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May 1982

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A RE-ANALYSIS OF THE RING-DITCH SITE AT PLAYDEN, EAST SUSSEX

by R. M. J. Cleal

The prehistoric ring-ditch site at Playden is reconsidered in the light of the work that has been done on the Late Neolithic/Early Bronze Age since 1935. The writer concludes that Bradley's (1978) interpretation of the site as having a mound of white sand in its second phase is correct, but that the first phase, in which there is an unusual timber structure within the ring-ditch, may be of a ritual nature rather than a settlement. Other anomalous ring-ditch sites of the mid- to late second millennium are illustrated to demonstrate broad similarities. The pottery is considered in detail. It is concluded that there is no evidence for any round-based vessels, and that although the vessels are not easily classifiable, they may belong to a transitional phase between the Grooved Ware and Deverel-Rimbury traditions. There is a radiocarbon date of 1740±115 b.c. for the first phase of the site.

INTRODUCTION

The prehistoric site at Playden, East Sussex, was excavated by H. J. Cheney in the early 1930s, and was published by him in the *Antiquaries Journal* (1935, 152–164); a note about the site, by Christopher Hawkes, appeared later in the year, in the same volume (1935a, 467–471). Recently a reinterpretation of the site has been published by Richard Bradley in the second Fengate report (Bradley 1978).

This note is not intended as a further interpretation of the site itself, but mainly as a reassessment of the material remains, forty years on from their original examination. In view of this, and because the site was published in a national journal, only a brief description of the site and its location will be given.

Location

The site at Playden lies on a knoll between the Tillingham Valley and Romney Marsh, 50 m above sea-level. It is sited on land forming part of the Mockbeggar estate, and is approximately 300 m south-east of Mockbeggar House.

The subsoil is of Wadhurst Clay, which in this area contains large pockets of white sand, one of which occurs very close to the site. Cheney noted that although most of the knoll was sandy the site was located on a patch of yellow clay.

The Excavation

The excavation of the site was conducted by Cheney during 1930. From the photographs of the site, and from comments from Mr. John Owen, who visited the site, it would appear that the excavation was marred by bad weather. There appear to be no site notes surviving and the recording seems to have been rudimentary. There is no indication on the published plan of the extent of the excavation; the photographs show that quite long stretches of the ditch were

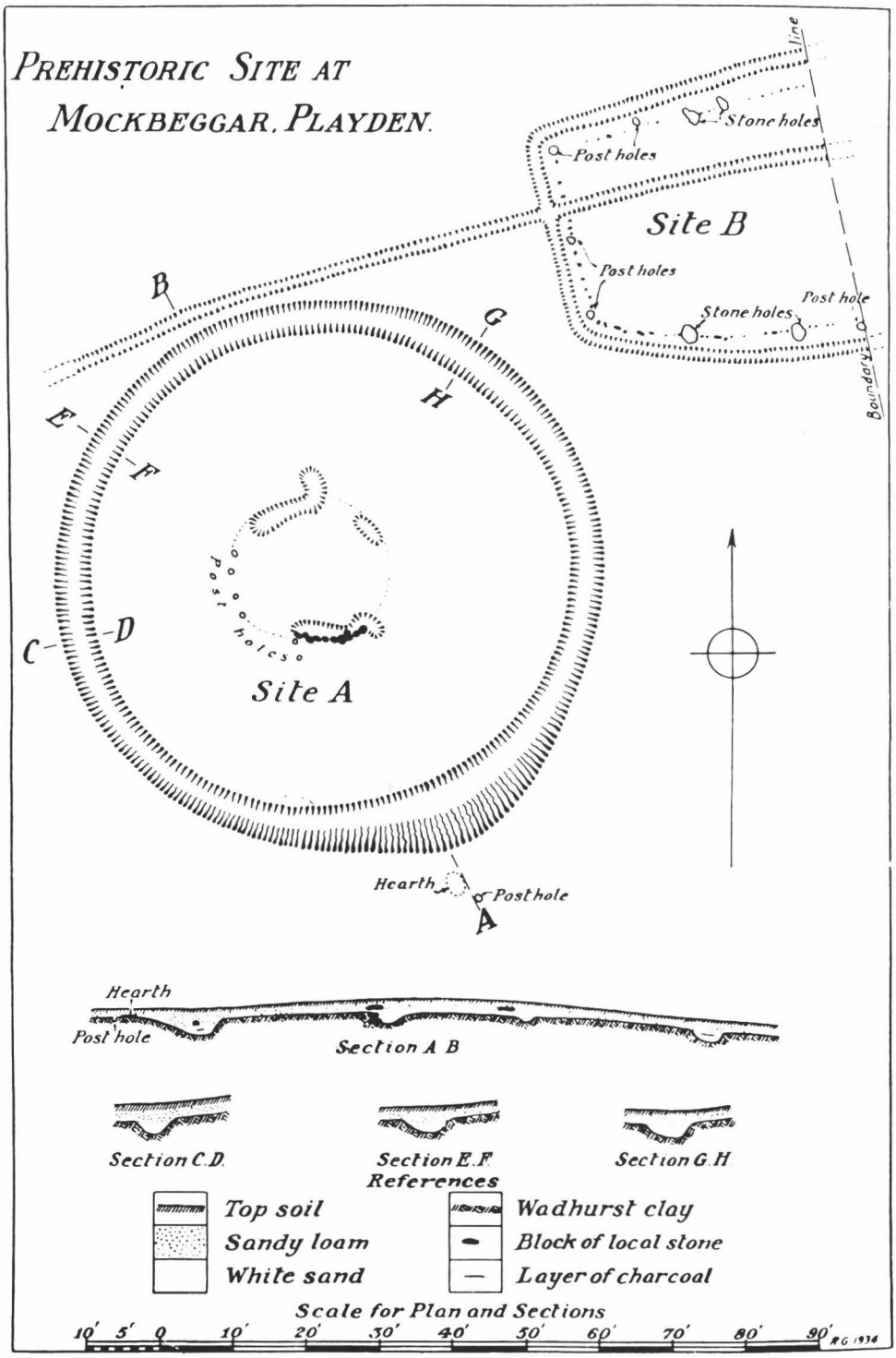

Fig. 1. Site Plan, reproduced by permission of the Society of Antiquaries of London.

cleared, and from a remark by Curwen (1935, 163) it appears that eventually the entire ditch was excavated. Two main areas were excavated, Site A and Site B, the former being the ring-ditch and the latter the rectangular enclosure.

Site A

The ditch was on average 1.5 m wide and 0.75 m deep and enclosed an area *c.* 19.8 m in diameter, apparently without a break. The primary fill of the ditch was 'much charcoal and burnt timber, one patch extending for a distance of 15 ft (*c.* 5 m). These remains were of oak, and in some cases were 5 ft or 6 ft (*c.* 1.5–2.0 m) long and from 1 in to 6 in (*c.* 2–15 cm) in diameter, and gave the impression that they might have been the timbers of a hut or huts, destroyed by fire' (Cheney 1935, 154). This was sealed by a layer of clean white sand, which also covered the interior, although from the published section it appears not to have extended across the whole site, only remaining in the centre and in the ditch. This sand occasionally contained small patches of wood ash, but was otherwise sterile. The burnt timbers from below the sand have produced a radiocarbon date of 1740±115 b.c. (BM 450).

Above the sand was a layer which Cheney refers to as an occupation layer, but he admits that there was no real stratification, and that this layer merged into the ploughsoil and contained both medieval pottery and iron slag as well as prehistoric pottery and flint flakes (Cheney 1935, 152). In the centre of the enclosure, lying above the white sand, were three groups of sandstone blocks, with many more in the ploughsoil, and Cheney noted that flint chips and flakes were more abundant in the area of these blocks than elsewhere. Beneath the sand were three hollows, one partly revetted by more sandstone blocks. Four possible post-holes *c.* 30 cm in diameter were cut through the sand and into the natural clay.

Cecil Curwen, in a note appended to the excavation report (Curwen 1935, 163–4), interpreted the site as domestic, with a timber hut at the centre, and the sand forming a replacement floor. However, Bradley (1978) has suggested that a primary timber structure, surrounded by a ring-ditch, and probably of a domestic nature, was replaced by a mound of white sand. This was possibly revetted by the four post-holes (and the nature of the excavation suggests that others may well have been missed), and capped by the numerous sandstone blocks which Cheney found lying on the white sand, forming 'three small pavements, or parts of a partially destroyed pavement' (Cheney 1935, 154), and in the plough soil. This hypothesis is based mainly on the large amount of sand in and around the enclosure, which would have formed far too thick a floor to have been practical.

THE POTTERY

The pottery from the site was originally examined by Stuart Piggott; the re-examination was felt to be warranted not by deficiencies in the original report, but by the developments in Neolithic and Bronze Age studies which have taken place since that time.

The pottery will be considered in the groups used by Piggott, in order to facilitate reference to the earlier report.

Group A (Figs. 2 and 3)

This group is described as a 'primary deposit' (Piggott 1935, 161). A1 comes from the ditch, below the white sand, A2 from one of the hollows, again sealed by the white sand, and A3, A4 and A5 from above the white sand in the ditch. Strictly, therefore, A3, A4 and A5 are not part of a primary deposit.

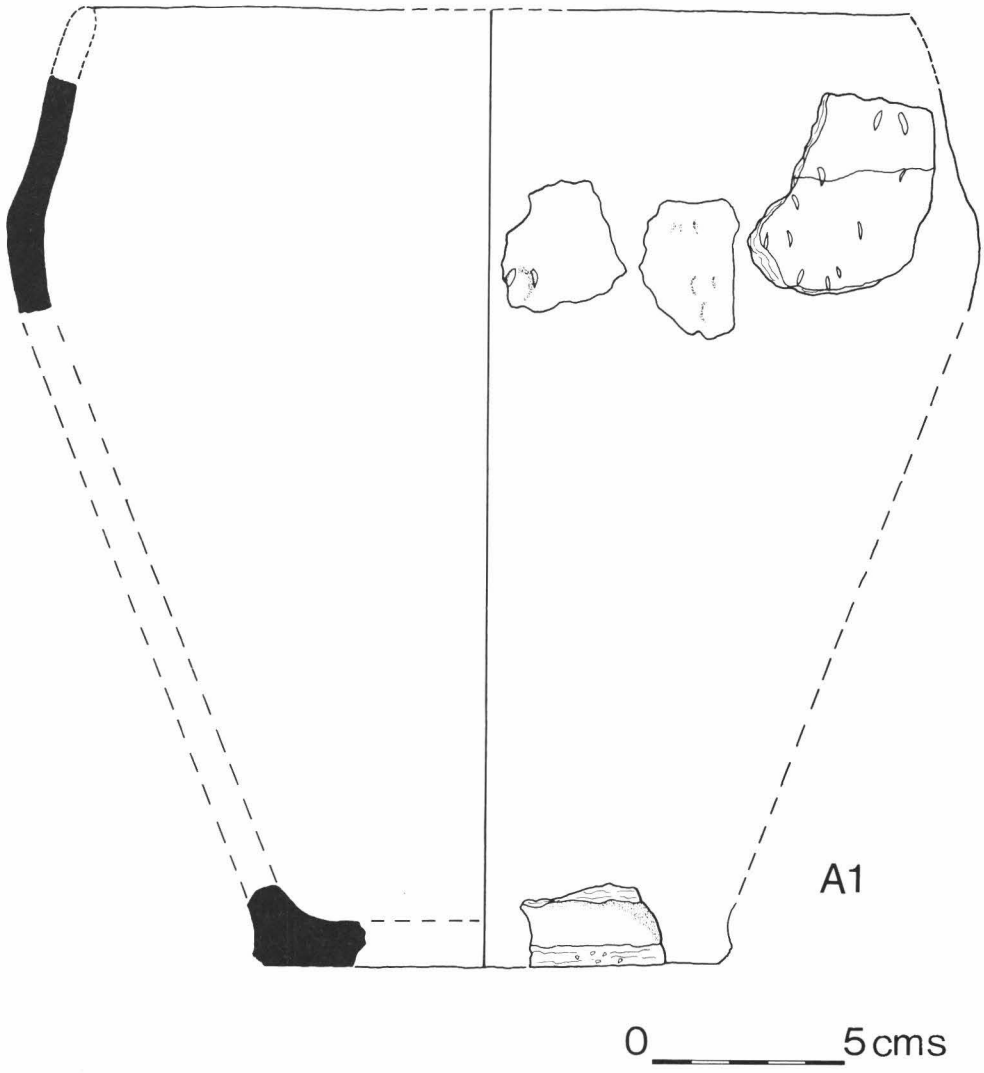

Fig. 2. Vessel A1, Group A.

