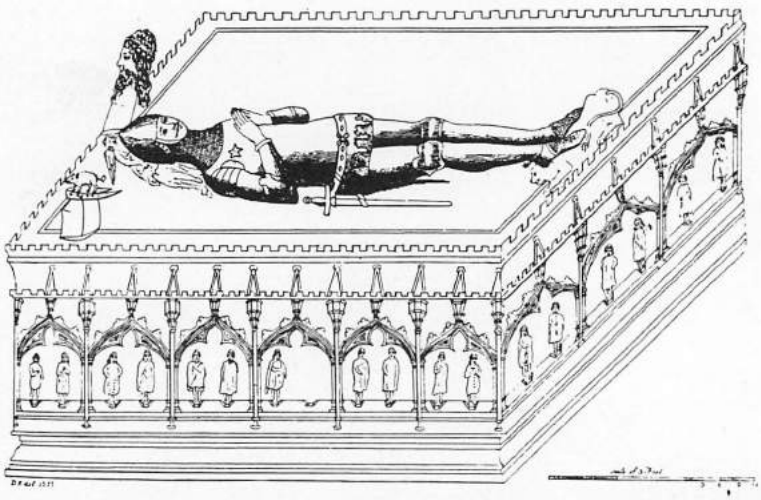
a

b

THE RIDDLES OF BURES
Angels on Tomb III.

a

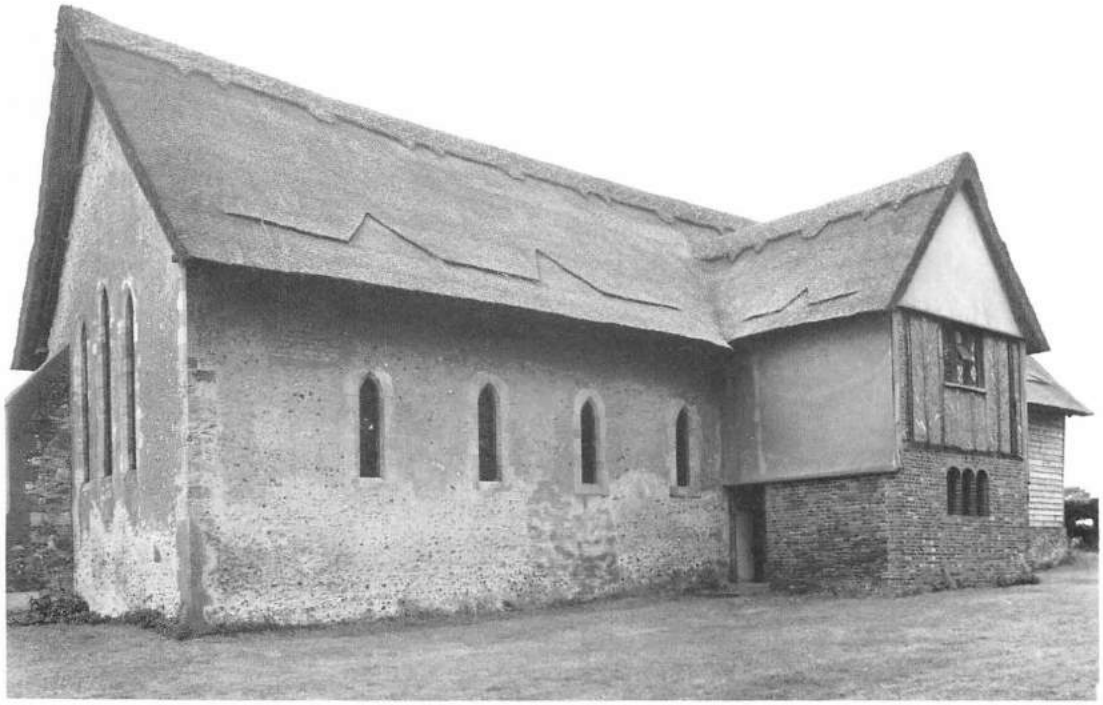
b



c

THE RIDDLES OF BURES

a. Tomb of the 13th Earl after Daniel King, 1653. b. Effigy of Robert de Vere, Hatfield Broad Oak. c. Tomb IV after Daniel King, 1653.



a

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THE RIDDLES OF BURES

a. Bures Chapel. b. Detail of tomb of Ralph Green, Lowick, Northants. c. 'Saracen's Head' at Kelvedon.

Saracen's head with no owner! What is more, we can hazard more than a guess as to where the requisite alabaster helm with boar crest for Oxford was obtained. It came from the effigy of the eighth earl. Having a lion at his feet, he ought, like the fifth and eleventh earls, to have the boar at his head. On careful inspection it can be seen not only that the angels supporting his head now are of different stone and do not belong but that there was originally under the head of this effigy a helm which has been removed leaving a bald patch between the camail and the cushion. Thus the abandoned tomb-chest became – perhaps already in the priory church before the dissolution – a repository for three other tell-tale bits and pieces. It remains to add that by a weird chance the date 1530 has been incised by someone on the left thigh of the eighth earl's effigy – but when and why?