Vessel A1: the fabric of this vessel is quite different from that of the others, being very soft and crumbly, with small rounded particles of grog. The sherds are all pink throughout. The small rim sherd drawn by Piggott appears to be missing.

The vessel is decorated by shallow, mostly paired, fingernail impressions, with only the slightest hint of pinching in one pair. The form is not certain, but the base and shoulder sherds are undoubtedly from the same vessel. The sherds are all very abraded.

Fingernail decoration of this sort is a feature of Beaker pottery and Grooved Ware, also occurs on Peterborough Ware, and there is at least one sherd with very similar decoration from the Deverel-Rimbury site at Itford Hill, Sussex (Burstow and Holleyman 1957, Fig. 22C). The

form of this vessel suggests that it is more likely to belong to the Grooved Ware or Deverel-Rimbury traditions, and the associated radiocarbon date of 1740±115 b.c. would suggest the former. This is supported by the occurrence of such decoration at the North Carnaby Temple sites 1, 3 and 4, in Yorkshire (Manby 1974, Figs. 17, 19, 20). At sites 1 and 3 sherds with paired

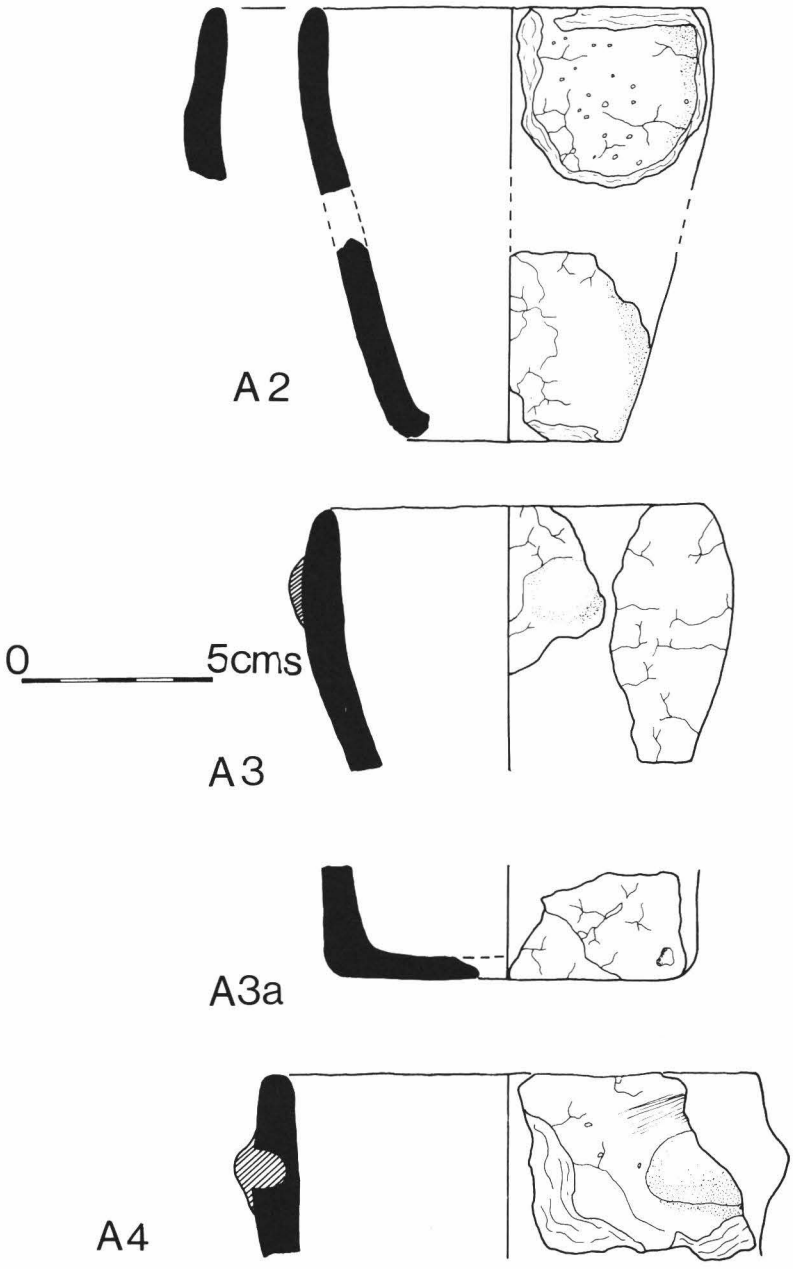

Fig. 3. Vessels A2–4, Group A.

fingernail decoration are associated with flat-bottomed, plain vessels with lugs, and with Durrington Walls style Grooved Ware. Two of the sherds at Site 3 (Manby 1974, Fig. 19:30), have applied vertical ribs as well as paired fingernail decoration, which firmly places them within the Grooved Ware tradition. The form of one of the Grooved Ware vessels from the same site (Fig. 19:29) is not unlike that of vessel A1, except that the change of angle is marked by a horizontal rib.

Vessel A2: nine sherds in a soft, laminated, coarse fabric, with very sparse flint filler (fragments up to 2 mm long), with a moderate to dense amount of grog. Exterior: patchy, orange to black; core: black; interior: pale orange. The sherds are generally abraded.

Vessel A3: eleven sherds, in a fairly hard fabric, with a slightly 'soapy' feel. No flint fragments are visible, the only filler being very sparse and small fragments of grog. Exterior: patchy, buff to pale brown; core and interior: black. There is one round applied lug. This vessel is illustrated with a flat base in the original report, but the base sherd, illustrated here as A3a, is of a hard flint gritted fabric, with a sparse to moderate amount of flint filler (fragments up to 6 mm long). Exterior: patchy, orange to grey and black; core: black; interior: grey. The fabric is slightly laminated. It seems unlikely that only the lower part of the vessel would be flint gritted, and it is possible that this represents either the base of A2, or another vessel. The writer would favour the latter, as although the basal diameter of A2 is uncertain it would seem to be smaller than that of A3a.

Vessel A4: one sherd of a hard fabric, with a slightly 'soapy' feel. There are one or two flint grits (*c.* 1 mm long), and a sparse to moderate amount of grog. Exterior: pale orange to buff, with a patch of black; core: black; interior: patchy black, buff, grey. The exterior is smoothed, and there are traces of wiping, possibly with grass or twigs. The oval lug appears to have been inserted as a plug and then smoothed down. The writer found no reason to believe that this vessel had a round base, as originally illustrated.

As with vessel A1, these vessels have parallels at the North Carnaby Temple sites (Manby 1974, Figs. 17:6, 19:24,32,36), which would again suggest a place in the Grooved Ware tradition. There are also plain vessels without lugs, but of a similar form to the Playden vessels A2, A3 and A4 at Durrington Walls (Wainwright and Longworth 1971, Fig. 60). However, there are also strong parallels among vessels of the Deverel-Rimbury tradition in the south, at, for instance, Latch Farm urnfield, Hampshire (Piggott 1938, Fig. 5:72A), and Plumpton Plain A (Hawkes 1935, Figs. 1: e,f; 2: a,b,d).

Vessel A5: this is not illustrated by Piggott, but is described as 'two sherds of thin grey ware with simple rim; very sparse fine flint grit' and came from the same place as A3 and A4. They were not seen by the writer.

Group B (Fig. 4)

This consisted of sherds from the sandy loam, lying above the white sand, and there were later sherds, including medieval pottery, mixed with the prehistoric material. Only those sherds which appeared to be more or less contemporary with those from the ditch were published.

Vessel B1: Piggott mentions six sherds of a heavy, coarse fabric, probably from one vessel (Piggott 1935, 162). The writer found nine thick sherds, in a very coarse flint gritted fabric. However, there are also two other thick sherds (maximum thickness 14 mm) with moderate to

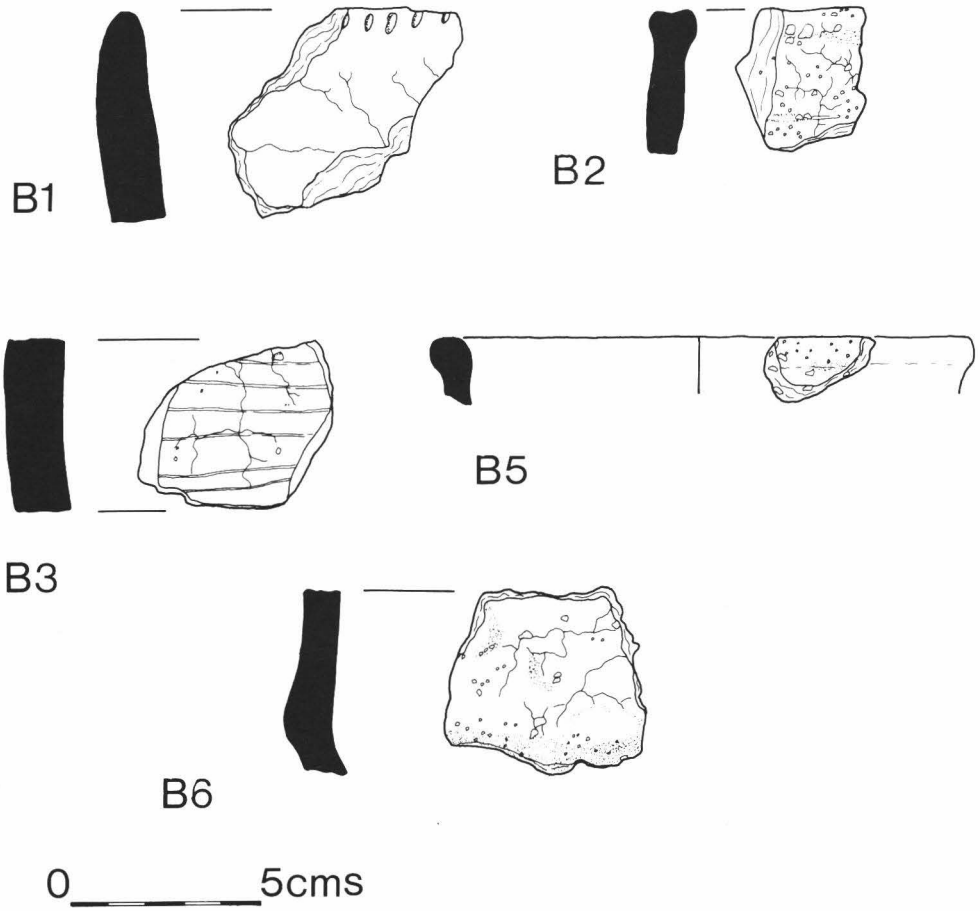

Fig. 4. Group B.

dense grog filler, which were illustrated as part of B1 by Piggott, but which do not seem to belong to the same vessel as the other six sherds. The grog gritted vessel (illustrated here as B1) is decorated below the rim with single impressions, probably fingernail, which again are paralleled in the Deverel-Rimbury tradition (e.g. at Latch Farm, Fig. 4:77, and Thorny Down, Wilts, Stone 1941, Fig. 5:8), although the rim form is equally well paralleled by the undecorated Grooved Ware from Durrington Walls (Wainwright and Longworth 1971, Fig. 60), some of which has grog filler.

Vessel B2: two rim sherds with an expanded, almost T-shaped form.

Vessel B3: represented by one sherd of a thick, coarse, fabric, with very sparse and fine fragments of grog. The decoration is of shallow grooving. This might well suggest the Grooved Ware tradition, although grooving does occur in other styles. It is not, however, a feature associated with Deverel-Rimbury pottery.

Vessel B4: this sherd could not be located; it is illustrated by Piggott, and is a small, featureless, and abraded simple rim.

Vessel B5: represented by a simple rim. The fabric is hard and flint gritted.

One sherd not mentioned in the original report, but illustrated here as B6, shows a pronounced shoulder and faint fingertip impressions. The fabric is coarse and gritted with very large fragments of flint (up to 10 mm long).

FLINT

Only the flint from Site A was listed in the original report, as the following (Cheney 1935, 157):

'45 lb unworked flint flakes
40 edged or serrated flakes
5 hammer stones
40 scrapers, 1 small thumb scraper with the unusual feature that part of the scraping edge is worked from one surface, and part from the other (F3)
25 lb pot-boilers
8 microliths
1 'strike-a-light' with square end; the end itself and one corner have been much softened by use'

It should perhaps be mentioned that Grahame Clark, commenting on the flints, only mentions one serrated flake, the others listed by Cheney presumably being simply retouched flakes (Clark in Cheney 1935, 157).

The flints now with the pottery from the site are only a part of this assemblage. The history of the finds is unclear, and it would seem likely that a large number of the flints were discarded by the excavator. Of the unworked flakes, the worked flakes, and the burnt flints, almost none survive, and only half the scrapers remain with the pottery. All the pieces illustrated in the original report were examined by the writer, with the exception of four of the microliths, which are missing. There is very little reference to the position of the flints, only the provenance of a few pieces being mentioned. However, Cheney's remarks do suggest that most of the flint came from above the white sand, within the enclosure.