However that may be, we have in the chapel at Bures the tombs or part of the tombs of the following:

1. Aubrey de Vere, d. 1141.
2. Robert, the fifth earl, d. 1296.
3. His countess, Alice, d. 1312 or 1317.
4. Thomas, the eighth earl, d. 1371.
5. Richard, the eleventh earl, d. 1417.
6. His countess, Alice, d. 1452.
7. John, the fifteenth earl, d. 1540.

Of all the earls of Oxford before the Dissolution the only ones not buried at Earls Colne were John, the twelfth earl (d. 1462), beheaded and buried at Austin Friars, London, and Robert, the third earl (d. 1221).[13] Curiously, the latter's tomb also presents something of a puzzle.

In the chancel of Hatfield Broad Oak priory church is the effigy in clunch of a knight bearing the Vere arms undifferenced on a splendidly diapered shield, the head on a cushion supported by angels, the feet on a reading desk at which two figures, who may be monks, kneel facing one another with a book open before each (Plate VIb). The style of the monument belongs to the last third of the thirteeenth century. The inscription in Lombardic letters on the bevel of the plinth is now largely illegible, but what remains affords no ground for doubting that it was correctly reported by Weever (p. 631) as follows: 'Sire [Robert de Veer le premier count de Oxenford le tirz git ci Dieux de]l alme si luy plest face merci qi pur lame pr[iera xl iors de] pardou[n avera + pater] noster +'.

The reference to Robert, the third earl (d. 1221), as 'Robert the first' shows that the tomb was erected not earlier than the time of the next Robert, viz. the fifth earl (d. 1296), who, like his father, Hugh, the fourth earl (d. 1263), was a benefactor of Hatfield Priory (references in *Complete Peerage*). It does not seem possible to date the tomb more precisely. Identical figures of monks are at the feet of the effigy of Ralph Nevill, earl of Westmorland (d. 1425), at Staindrop.[14] The type of indulgence cited is found from the mid-thirteenth century onwards[15] and diaper occurs in England from about that time also. The reason why no monument to the third earl was erected

sooner may be that his successor, Hugh (d. 1263), was a minor for ten years after his father's death.

The Society is grateful to the author for a grant towards the publication of this paper.

FOOTNOTES

1. I am grateful to Sir Anthony Wagner, K.C.V.O., D.Litt., Garter King of Arms, and to Lady Wagner for collaboration and suggestions, and to Colonel G. O. Carwardine Probert of Bevills, Bures, the owner of the chapel, for his courtesy and hospitality. Mr. F. W. Steer, former Senior Assistant County Archivist, has kindly allowed me to use his notes and transcripts relating to the tombs. The photography is by Dennis Mansell, Braintree.
2. B.M. Add. MSS. 27348–50.
3. Gough, *Sepulchral Monuments*, i, p. 68 and Plate xxiv.

3a. The removal of the three tombs from the parish church to the 'Priory' apparently occurred about 1880. The date 1872 appears on one of the Victorian extensions to the original early-nineteenth-century building, and the gallery or 'cloister' for the reception of the effigies was built on to those extensions later still. On the other hand, an inspection of them *in situ* in the gallery took place in August 1882, as recorded in *Trans. Essex Arch. Soc.* N.S. iii. 85.

4. See Historical Monuments Commission, *Essex*, iii, 86.
5. College of Arms MS., R. Symonds, Essex church notes, i, 185–6.
6. Holman MSS. on Essex churches, Essex Record Office.
7. The identification, however, is extremely doubtful, as all three descriptions conflict and none fully agrees with Bolebec (vert, a lion erminé).
8. *Complete Peerage*, x, 218. I am indebted to Mr. A. R. Dufty for the view that there is 'no reason (on grounds of style) to dispute a date in the second decade of the fourteenth century for the tomb-chest'. He is of the opinion that the effigy also could be early fourteenth century. A similar tomb-chest at Holbeach, Lincs. (Pevsner, *Lincolnshire*, Plate 32(a) and p. 573), but with deeper niches and no intervening arches, is ascribed to the second half of the fourteenth century.
9. Almost completely defaced. It was interpreted by Symonds (*supra cit.*) as Vere with garter, and by H.M.C. (*supra cit.*) as Vere with inescutcheon. In fact, a rubbing kindly made for me by Colonel Probert shows clearly that it was an impaled shield with an escutcheon of pretence. This could be Vere impaling Sergeaux, with a Sergeaux claim to some representation, possibly of FitzAlan of Arundel (see *Complete Peerage*, i, 243f. and x, 236). An escutcheon of pretence as early as the sixth decade of the fifteenth century (see text) is noteworthy.
10. The tomb of Sir Edmund Thorpe (d. 1418?) at Ashwellthorpe, Norfolk (Pevsner, *N.W. & S. Norfolk*, Plate 42), is closely similar and no doubt from the same workshop.
11. Powell, B.M. Add. MSS. 17460.
12. It is observable that the Countess of Oxford's brass has been made up to the same size as Viscount Beaumont's subsequent to the original design by the clumsy addition of an extra pediment. I have offered a libellous suggestion about the marriage of the thirteenth earl and Elizabeth Scrope in the Society's *Newsletter* for the second quarter of 1975.
13. The *Complete Peerage*, x, 234, states without quoting authority that Aubrey, the tenth earl (d. 1400), was buried at Hadleigh, Essex (where he was constable of the castle); but Weever, p. 616, gives him as buried at Earls Colne.
14. Shown in C. A. Stothard, *Monumental Effigies of Great Britain*, 1817.
15. Lépicier, *Indulgences*[2] (1906), p. 296. I am indebted to Fr. Placid of Ampleforth for this reference.

Archaeological Notes

The FitzRalph Brass at Pebmarsh

by MONTGOMERY BURNETT

In the parish church of St. John the Baptist, Pebmarsh, North Essex, the brass of Sir William FitzRalph is famous both for its quality and early date and is widely known from the hundreds of rubbings taken from it.

Research into the origins of this brass was active in the 19th century when J. G. and L. A. B. Waller published their volume on *Monumental Brasses*. The late T. D. S. Bayley, Rector of Pebmarsh and President of the Essex Archaeological Society, made a fresh study of the brass in his book, *Pebmarsh Church, Essex* (Oxford, 1946). These two books gave a detailed description of the brass at varying stages of history and Bayley also gave a careful description of the armour depicted and how it was worn.

The exact date of the brass, however, has always been conjectural since no date of Sir William's death has ever been discovered. This date is in fact of some importance since it relates, through the armour, to a transitional period from mail to plate armour.

As a result of some recent research into the history of the Wascoyl family, then living at Lamarsh, it has been possible to get a little closer to the probable date of Sir William FitzRalph's brass.

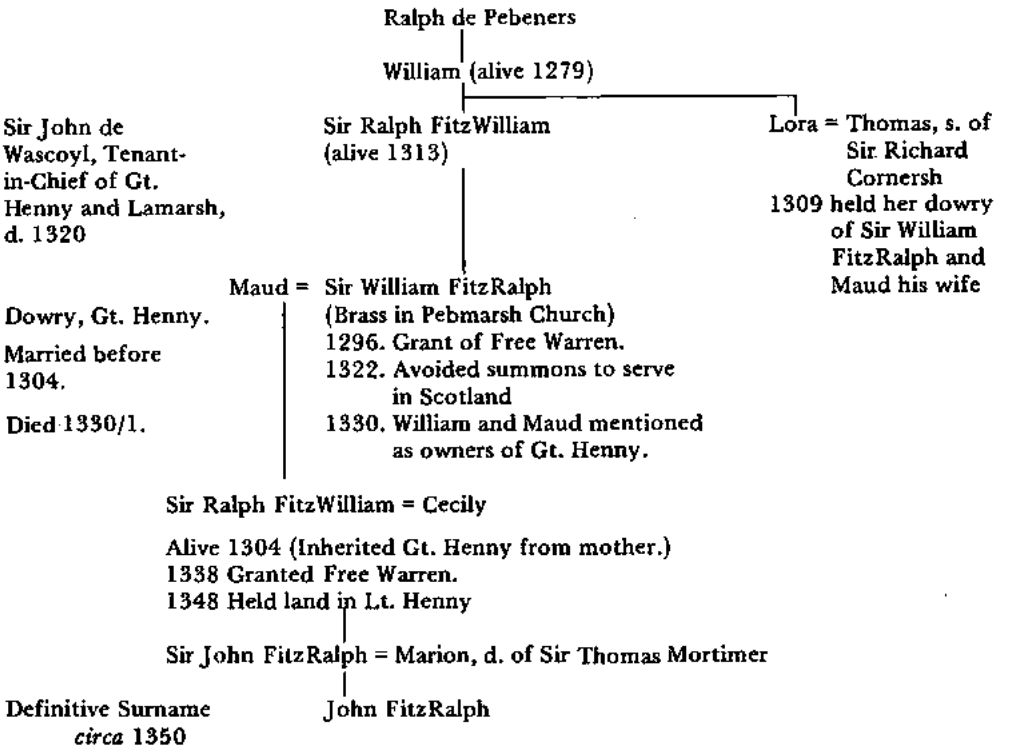
It will be best to start by consulting the pedigree of the de Pebeners family on page 100 as this in itself is revealing.