Implements

Scrapers: (F1,2,3,4,5,6,7)

Sixteen scrapers are now with the collection:

End scrapers	2 (F1)
End and right side scrapers	1
End and left side scrapers*	5 (F2,3)
Right side scrapers	1
Horseshoe scrapers	5 (F4,5,6)
Discoidal scrapers	1 (F7)

*One of the end and left side scrapers also has a hollow scraping edge on the right side, but is counted only with the end and left side scrapers.

The large scrapers, such as F1 and F2, are long-lived forms, used throughout the Neolithic and Bronze Age. However, the small scrapers F4 and F7 are typical of Beaker contexts, occurring in large numbers on Beaker sites at Dovercourt and Walton in Essex (Warren 1912) and elsewhere. The peculiar scraper F3 is paralleled at the Bronze Age site at Mildenhall, Suffolk (Clark 1936, Fig. 11, and see below in Discussion).

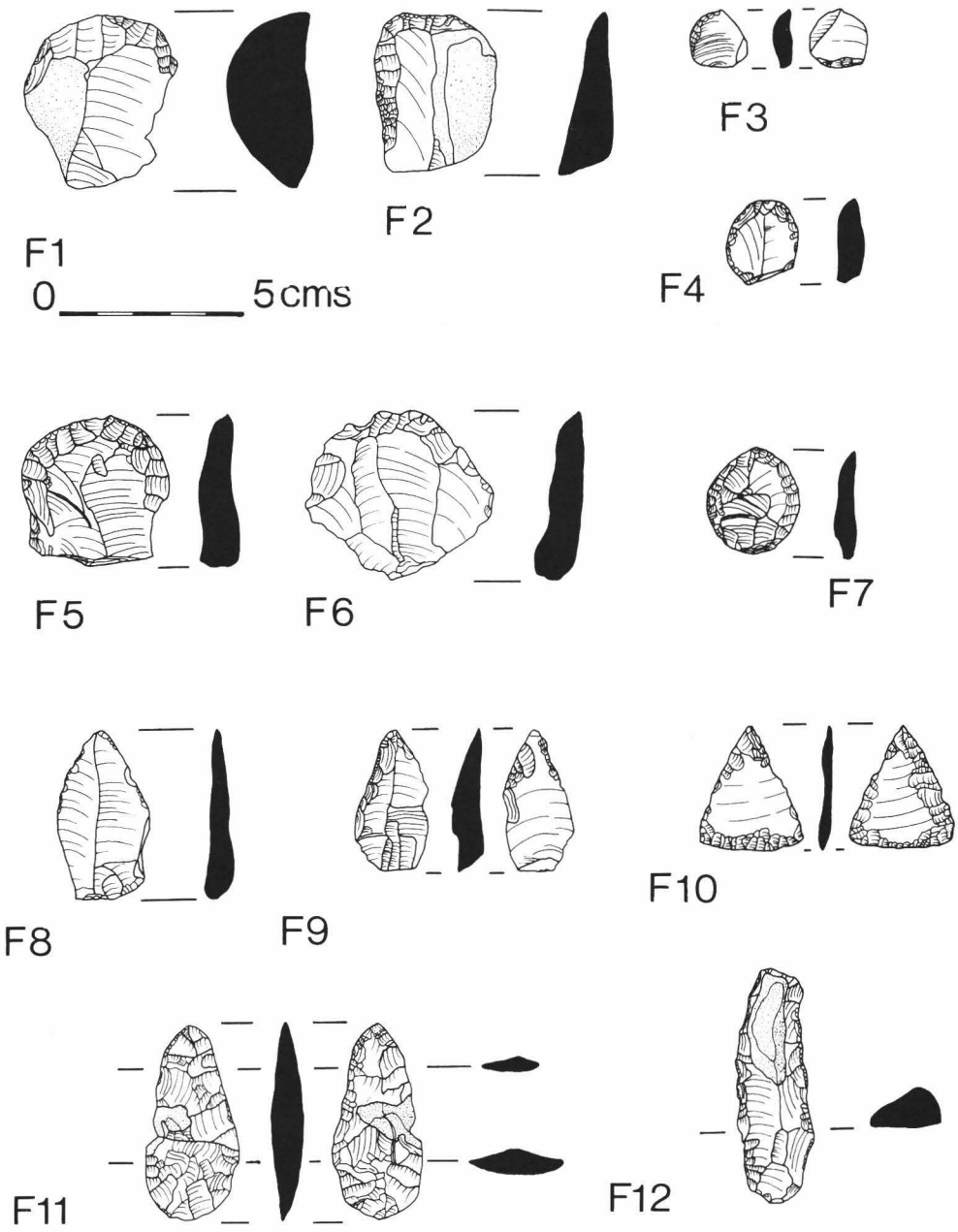

Fig. 5. Flint implements.

Projectile points: two of these, F8 and F9, were roughly worked to a point and approximate to leaf-shaped form. Of the other two, one, F11, was described in the original report as a large leaf-shaped arrowhead, and the other, F10, as a triangular arrowhead. F11 has been fire-damaged. It is too thick in section to be really convincing as a leaf-shaped arrowhead, but neither is it of laurel leaf form, so that a large, leaf-shaped projectile point seems the only possible description, albeit a rather unsatisfactory one. It is noted as coming from the ditch, above the white sand. There are no exact parallels for the triangular arrowhead, F10, and Clark did suggest that it may be a roughout for a barbed and tanged form (Clark in Cheney 1935, 159). This explanation is also followed by Green (1980, 142) who remarks on the generally late occurrence of triangular forms, which would seem to support the theory that they are unfinished barbed and tanged arrowheads. F10 was found in the ditch, below the white sand, and therefore associated with the date of 1740±115 b.c.

Fabricator (F12): the provenance of this implement is not mentioned, but the cortex is typical of chalk-derived flint, and Cheney remarks that the flints found below the white sand were exclusively pebble flint (Cheney 1935, 164). Above the white sand most of the cortical flints were apparently chalk-derived, so it seems that F12 must have been found above the white sand.

Waste: only seven waste flakes and five retouched flakes remain with the collection.

Other Stone

The bottom of a saddle quern was found in the ditch, above the white sand, with fragments of the top stone scattered nearby (Cheney 1935, 154). The stone was not identified in the report, and was not seen by the present writer.

DISCUSSION

Bradley (1978) argues that Playden was a domestic site, enclosed by a ring-ditch, and was later replaced by a mound of white sand. The argument for the existence of a mound is convincing, but the interpretation of the first phase as domestic is more open to doubt. The main argument against a domestic function is the paucity of occupation debris in the primary fill of the ditch (i.e. below the white sand). It is interesting to note that a hearth and post-hole were found just outside the ditch on the south-east side, and that it was in the south-east section of the ditch that the only primary finds noted, the vessel A1 and arrowhead F10, were found. The ditch also widens, and has a shallower slope on the outside, near the hearth. There were patches of burning and flint debris under the sand within the enclosure, and a few flint flakes came from below the sand in the ditch (Cheney 1935, 153; Curwen 1935, 164).

The published plan of Playden is slightly misleading in that four of the post-holes, around the dotted circle (Fig. 1), were visible in the top of the white sand, and therefore are unlikely to have formed part of the primary structure. The timbers found in the ditch suggest that the primary structure was dismantled, and it seems unlikely that four minor posts would be left standing and the mound constructed around them. This writer would prefer to see these post-holes as belonging to a revetment of the mound, as suggested by Bradley (1978, 221–2). Without these four post-holes the primary structure is much less convincing as a hut, and appears rather as an irregular horseshoe setting, with large gaps, and outward 'kinks', or possibly as a timber 'cove', with the timbers set in trenches, one having a packing of sandstone blocks.

There are no exact parallels for Playden, either as a domestic site or a ritual one. Barrows occasionally have timber settings beneath them, but at Playden there is apparently no grave, and timber structures beneath barrows are generally stake-built. It is possible that the hollows are graves; the approximate dimensions of both are given as 8 ft (*c.* 2.4 m) long, 2 ft (*c.* 60 cm) wide, and 1 ft 6 in (*c.* 40 cm) deep, with a fill of 'sandy loam intermixed with fragments of charcoal and burnt rock, and some flint flakes' (Cheney 1935, 155). The southern hollow appeared to be revetted on the south side by a 'wall' of sandstone blocks. These hollows could be interpreted as graves, although their shape would be unusual, with all bone destroyed by the acid nature of the subsoil. However, the deposit of burnt timbers in the ditch does strongly suggest that several posts must have stood within the enclosure, and these hollows would seem the likeliest setting for them.

Timber structures do of course occur within henges, although the excavated examples are rather elaborate, as at Mount Pleasant and Durrington Walls (Wainwright 1979, Wainwright and Longworth 1971). However, at Marden (Wainwright 1971), a smaller, more irregular structure was found, with only one circle of posts, of approximately the same diameter as the Playden setting (*c.* 10 m). Arminghall, Norfolk (Clark 1936a), also has a horseshoe setting of posts, although on a larger scale and in a more regular layout than at Playden.

Playden cannot strictly be classed as a henge, as it has no entrance, but there are sites, such as Dorchester, Oxon., Sites I and XI (Atkinson *et al.* 1951) which are obviously related to the henge monument tradition, but lack entrances. There are also several sites which are similar to Playden, in that they have internal timber structures or settings (Figs. 6 and 7). These are illustrated merely to demonstrate broad similarities, rather than to draw exact parallels, and the function of these sites is also in doubt.

At Bleasdale, Lancs. (Varley 1938) the inner structure, which was probably primary, consisted of a circular setting of timbers, which was replaced by a mound, formed of upcast from a pennanular ditch, dug around the timber circle and respecting its entrance. The central grave, which contained two collared urns with a cremation, probably belongs to the phase in which the ditch was dug and the mound erected. A date of 1810±90 b.c. came from wood of either the inner or outer structure. The sequence at the inner site is similar to that at Playden, although there the mound cannot have been formed of ditch upcast, as the ditch was cut through hard yellow clay, not sand. Cheney assumed that the ditch was contemporary with the timber setting, although this is not necessarily the case.

Corbridge, Northumberland, is a much more dubious case, discovered during the excavation of the Roman fort (Richmond and Gillam 1955). The shallow ditch appeared to have been a palisade trench. Six clay-packed post-holes and a slot with two post-holes within it were found, and there may well have been more, destroyed by the stripping of the surface prior to the construction of the fort. The excavators pointed out the resemblance to Bleasdale.

Litton Cheney, Dorset, had an internal bank, one entrance and an oval ditched structure. The shallow ditch of the internal structure appeared to have held posts, with flint nodules used as packing (Catherall 1976), which is rather reminiscent of the discontinuous bedding trench at Playden. There were two pits within the structure. The site was later used for cremation burial, associated with collared urn sherds, and may have had a stone circle on its bank (Piggott 1939). The excavator considered the structure to have been roofed, and to have been domestic, partly because its entrance faces away from the prevailing wind. There were no finds firmly associated with the first phase. The excavator's hypothesis was that the site was a temporary summer camp, and that flint implements and pottery might not have been required (Catherall 1976, 92).

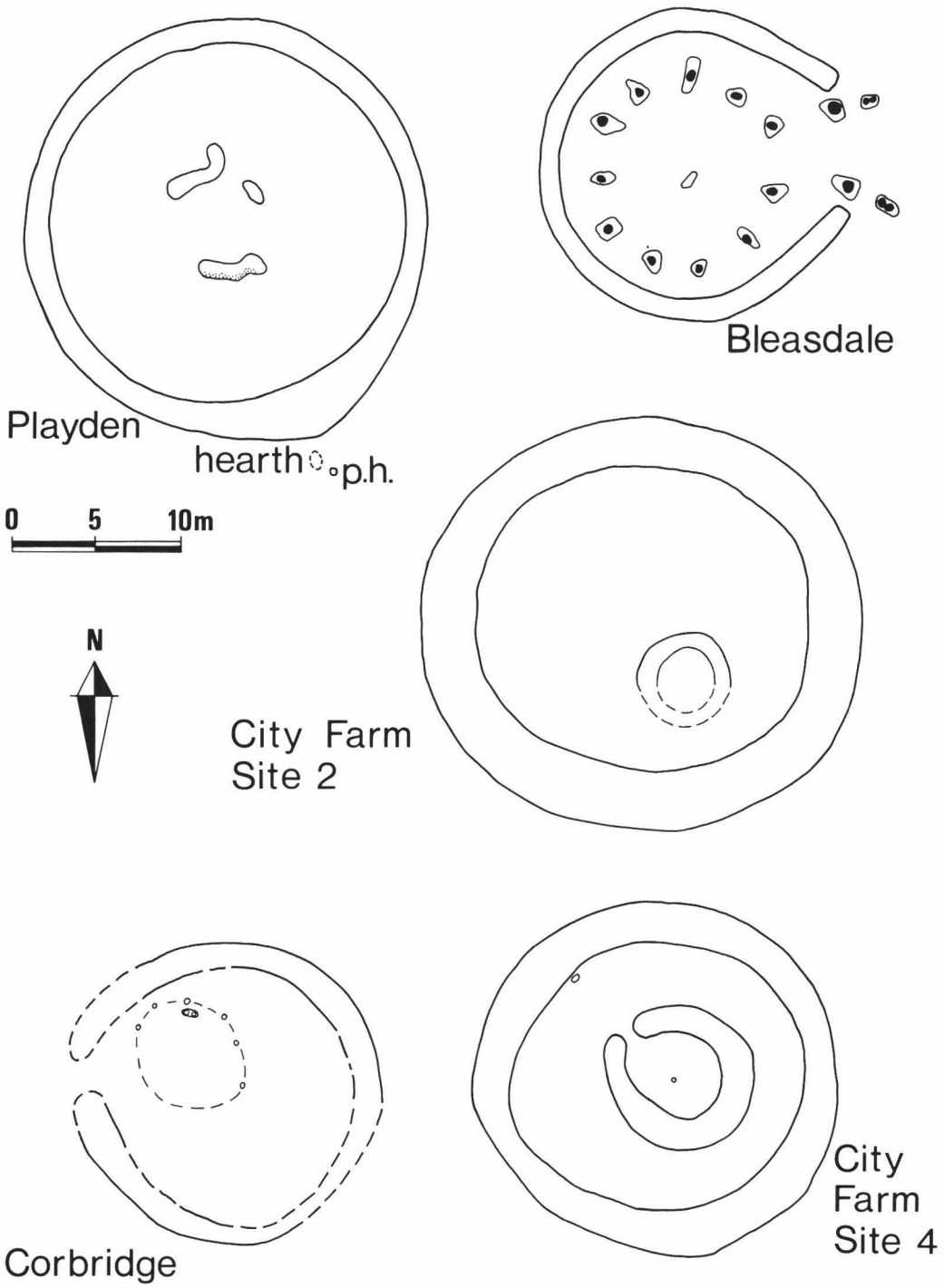
Playden
hearth
p.h.
0 5 10m
N
Bleasdale
City Farm
Site 2
Corbridge
City
Farm
Site 4

Fig. 6.

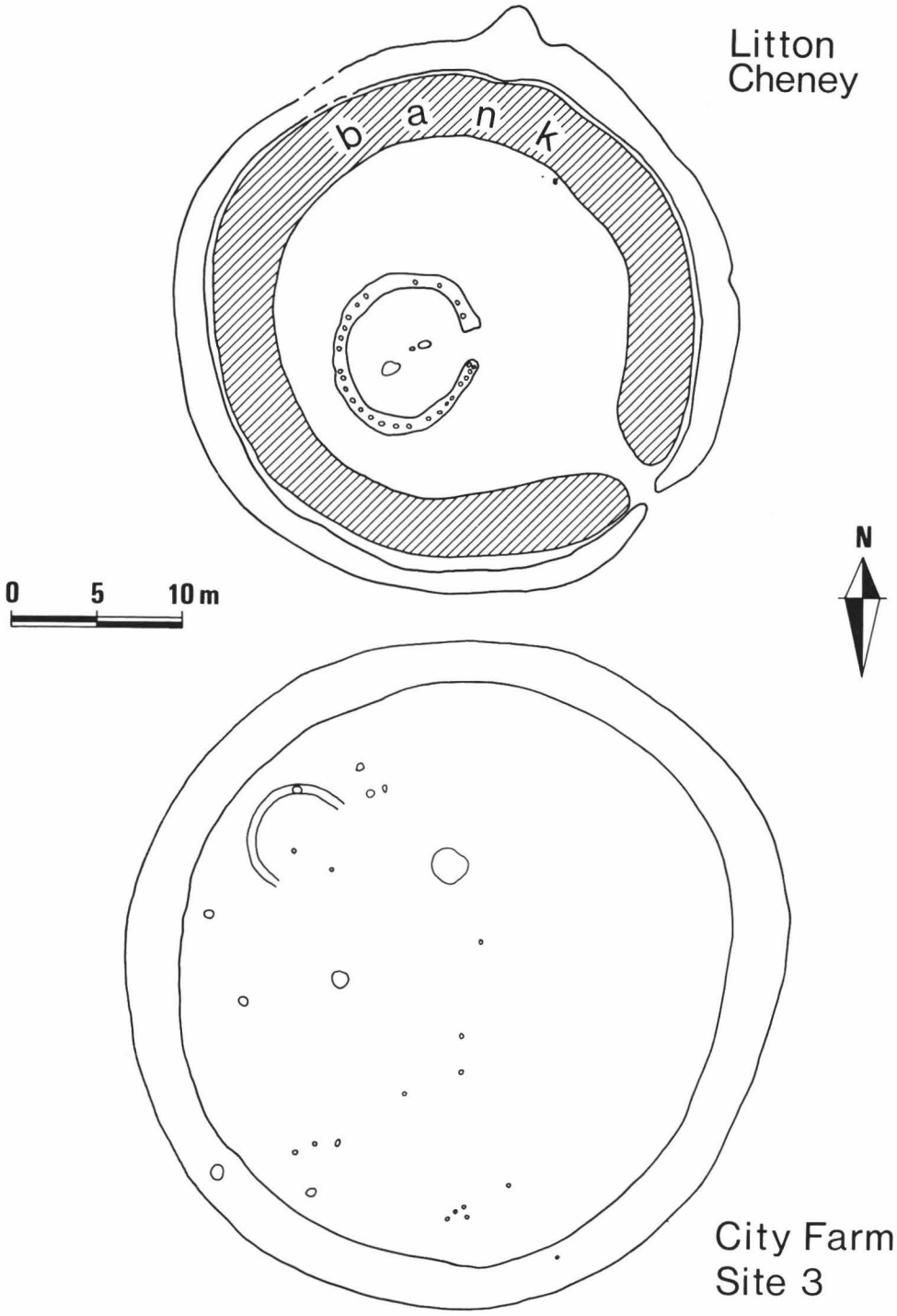

Fig. 7.

This argument could also be applied to Playden, which would have been close to coastal marsh, more usable in the summer, but this writer feels that there are other possible explanations for a lack of artefacts, as, for instance, have been advanced for Avebury (Smith 1965).

At City Farm, Hanborough, Oxon. (Case *et al.* 1964) there were three ring-ditch sites with internal features. Site 4 had two possibly contemporary ditches, both refilled deliberately. The inner had a timber revetment within it, although the ditch sections could also be interpreted as a palisade trench, with the timbers removed. Sherds of long-necked Beaker were found in the primary, natural, fill of the outer ditch, and in the deliberate backfill of the inner ditch. A date of 1510±65 b.c. came from charcoal of the inner ditch's 'revetment'. At Site 3 there was a continuous ring-ditch, possibly with an outer bank, surrounding a cremation cemetery. One cremation was placed in the ditch at an early stage in the fill. Within the enclosure was a shallow, incomplete ditch, possibly a gully trench for a structure. Site 2 was similar in having a continuous outer ring-ditch, and a small shallow inner one, set eccentrically within it. The outer ditch may have had an internal bank. Site 2 was not fully excavated, but Site 3 produced mainly collared urn sherds.

There are then monuments of the mid-second millennium which do not fit readily into the known categories of henge, settlement, or burial site, and this writer only wishes to suggest that there are aspects of Playden which do suggest a ritual rather than a domestic function for the first phase; in particular the form of the internal structure, which need not be interpreted as a hut, and the scarcity of occupation debris below the white sand. Bradley (1978) draws attention to the similarities between Playden and the ring-ditch site at Fengate, Peterborough, which was first used as a domestic site and then for burial. Apart from Fengate, the fact that domestic ring-ditch sites do exist appears to be demonstrated by Lawford, Essex (unpublished, material in Colchester Museum), where a ring-ditch with an entrance surrounds a Grooved Ware settlement. However, the main argument for the Fengate ring-ditch site initially being domestic was the high concentration of finds in the vicinity. The secondary use of the site for burial is interesting as this also occurs at Litton Cheney, Bleasdale, and City Farm 3.

Whatever the similarities between Playden and the other sites noted, including Fengate, which has the only large artefactual assemblage, the material remains are not comparable. At Fengate the pottery was Grooved Ware, and although the Playden vessels may be related to Grooved Ware (see discussion of vessels A1, A2, A3 and A4 above) they are certainly not typical of the tradition. However, there is another fen-edge site, at Mildenhall, Suffolk, which, although not a ring-ditch site has some relevance to the Playden material assemblage.

At Mildenhall an apparently contemporaneous assemblage on an old land surface was sealed by peat which began to form towards the end of the second millennium b.c. There are sherds belonging to several ceramic traditions, including sherds from collared urns (Clark 1936, Fig. 4:1–4), biconical urns and related vessels (Clark 1936 Fig. 6 and possibly Fig. 7, although no. 3 in particular is anomolous), cord-impressed sherds (Clark 1936, Fig. 5:1 and 4), which may belong with the collared urn sherds (and may in fact be residual, as Clark notes, 1936, 36), and fingernail decorated sherds (Clark 1936, Fig. 5:9 and 10), one of which has a lug. The latter are most easily placed within the Deverel-Rimbury tradition. One sherd (Clark 1936, Fig. 5:13) has an applied fingertip decorated horseshoe cordon, which occur frequently on Ardleigh urns. Three other vessels from the site, which fall into no recognisable category, were named Mildenhall Ware by Clark (this was before Isobel Smith's use of the term for a sub-style of the Windmill Hill tradition), and are in a finer fabric than the other pottery, and are decorated in a style reminiscent of late Beaker decoration (Clark 1936, Fig. 8, especially no. 4). The sherds of

these vessels were mixed in with the other sherds in the occupation level and presumably are contemporary with them. The resemblance of the Mildenhall and Playden assemblages lies chiefly in the Deverel-Rimbury component (particularly Clark 1936, Fig. 5:9) and the rim forms (e.g. Clark 1936 Fig. 4:8 and 9) which may be included in this category. Several vessels at Mildenhall show the pronounced shoulder of the biconical urn (notably Clark Fig. 6:1–4, and possibly 8), but as Burgess states (1974, 182), biconical urns show similarities with Deverel-Rimbury vessels 'to a point where distinction becomes difficult', so to try and strictly distinguish the two styles in an assemblage where they are clearly contemporary would seem an unnecessary exercise. Vessels A1 and B6 from Playden also show fairly well-defined shoulders, but are acceptable within the Deverel-Rimbury tradition. The importance in recognising these different components in the Mildenhall assemblage lies in the chronological implications. Smith and Butler (1956) have argued for an Early Bronze Age date for biconical urns, and urns with horseshoe bands and other applied decoration. Smith also argues, in the same article, that Deverel-Rimbury urns (excluding the Globular type) and biconical urns, are derived from the southern facies of Grooved Ware. This then places Mildenhall within the Early Bronze Age, rather than the Late Bronze Age, which was where it was considered to belong in the 1930s. A fairly early date for Mildenhall is also suggested by Clark's Mildenhall Ware. As Clark recognised, the Mildenhall style of decoration is related to late Beakers, on which incised 'floating' motifs, often lattice-filled triangles and lozenges, are common (Clark 1970). At Wattisfield, Suffolk, a late Southern Beaker assemblage has a radiocarbon date of 1570±150 b.c. (BM 77), so that the Mildenhall assemblage is extremely unlikely to be earlier than the period covered by that date (i.e. 1720–1420 at one standard deviation), and at the other extreme is unlikely to be later than the end of the Wessex 'Culture', on the dating of biconical urns.

Playden does have a date of its own, mentioned above, of 1740±115 b.c. (BM 450). Taking into account one standard deviation this gives a range of 1855–1625 b.c., but this is only firmly associated with the vessel A1 and the triangular arrowhead F10, the lugged vessels being deposited at a later date. Although the Grooved Ware affinities of A1 have been pointed out above, there is a possibility that the decoration at least may be derived from Beakers, although this argument is applicable to Grooved Ware generally. Non-plastic paired fingernail occurs commonly on coarse pottery associated with Beakers, and although it occurs on Grooved Ware and Fengate Ware it may not be a primary feature of those traditions, but be derived from the Beaker complex.