From this it will be seen that Lora, a daughter of the house, married Thomas, son of Sir Richard Cornersh. In 1309[1] they held 96 acres of land in 4 parishes from William, son of Ralph and Maud, with reversion to the latter. This William, son of Sir Ralph FitzWilliam de Pebeners, was the knight of the brass and was therefore Lora's nephew and she held her land of him though her brother, Sir Ralph, was still alive.

William, as heir, later inherited the manor of Pebmarsh, but it was through his wife, Maud, that he had a part of the manor of Henny, held on a knight's fee, 'as of the manor of Lamarsh'. This was made clear from an Inquisition of 1331 when Peter de Boxstede was found to hold 'part of the manor of Henny held by Maud late wife of William FitzRalph Kt. as of the manor of Lamarsh'.[2] This information tells us that the manor of Henny was part of Maud's dowry, that Maud died in late 1330 or early 1331, and that her husband, Sir William, was still alive in 1331.

Sir William's military service, as noted by the Wallers, included three tours in Scotland for the years 1296, 1298, and 1301,[3] while in 1316 he had a commission to raise foot-soldiers for the King's service. In 1322 he was again summoned to attend an invasion of Scotland but excused himself on a plea of illness. He was therefore a

1. *Feet of Fines*, Essex, 1309.
2. *Inquisitions*, 1331.
3. *Parliamentary Writs*.



seasoned campaigner in the Scottish wars and in view of this it seems likely that he was a Knight Banneret, the equivalent of a Brigadier in modern parlance.

His wife, Maud, who had brought him the Knight's Fee in Henny, was, by inference, the daughter of Sir John de Wascoyl who was Tenant-in-Chief of that manor which went with Lamarsh, Fairstead and two other manors in Suffolk, until his death in 1320.[4] As early as 1304 Sir John had made a conveyance of Henny to John, parson of Henny, for life, with successive remainders to William, son of Ralph de Pebeners and Maud his wife for life and then to Ralph, son of the said William and his heirs.[5]

If William and Maud were named by Sir John de Wascoyl as residuaries in 1304 and as owners of the land in 1330[6] it seems clear that Maud was Sir John's daughter and that Henny, which had long been in the possession of the Wascoyls, was her dowry. Thus in 1304 Sir John de Wascoyl was alive; by 1330 he was dead and Sir William FitzRalph and Maud had become the owners of the land. It is also clear that the latter couple were still living in 1330 and that Maud alone had died by 1331. This discards the Wallers' assumption, which Bayley accepted, that Sir William died, following his illness, in 1324.[7] This and the method of naming successive generations of the family, as shown in the pedigree, means that the 'Sir William le Fitz Rauf

4. *Fine Rolls*, 1320.
5. *Feet of Fines*, Essex.
6. Holman.
7. *Parliamentary Writs.*

Knight' summoned to attend the great Council of Westminster on 30 May 1324 was Maud's husband and not her son.

The Wallers' assumption that the man who was summoned to parliament in 1324 was the same man as he who was granted a Free Warren in 1338[8] is also incorrect for the Free Warren (hunting rights) was in favour of Ralph, son of William de Pebeners and this was Sir William's son. We have therefore established the date of his death as between 1331 and 1338 and these factual dates are broadly borne out by Mr. Page-Phillips who has recently used the indent method of dating based on stylistic evidence. By this method he has dated the Pebmarsh brass at 1330, within two years of the earliest probable date of Sir William's death.

The confusion seems to have been assisted by the belief that the family name was FitzRalph: so it was by about 1350, but up to the period we have been considering it had not been so, as reference to the pedigree will show. There was no surname, as we know it, and it can be seen that the eldest sons were named successively Ralph and William, with the definitive 'de Pebeners' attached, a method used to avoid confusion in reference to father and son. The word 'Fitz', meaning 'son of' was used in its literal sense. It therefore follows that Sir William's son, as in fact we know, was named Ralph and not William.

The chief point of the Wallers' argument was their assumption that Sir William's illness was followed by his death, but we now know he remained alive. This led them to the second assumption that the summons of 1324 must have been sent to his son, but nomenclature has disproved this. The excuse, 'I can't come because I'm ill' is perhaps the oldest in history and Sir William may well have used it in this way. On the other hand if he really was ill he did not have to die of his illness.

Bayley fell into the trap of accepting the Wallers' findings but this in no way disproves his research for he covered the whole period pretty thoroughly, referring to similar transitional brasses made for Sir Hugh Hastings (1347) at Elsing, Norfolk, and for Sir John de Wautone (1347) at Wimbish, Essex. Both these he named as 'still transitional'. Thus we now have the later period of 1331–1338 for dating the FitzRalph brass, still well covered by the latitude of the transitional period from mail to plate armour.

8. *Patent Rolls.*

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