The association of the triangular arrowhead F10 with the radiocarbon date is used by Green (1980, 142–3) to support his theory that such arrowheads are early to mid- second millennium b.c. in date and are probably blanks for barbed and tanged forms. This would be consistent with there being a possible Beaker element in vessel A1. Mildenhall has two barbed and tanged arrowheads, the rest of the industry being dominated by large horseshoe and convex scrapers (Clark 1936, 44–7, Figs. 9,10,11). However, one feature of the industry was a group of flakes 'struck at a remarkable angle, and with trimmed striking platform' (Clark 1936, 47, and Fig. 11). The main feature of these was the edge of the striking platform was retouched to form a scraping edge, and on some the edge of the flake was also trimmed. This is very similar to the treatment of F3 from Playden, although this is slightly smaller than the Mildenhall examples.

The main interest of the Mildenhall site lies in its demonstration of change and experimentation during the middle to late second millennium b.c. Although Clark's 'Mildenhall' vessels have remained unique they suggest that at that time there was local development from Beakers, which here did not evolve into a recognisable style, but which

occurred at a time when collared, biconical, and Deverel-Rimbury urns were current or themselves developing. Playden would seem to belong to broadly the same period, although at Playden the Beaker element, if present at all, is represented by the random paired fingernail decoration of vessel A1.

It is clear that certain stylistic traits continue throughout the second millennium b.c., as Longworth (1961), Smith and Butler (1956), and Manby (1975), have pointed out, with Deverel-Rimbury and biconical urns inheriting Grooved Ware characteristics, Collared Urns inheriting Peterborough and some Beaker elements, and Manby's Rudston Ware developing into Yorkshire Food Vessel forms. The Grooved Ware — Deverel-Rimbury relationship is most clearly demonstrated by the bucket-shaped form, often with a slight in-turning towards the rim, which is shared by Deverel-Rimbury and Grooved Ware vessels. Lugs also occur on decorated Grooved Ware vessels (e.g. at Durrington Walls, Wainwright and Longworth, 1971; Lawford, Essex, unpublished material in Colchester Museum), but only appear to be common on undecorated vessels, such as those at the North Carnaby Temple sites (Manby 1974). There is a date of 1690±70 b.c. (HAR 2146) for Low Caythorpe (Pierpoint 1979), a site with undoubtedly Grooved Ware vessels about 1500 m from the North Carnaby Temple sites. This date is statistically indistinguishable from the Playden date, and if it is assumed that the North Carnaby Temple and Low Caythorpe sites were broadly contemporary this would help to support a Grooved Ware derivation for the Playden vessels, although on purely stylistic grounds they are acceptable within the Deverel-Rimbury tradition, which is in fact how Hawkes classified them in a note on the site (Hawkes 1935a).

As has been stated above, the idea of Deverel-Rimbury pottery being at least partly derived from Grooved Ware is not a new one; Barrett has summarised the arguments and references in his article on the Deverel-Rimbury tradition (Barrett 1976), and he also sees it as emerging in the Early Bronze Age. The similarity of some Deverel-Rimbury urns to Grooved Ware vessels, particularly of the Durrington Walls sub-style, is undeniable (compare Latch Farm, Piggott 1938, Figs. 7 and 8, with Durrington Walls, Wainwright and Longworth 1971, Figs. 34, 35, 39, 41). The same may well be true of Ardleigh urns in East Anglia, although the derivation there being mainly from the Clacton sub-style of Grooved Ware, with its emphasis on impression (Longworth 1960).

Summary

The evidence for Playden being a domestic site in its first phase seems dubious to the present writer, although Bradley's interpretation of the second phase as a mound does seem to fit the evidence. Playden seems to belong to a group of anomolous mid-to-late second millennium b.c. sites which may or may not be of a ritual nature, although features of their construction, and the re-use of some of the sites for burial would seem to suggest that they are not purely functional. The pottery is unusual, and is difficult to place within any one tradition, but may belong to transitional phase between the Grooved Ware and Deverel-Rimbury traditions.

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References

Atkinson, R. J. C. 1951. *'Excavations at Dorchester, Oxon.'*, Oxford: Ashmolean Museum.

Barrett, J. 1976. 'Deverel-Rimbury: problems of chronology and interpretation' in *'Settlement and Economy in the Third and Second Millenium BC'* (eds. C. Burgess and R. Miket), Brit. Archaeol. Rep. **33**, 289–307.

Bradley, R. J. 1978. 'A Reconsideration of the Late Neolithic site at Playden, East Sussex', in *'Excavations at Fengate: Second Report'* (F. Pryor), Toronto: Royal Ontario Museum.

Burgess, C. 1974. 'The Bronze Age' in *'British Prehistory'* (ed. C. Renfrew), 165–232. London: Duckworth.

Burslow, G. P. and Holleyman, G. A. 1957. 'Late Bronze Age Settlement on Itford Hill, Sussex', *Proc. Prehist. Soc.* **23**, 167–212.

Case, H. et al 1964. 'Excavations at City Farm, Hanborough, Oxon.'. *Oxoniensia* **29–30**, 1–28.

Catherall, P. D. 1976. 'Excavations at Litton Cheney, Dorset, 1974 in *'Settlement and Economy in the Third and Second Millenium BC'* eds. C. Burgess and R. Miket), Brit. Archaeol. Rep. **33**, 81–100.

Cheney, H. J. 1935. 'An Aneolithic Occupation Site at Playden near Rye', *Antiq.J.* **15**, 152–64.

Clark, J. G. D. 1936. 'Report on a Late Bronze age Site in Mildenhall Fen, West Suffolk', *(Antiq.J.* **16**, 29–50.

—— 1936a. 'The Timber Monument at Arminghall and its affinities', *Proc. Prehist. Soc.* **2**, 1–51.

—— 1970. *'British Beaker Pottery'*. Cambridge: University Press.

Curwen, C. 1935. 'Conclusions' in 'An Aneolithic Occupation Site at Playden near Rye', (H. Cheney), *Antiq. J.* **15**, 163–4.

Green, H. S. 1980. *'The Flint Arrowheads of the British Isles'*, Brit. Archaeol. Rep. **75.**

Hawkes, C. F. C. 1935. 'The Pottery from the Sites on Plumpton Plain', *Proc. Prehist. Soc.* **1**, 39–59.

—— 1935a. 'A Middle-Late Bronze Age date for the Occupation site at Playden, Nr Rye', *Antiq. J.* **15**, 467–71.

Longworth, I. H. 1960. 'A Bronze Age farm on Vince's Farm, Ardleigh, Essex', *Proc. Prehist. Soc.* **26**, 178–92.

—— 1961. 'The Origins and Development of the Primary Series Collared Urn Tradition in England and Wales', *Proc. Prehist. Soc.* **27**, 263–306.

Manby, T. 1974. *'Grooved Ware Sites in the North of England'*, Brit. Arch. Rep. **9.**

—— 1975. 'Neolithic Occupation Sites on the Yorkshire Wolds', *Yorkshire Archaeol. J.* **47**, 23.59.

Pierpoint, S. 1979. 'Three Radiocarbon Dates for Yorkshire Prehistory', *Antiquity* **53**, 224–5.

Piggott, C. M. 1938. 'A Middle Bronze Age Barrow and Deverel-Rimbury Urnfield at Latch Farm, Christchurch, Hants.', *Proc. Prehist. Soc.* **4**, 169–87.

Piggott, S. 1935. 'Report on the Pottery' in 'An Aneolithic Occupation Site at Playden near Rye', (H. Cheney), *Antiq. J.* **15**, 161–3.

—— 1939. 'Stone and Earth Circles in Dorset', *Antiquity* **13**, 138–58.

Richmond, I. A. and Gillam, J. P. 1955. 'Some excavations at Corbridge, 1952–1954', *Archaeol. Aeliana ser. 4*, **33**, 218–52.

Smith, I. F. 1965. *'Windmill Hill and Avebury'*, London: Society of Antiquaries.

—— and Butler, J. J. 1956. 'Razors, Urns and the British Middle Bronze age', *12th Annual Report of the Institute of Archaeology, University of London.*

Stone, J. F. S. 1941. 'The Deverel-Rimbury Settlement on Thorny Down, Winterbourne Gunner, S. Wilts.', *Proc. Prehist. Soc.* **7**, 14–133.

Varley, W. J. 1938. 'The Bleasdale Circle', *Antiq. J.* **18**, 154–71.

Wainwright, G. J. 1971. 'The Excavation of a Late Neolithic Enclosure at Marden, Wiltshire', *Antiq. J.* **51**, 177–239.

—— 1979. *'Mount Pleasant, Dorset: Excavations 1970–1971.'* London: Society of Antiquaries.

—— and Longworth, I. H. 1971. *'Durrington Walls: Excavations 1966–1968'*. London: Society of Antiquaries.

Warren, S. H. 1912. 'The Classification of the Prehistoric Remains of Eastern Essex'. *J. Roy. Anthropological Institute,* **42**, 91–127.

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A MIDDLE-SAXON IRON SMELTING SITE AT MILLBROOK, ASHDOWN FOREST, SUSSEX

by C. F. Tebbutt
with R. F. Tylecote, and the Archaeometallurgy Group, University of Aston
and contributions by Caroline Cartwright, Anthony J. Clark, Carole A. Keepax and Anthony D. F. Streeten

Pipelaying on Ashdown Forest revealed an iron-working site dated by associated pottery to the Saxon period and by archaeomagnetism and radiocarbon dating to the ninth century. A bowl furnace, hearths and slag heap were excavated as a rescue operation. Materials from the site were examined metallurgically. The significance of the site in the context of Saxon ironworking technology, pottery, and penetration of the Weald is discussed.

INTRODUCTION

During 1979–80 the Mid-Sussex Water Company laid a 300 mm water main from Horsted Keynes to a new reservoir at Black Hill on Ashdown Forest. Pipe laying consists of first digging a shallow trench *c.* 4 m wide from which the topsoil only is removed and piled along one side. Pipes are then distributed, quickly followed by the cutting of the deep pipe laying trench. Finally the top soil is restored and levelled. With the full co-operation of the Water Company and pipe laying contractors these operations have been watched, whenever possible directly after the topsoiling trench has been dug.

In April 1980 a length of topsoiling trench, dug and examined the same day, revealed a scatter of black soil, slag and broken furnace lining, all indicative of a bloomery furnace site. It was fortunately a Friday, and members of the Wealden Iron Research Group were alerted for a rescue operation to excavate and record the site as quickly as possible. The machine for digging the final trench was only 200 m away.

It appeared, and was later confirmed, that most of the bloomery working area was confined to the original pipeline trench, and this was excavated, recorded and photographed, and the slag heap dug over, during the weekend. No excavation took place beyond the area already disturbed. Early in the following week A. J. Clark was able to take archaeomagnetic samples from the hearths and O. P. Nicholson of the Department of Metallurgy, University of Aston, to collect samples of cinder, slag and furnace lining. Further examples of the above, including material from the slag heap, were obtained for examination by R. F. Tylecote and by Leo Biek. By the end of the week the site was destroyed.

THE EXCAVATION

The Site (Pl. 1; Fig. 1)

The site on Ashdown Forest at TQ441296 can be accurately located, as the pipeline has been marked by the Water Company with concrete posts. It lies on the line of these posts 192 m

east of the present east edge of the A22 road, or 187 m east of the concrete marker post nearest the road. Here the heathland, at 475 ft O.D., commands extensive views over Ashdown Forest to the south and east, and is now covered by gorse, bracken and heather. The actual site is on the upper part of a long valley gently sloping down to the Mill Brook some 600 m to the south. Immediately to the east a small shallow subsidiary valley, probably with a spring at its head, cuts through the main valley side and drains into the Mill Brook.

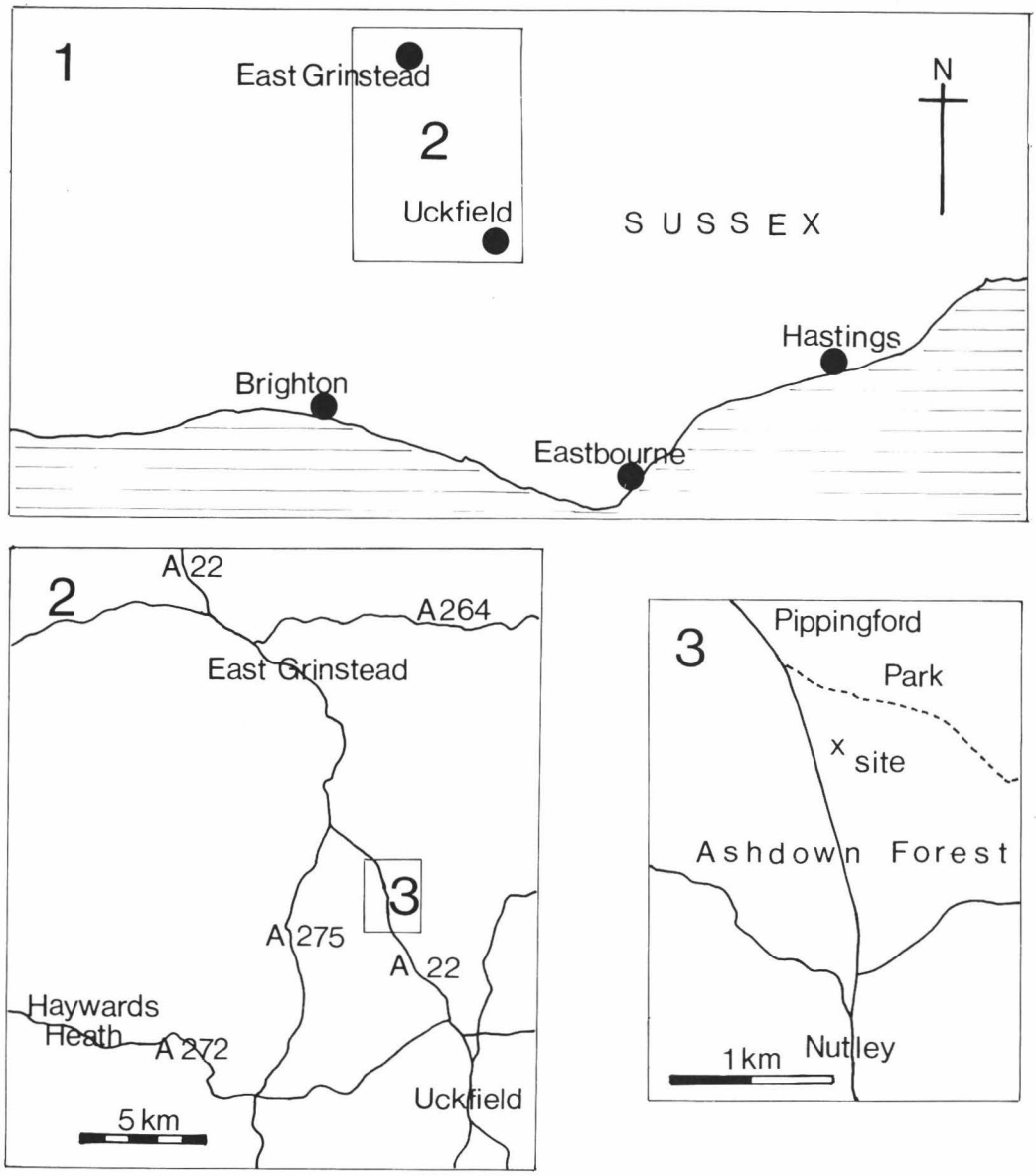

Fig. 1. Location plan

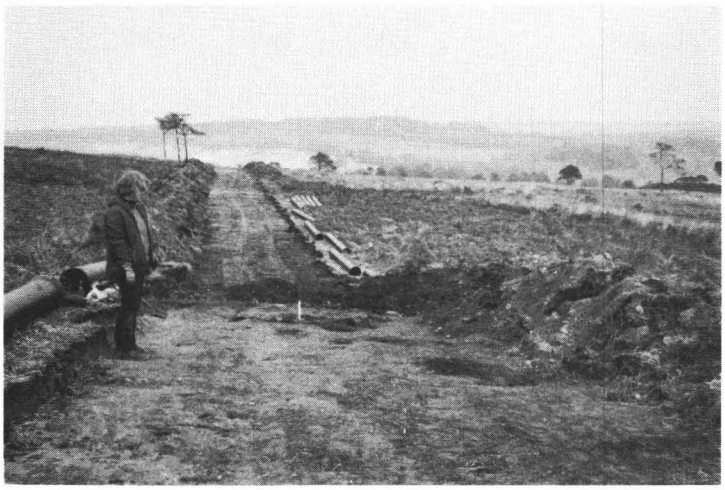

Plate I. The site, looking east

The Working Area (Fig. 2)

The working area, situated on the west side of the above described small valley, appears to have been levelled artificially, partly by dumping waste downhill. This had the effect of creating an unnaturally steep drop to the valley. The area may have been chosen to secure a nearby water supply and the well-drained base necessary for furnace working.

Within the confines of the original pipeline trench there were found a smelting furnace, two subsidiary hearths, a number of stake and post holes and a waste slag dump. Later a magnetometer survey by A. J. Clark confirmed that, with the exception of a small part of the waste dump, the industrial area did not appear to extend further out into the undisturbed heathland. There is always the possibility that buildings, represented by post holes not registered by the magnetometer, might have done so.

The Furnace (Pl. 2 and 3; Figs. 2 and 3)

The remains of the furnace showed it to have been dug into the coarse sand and lined with yellow 'clay'. It was of the *bowl* type A2 (Cleere 1972) with no adjoining pit for slag tapping. It was rather irregularly circular in plan (approx. 1 x 0.95 m) and 32 cm deep from the subsoil surface. The slope of its sides became steeper as it neared the base which was only 15 cm across. A small hole in the bottom on the west side was probably a stake hole. A small part of the superstructure, about 7 cm high, survived above the subsoil surface on one side.

The bottom of the bowl was packed full of charcoal, containing a few pieces of cindery slag and burnt flints, while the upper part was filled with collapsed fired clay superstructure. Parts of the walls remaining *in situ* showed that there had been at least three re-linings, but it was noticed that the new linings did not go down to the bottom but rested on the charcoal fill. At the west end the linings appeared to have been cut through, possibly to take a tuyere, but it was impossible to be certain of this as much of the linings had collapsed with the superstructure. At subsoil level the reducing zone was indicated by grey hard-burnt clay next to the bowl, grading to red and finally pink and yellow.

The existence of a superstructure could be inferred from the parts of it collapsed into the

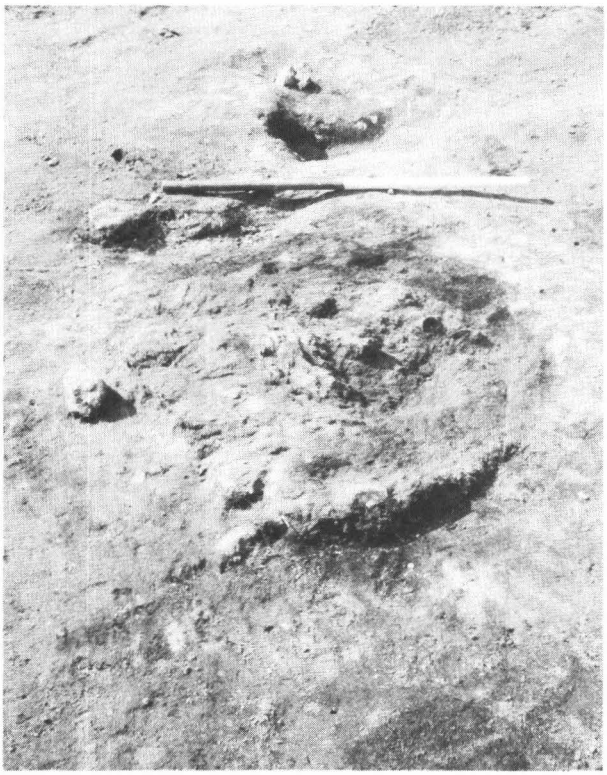

Plate 2. Furnace before excavation (metre scale)

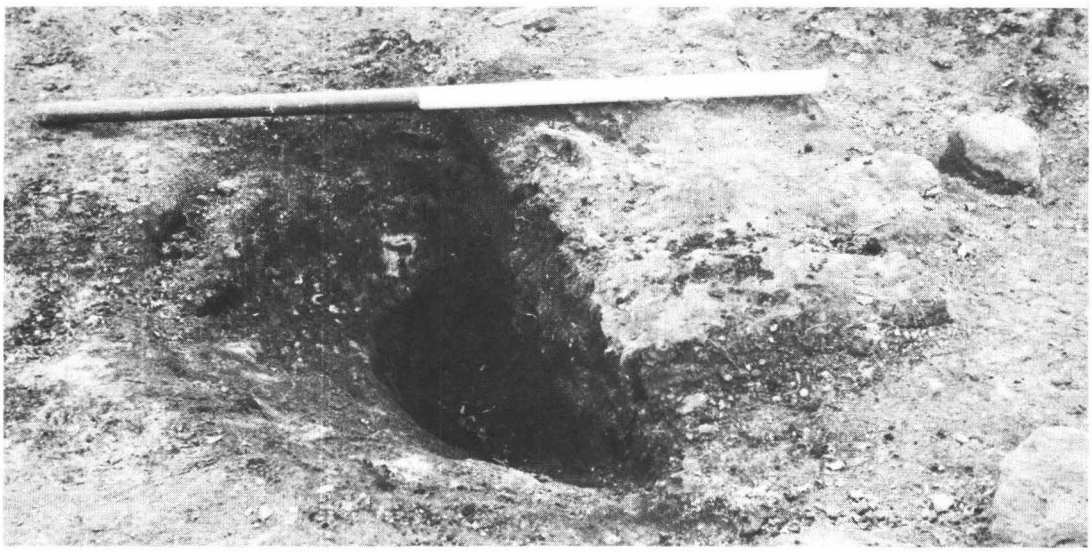

Plate 3. Sectioned furnace (metre scale)

bowl and from the encircling stake holes. No part of the clay walls or superstructure showed signs of a coil construction as found in some Romano-British smelting furnaces (Tebbutt 1979).

The Furnace Shelter (Fig. 2)

Curving round the north and north-east sides of the furnace an intermittent dark stain, *c.* 10 cm wide, appeared on the surface of the light yellow subsoil and extended for just over 2 m. At its east end were two stones and along its course, below the stain, were found five stake holes. It is suggested that it represents a wattled hurdle structure sheltering the furnace area from the north-east wind. It may well have extended to include the hearth just beyond which are post holes, but no definite evidence could be recovered.

Hearth 1 (Pl. 4; Figs. 2 and 3)

A small hearth was found close to the NW side of the furnace. It was approximately circular, *c.* 38 cm in diameter and 15 cm deep. When found it was full of charcoal containing a few pieces of cindery slag. At its NW side it had a shallow lead-in channel beyond which was a group of stones suggesting a bellows siting. Outside the perimeter of the shallow bowl was a ring of stake holes marking the position of some form of structure. The surface of the hearth lining was red, and it had therefore been used under oxidising conditions, with free access of air. At some sites, e.g. Cowpark, Ashdown Forest (Tebbutt 1979) comparable (Romano-British) remains have been uncovered which are believed to be for the re-heating of the spongy raw bloom in the process of forging it into compact iron. There would appear to be no parallel at Ramsbury (Haslam *et al.* 1980), but that excavation was limited.

Hearth 2 (Pl. 5; Figs. 2 and 3)

The purpose of the remaining hearth to the south-west of the furnace is less certain. The round bowl was *c.* 50 cm in diameter and 15 cm deep, and had a surface heavily burnt to a grey colour approximating to that of the furnace. In it, when found, was a cindery slag 'furnace bottom' which also exactly fitted the bottom of the smelting furnace.

East of this hearth a thin charcoal layer of regular shape (see plan) extended for *c.* 1.20 m, narrowing from a width of 75 cm to 25 cm at its conjunction with the bowl hearth. The main area of charcoal was found to be lying in a shallow trench or hollow 10 cm deep, although it did extend slightly beyond this to the south-east. A number of stake holes seemed to be associated with this feature, and its use in conjunction with the hearth was demonstrated by the fact that the burnt grey clay of the hearth extended a short way along it.

Post Holes (Fig. 2)

In addition to the stake holes, which were obviously associated with definite features of the working area, there were a number of post holes whose use must be speculative. It is highly probable that the large post hole south-west of no. 2 hearth, *c.* 50 cm diameter and 22 cm deep, held a tree trunk anvil block. Other posts may have extended the length of the curved windbreak described above.

The Slag and Waste Dump

This was situated downhill of the furnace and hearths, and consisted of a black area due to charcoal dust with burnt stones and slag of various kinds, including a small amount of run slag of the type that forms inside a furnace. There were also pieces of vitrified furnace lining and at

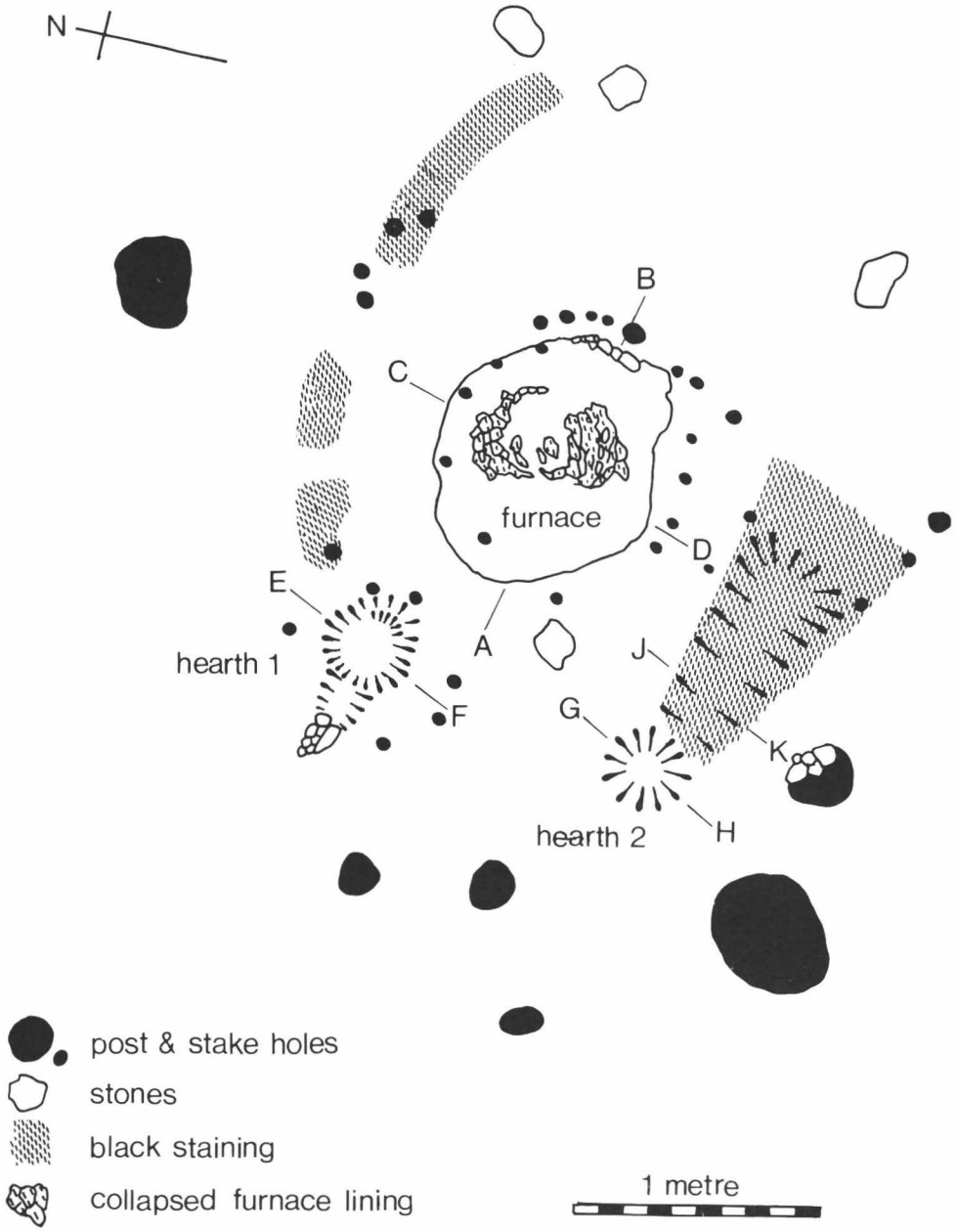

Fig. 2. Excavation plan (furnace shown before removal of contents)

Plate 4. Hearth 1 and unexcavated furnace (metre scale)

Plate 5. Hearth 2 (metre scale)

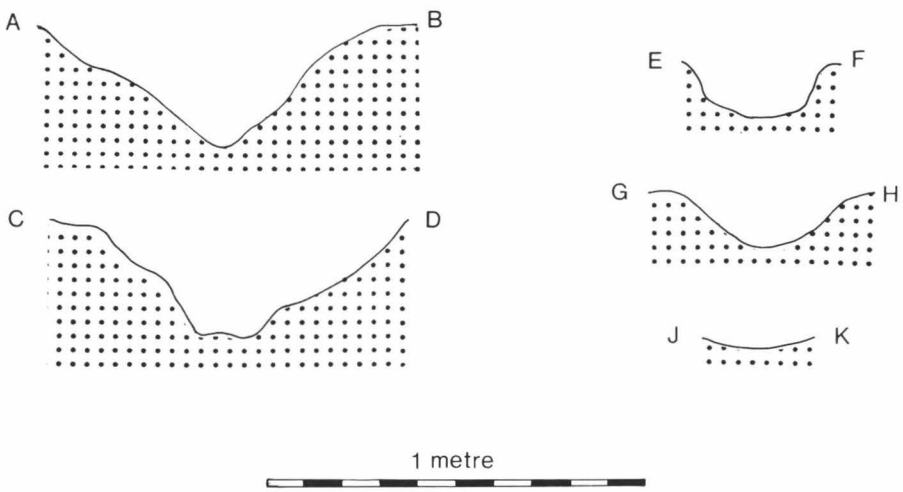

Fig. 3. Furnace and hearth sections

least 150 small burnt and cracked flint pebbles or splinters from them. Some of these had a slag coating, and others were embedded in lumps of cindery slag. A few pieces of roasted ore (see below) and *Cyrena* limestone were also found. Other artifacts from the slag heap are described separately.

THE FINDS

These were all from the slag heap. In a High Wealden context finds of human artifacts are predictably few as the acid soil dissolves nearly all bone and badly corrodes ferrous metals.

1. Sandstone hone. (Fig. 4a)

The broken piece of hone was submitted to Ms C. Cartwright who reported as under:—

'This whetstone, sharpener or grooved stone could be used for bone, wood or metal or a combination of the three. It has obviously been used for sharpening and/or smoothing. The sandstone is hard, compact and fine grained with densely packed small quartz and mica grains. A very suitable choice for its function.'

This multipurpose hone is not part of the tool kit of a smelter but rather of a smith, and might suggest that articles of iron were also being made here. On the other hand, such a hone might have been as much a part of every man's personal possessions as his knife. Many steels and hones were found in Cambridgeshire Saxon graves by Lethbridge (1936).

2. Holed flint. (Fig. 4b)

This was submitted to Ms C. Cartwright who reported as under:—

'The rounded flint object with central hole is natural flint, presumably brought in with the other flint pebbles found in the slag waste. The central hole appears to have been naturally formed and is not man made. There are some slight wear traces round the mouth of the hole such as one might expect from prolonged association with a leather thong, but as the surface of this fragment appears to exhibit the characteristic smoothness and occasional pitting one associates with beach pebbles in general it is difficult to be too conclusive about this. It would seem fairly likely that such an object would have been placed on a thong or string of some sort, had it been in the kind of context to be noticed from among a heap of other flints. The idea of the holed stone being an amulet is quite feasible.'

The use of naturally holed stones as a preventative against the power of demons, witches and ghosts is recorded by Fraser (1932) and Hole (1940). Saxon examples are the large beads found singly on the necks of skeletons at the probable seventh century cemetery at Shudy Camps, Cambridgeshire, and described by Lethbridge (1936) as charms against the evil eye.

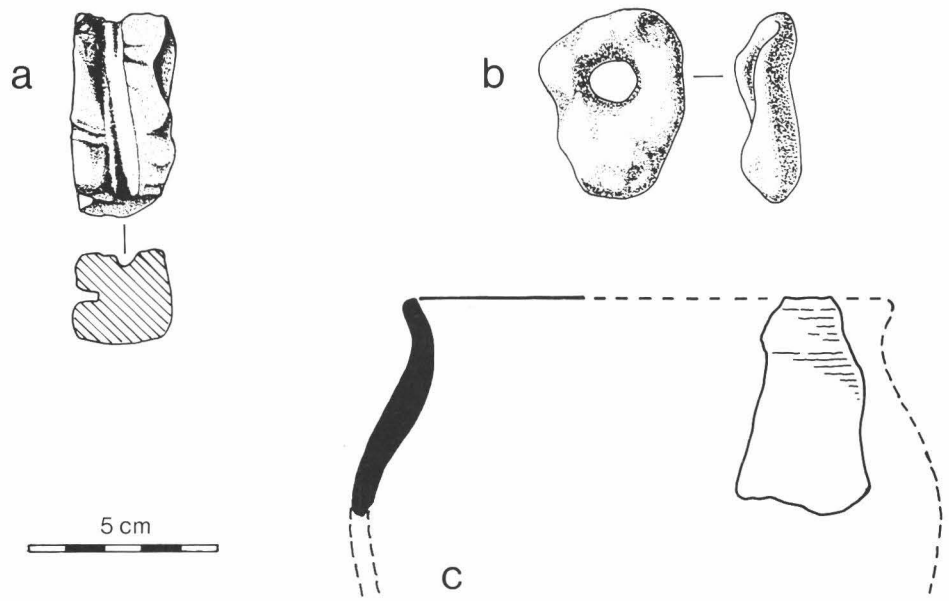

Fig. 4. a—sandstone hone; b—holed flint; c—pottery sherd

The pottery (by Anthony D. F. Streeten)

Dating evidence for distinguishing between Romano-British and medieval bloomery sites in the Weald is usually confined to a few sherds of pottery. The fragments from Millbrook were firmly stratified among slag and furnace debris in the waste heap, but the fabrics could not be assigned to known Romano-British or medieval types. Initially, therefore, the material was assumed to be either Iron Age or Saxon.

Comparison with late pre-Roman Iron Age sherds sealed beneath the ramparts of the nearby hillfort at Garden Hill (Money 1977, 344) showed that the flint temper of the Iron Age fabrics was coarser than that in the Millbrook pottery. A Saxon date was therefore inferred, and this has been confirmed by the results from radiocarbon and archaeomagnetic tests which point to use of the bloomery in the early ninth century (see below). The sherds from Millbrook therefore achieve the distinction of being the first recorded Middle Saxon pottery found in the High Weald, and it is encouraging that they can be distinguished visually from other local types belonging to different periods.

Description

The small assemblage of twelve sherds can be divided into three fabric groups, probably representing no more than three vessels. All sherds have been examined under a binocular microscope, and thin sections have been prepared from Fabrics i and ii. Sample numbers refer to the author's slide collection deposited at Southampton University.

Fabric i. Dark grey/black core with surface colours shading from grey to red-brown. Soft, harsh texture with smoothed (not burnished) exterior; hackly fracture. Abundant coarse angular grey and black flint; sparse grains of medium/coarse sand; sparse mica and moderate groundmass of fine quartz visible in thin section. Isolated inclusions of sandstone and vegetable matter. Hand-made. (Sample 1051)

Four rim sherds; five body sherds

Fabric ii. Dark grey/black core and surfaces. Soft, harsh texture, slightly smoothed in places; rough fracture. Abundant medium angular pale grey and black flint, sometimes slightly iron-stained; moderate grains of medium/coarse sand; sparse mica and moderate groundmass of fine quartz visible in thin section. Hand-made. Soot encrustation on exterior. (Sample 1052)

Two body sherds

Fabric iii. Dark grey/black core and internal surface; brown exterior. Soft, fairly smooth texture; hackly fracture. Abundant vegetable temper and impressions. Hand-made. (Not thin-sectioned)

One body sherd

All the rim sherds are probably from the same vessel, but none was large enough to reconstruct the diameter. They are assumed to have come from a small globular cooking pot of approximately the size shown (Fig. 4c).

Discussion

Flint does not occur naturally in the Weald, and its use as a tempering agent in pottery of any date found in the region must imply that either the vessels themselves or the raw materials were imported from further afield. Flint was evidently brought to the site for use in the smelting furnace but this is clearly different from the flint in the pottery (see below). Evidence that the pottery was not manufactured with this 'imported' flint is provided by the smoothed and slightly rounded shape of some fragments visible in the sherds when seen under a binocular microscope. Comparison with control samples of water-worn and crushed flint suggests that the temper was selected from natural flint 'sands', rather than from deliberately cracked material. Unless the temper was brought with the intention of pottery-making, there can be little doubt that the flint-filled fabrics were not produced in the immediate vicinity of the bloomery.

The size of the flint and the quantity of quartz is different in Fabrics i and ii, but similarities between both the medium-sized quartz and the moderate groundmass of fine grains visible under a petrological microscope may indicate that these two vessels are from the same source. Fabric iii is quite different, but the sherd is too small to be thin-sectioned without destruction. Whereas this fabric shows the deliberate addition of vegetable temper by the potter, the isolated specks of organic material in Fabric i are probably accidental.

All three of these hand-made wares are undoubtedly 'domestic' products, and the occurrence of both flint- and vegetable-tempered wares in a restricted, if small, assemblage demonstrates that the different types were used at the same time.

There are few groups of Middle Saxon pottery from elsewhere with which meaningful comparison can be made. Typological parallels for the globular cooking pot can be drawn over a considerable area (White 1934, 395–7), and the use of flint temper has been noted in the County among slightly earlier vessels from Bishopstone (Bell 1977, 229), in Middle and Late Saxon types from Chichester (Down 1978, 341–3), and in probable Late Saxon contexts at Burpham (Sutermeister 1976, 203–6). The sequence established at Hamwih (Saxon Southampton) where both hand-made grass-tempered and sand-tempered wares become overshadowed by the dominance of flint-tempered fabrics in later eighth and ninth-century contexts, may be applicable over much of South-East England (Hodges 1980, 95–6). In Surrey, however, vegetable temper is thought to persist until the eleventh century, and coarse flint-tempered wares can be as late as the thirteenth century (Drewett 1974).

Isolated flint-tempered sherds have been found on other Wealden sites, but hitherto there has been no evidence for the post-Roman period that pottery was used in this area before the twelfth century (Streeten 1979, 117 and 120). The absence of shell-tempered ware among the material from Millbrook may help to define the date range of this fabric which occurs extensively in later Saxon and early medieval contexts in West Kent, Surrey and parts of East Sussex, but undue emphasis should not be placed upon such a small sample.

Whether or not pottery was produced locally, it is now clear that Middle Saxon sherds can survive even in the acid Wealden soils, and the absolute chronology offered by the radiocarbon and archaeomagnetic dates makes a significant contribution to calibration of the ceramic sequence. The characteristics of the flint, and the presence of two contrasting 'ceramic technologies' (flint- and vegetable-tempered fabrics) in the same assemblage, provides a possible indication that the pioneer Saxon ironworkers carried pottery vessels with them into the Weald.

(Note by L. Biek X-radiographic examination, while generally confirming the above, clearly showed that finer

discrimination was possible, as in the case of the pottery found at Little Waltham (Biek and Bayley 1978). But the small size of the Millbrook sherds precludes any estimation of fabric variability within one vessel.)

Scientific Dating (by A. J. Clark, Ancient Monuments Laboratory)

A sample of charcoal mixed with soil was collected for radiocarbon dating. The few sufficiently large fragments were identified by Mrs Carole A. Keepax as oak (*Quercus* sp.), probably from mature timbers (Ancient Monuments Laboratory Report 3209). Measurement at AERE Harwell gave a date of a.d. 730±70 which, when calibrated according to the curve of Clark (1975), becomes A.D. 745 + 90/ − 65 at the 68% confidence level.

Fifteen samples were taken by the disc method (Clark 1980) for directional magnetic dating, ten from the better preserved southern part of the furnace, and five from the south-eastern sector of hearth 1. Orientation was by the built-in magnetic compass of a theodolite, positioned well away from the steel pipes placed in readiness for use. Sun orientation was not possible because of total cloud cover. The samples were measured in a Digico spinner magnetometer. The mean NRM direction was Dec 11.6°E, Inc 69.6°, α_{95} 5.0°. When normalised to Meriden this became Dec 12.0±7.8°E, Inc 70.3±2.7° at approximately 68% confidence level. Alternating field partial demagnetisation tests on two samples indicated that 100 oersteds peak field might remove unstable components, but treatment of all the samples at this level produced a mean direction of Dec 13.2°E, Inc 69.9°, α_{95} 5.3°, a slight deterioration in precision, so that the NRM value was probably preferable, although very little different. This gave a date of about A.D. 860±60 on the archaeomagnetic curve as at present known. The overlap with the radiocarbon date would indicate a date within the first 35 years of the ninth century. The radiocarbon date was based on mature timbers, and the sample was prepared for measurement by treatment of the whole mixture of soil and charcoal, a small proportion of which could have been present in the soil before the site was occupied. Both of these factors could have given an early bias to the measurement, for which combination with the magnetic result provides compensation. Indeed, in spite of our tentative knowledge of this part of the magnetic curve, a date close to the central magnetic value might be the most probable.

Magnetic survey (by A. J. Clark, Ancient Monuments Laboratory)

In order to discover whether more furnaces were present, a fluxgate gradiometer scan was carried out over the surrounding area after the pipe had been installed, so that its magnetic interference was mostly limited to the strip of ground already excavated. The perimeter of the survey north of the pipeline was as follows: approximately 40 m west along the north side of the excavated strip from the base of the steep slope east of the hearths, 40 m north along the base of this slope, and along the northern side of a diagonal path joining the ends of the other two sides. The traverses were started along the first side, and ran parallel to it at 1 m intervals initially. They showed the slag scatter from the hearths extending about 3 m into the untouched ground, but no sign of further hearths. After 5 m, the traverse spacing was increased to 2 m because of the lack of magnetic anomalies and the density of vegetation. Nothing further was detected. To the south of the pipeline, a more open and rapid survey was made, following the steep slope round south-westward to a re-entrant, and covering the likely positions of any slag spreads on the slope and of hearths close to its top placed similarly to the excavated examples. In fact, only a few scattered pieces of slag were located, adjacent to the known hearths, where they could have been thrown by the workers. The magnetic anomalies produced by the slag lumps, with characteristically randomly orientated north and south poles, were typically of the order of 50 nanotesla (gamma) with the 0.5-metre baselength gradiometer carried 0.3 m above the ground surface.

Geology and Ore provenance (by Stephanie Fells, Department of Metallurgy, University of Aston)

The Millbrook furnace is sited on the Ashdown Beds Formation, a thick (>200 m) sequence of siltstones and sandstones with occasional clays (Bristow & Bazley 1972). Earliest Cretaceous in age, these have been interpreted as the deposits of a braided river system draining north-westwards (Allen 1975). The overlying formations within the Hastings Beds Group are also mostly freshwater deposits, accumulated on a coastal mudplain with sandy water courses, though the occasional establishment of brackish water conditions is indicated by *Neomiodon* and non-*Cypridea* ostracod faunas, chiefly in the clays (Anderson 1967, Allen *et al.* 1973).

TABLE I
Analyses of selected samples of ores

Sample	*B limonite*	*S siderite*	*ironstone**
FeO	absent	23.32	30.42
Fe_2O_3	79.91	14.48 (c)	10.10
SiO_2	3.01	37.20	26.10
CaO	0.60	0.94	0.86
Al_2O_3	ND	6.50	8.24
CO_2	1.47	8.62 (c)	20.25
S	0.17	0.72	0.04
P	0.22	0.15	0.30

ND = Not determined

* Data for a specimen from Snape Wood, *c.* 20 km north of the site; quoted by Worssam and Gibson-Hill (1976, Table 2, no. 1), here given for comparison.

(c) Calculated (from appropriate additional results, not shown).

Analysis of B and S by K. Smith.

Several types of ironstone were found on site, although the predominant variety is a box-stone weathered nodular siderite, commonly called clay ironstone (Table I, Sample S). Such nodules are frequent in the Wadhurst Clay Formation, which overlies the Ashdown Beds, and also occur in the stratigraphically higher Grinstead Clay Formation. The Millbrook site lies near the crest of the Weald anticline and, consequently, these younger ironstone-bearing clay formations outcrop both to the south (at a distance of 3–4 km) and to the north (approximately 6.5 km). Just less than 1 km to the southeast of the site, near Nutley, is a lenticular clay body up to 7.5 m thick within the Ashdown Beds. Numerous bell-pits on the eastern side of the shallow valley at TQ 4482 2856 strongly suggest former working of ironstone within this clay (Bristow & Bazley 1972). It is therefore possible that the clay ironstone found at Millbrook was locally derived. Fragments of *Cyrena* (i.e. *Neomiodon*)-rich lumachelle collected around the furnace had been roasted and now consist of hematite and magnetite, though the matrix is likely to have been calcite or siderite mudstone. This lithology is probably from the Wadhurst Clay Formation.

Other fragments of ironstone from the site are more problematic and appear to derive from outside the Wealden outcrop. Some of the pieces consist of limonite nodules containing flint pebbles (Table I, Sample B), whilst others are of a dark reddish-purple sandy ironstone and also contain pebbles of flint and some siltstone. The latter lithology may be from the northern margin of the Weald, for similar materials occur there in the Drift deposits and soils on the Lower Greensand and upper part of the Weald Clay outcrop (Allen pers. comm.).

Refractories associated with the furnace (by O. P. Nicholson, Department of Metallurgy, University of Aston)

A number of samples of the refractory and other residual materials were examined visually and (for some samples) by thin section microscopy. The materials were mostly fragments of furnace lining (some with adherent slag) and several kilograms of flints. After careful scrutiny of the refractory remains, one piece was identified by its hand-rounded edge as from the top lip of a bowl furnace. (A virtually identical fragment is illustrated by Pittioni (1974) but not otherwise described.) Another formed part of a tuyere. This latter was a fragment, not including hot face material, but having part of a cylindrical channel in it. The channel was of about 2 cm diameter and could have been part of a tuyere formed by ramming the lining around a core peg which would subsequently be removed. A bore of these dimensions is too small to accommodate a further, prefired, clay nozzle and must have been used directly as a tuyere.

Refractories: The refractory linings were of yellowish colour and in most cases were uniformly fine in texture. In some examples observed on site the fired layer was backed by material which was still plastic and water absorbent, indicating that permanent alteration by heating had not taken place — i.e. that the lining in question had had limited use. Such in situ portions of linings consisted of up to approximately 4 cm of fired material backed by a similar or somewhat greater thickness of plastic material. Thin sections of this refractory showed very clearly to the eye the way in which the plastic mix had been thoroughly worked before ramming into position, the flow patterns being much more clearly revealed than in the hand specimens. Micro-examination identified the material as a clay/silt mixture ('mud') containing an estimated 25%–30% by volume of fine quartz particles of 0.05–0.07 mm diameter. Such a material would have less plasticity and cohesion than a less siliceous clay; the extensive 'working' which it shows would have been very necessary to achieve a lining sufficiently stable to stand up to operating conditions. The matrix of the lining, near the hot face, consisted almost entirely of apparently glassy material although here and there clusters of needle-like mullite crystals had begun to separate. The inference is, again, that this lining had not been subjected to extremely high temperatures, nor held hot for a long time.

One sectioned specimen was examined because it included angular flint fragments of 5–10 mm maximum dimension. It could be seen that one such fragment had been freshly broken from a larger flint; the difference between the original patinated and altered surface, and the fresh fracture, was obvious. Some attack had taken place between matrix and flint — it was not clear whether this was between flint and clay or flint and slag, the specimen being a random lump whose original placement in the lining could not be determined. The number of embedded flints was much less than 10% by volume of the specimen; at such sizes as were observed, and in such an amount, they could not have much influence on the refractory performance of the lining. On the other hand they may have had some useful effect in improving the mechanical stability of the linings, for instance in preventing cracking and collapse in the period before high temperatures dried, hardened, and stabilised them. There was no visible indication of heat induced transformation of the quartz structures.

Flint: The flints found associated with the Millbrook site are noteworthy in that they must have been brought to the site. The Geological Survey memoir (Bristow and Bazley 1972) specifically mentions that only occasional flints are found in the river gravels of the R. Medway (N. of Millbrook) and the gravels of the R. Ouse (S. of Millbrook) are entirely Wealden and contain no flints. The nearest area where flint is common is said to be further south, towards Piltdown.

Most of the flints examined were heavily patinated; in a high proportion, this patina was crazed and partially detached giving a characteristic indication that the pebble had been heated. Representative pebbles were sectioned and examined under the microscope. The structures were as would be expected after short-term heating; some heat-induced cracks were present. The structure of the flints examined was similar to the structure of the flint flakes in the refractories examined and discussed earlier.

The purpose for which flints might have been deliberately brought to this site, possibly from a distance, remains unclear. Only one piece of refractory clearly showed flint inclusions, although other fragments may contain similar added material not visible on the surface. The flint pebbles — of sizes ranging between 20–50 mm major dimension — all seemed to have been strongly heated; this is a well known treatment to increase the flaking qualities of the material (Weymouth and Mandeville 1975), and in this case the increased ease of breaking down to sizes observed in the specimen discussed would be useful. The addition of silica to aid slag formation in certain ore types is also known; it may be that this was the intention, although even the crushed flint fragments would be unnecessarily coarse for this purpose.

The slag (by J. G. McDonnell and O. P. Nicholson, Archaeometallurgy Group, Department of Metallurgy, University of Aston)

Over 40 kg was available for examination. Ironworking slags from archaeological sites occur in a variety of forms dependent on the type of ironworking process and level of technological achievement involved. Slags can be termed 'agglomerated', 'run', or 'tap' depending on their visual characteristics. Agglomerated slags are slag masses which have grown by the fusion together of small droplets of fluid or semi-fluid slag. They are derived from the most primitive iron smelting techniques and from the smithing process. Run slags are slags which have an internal agglomerated structure but at the surface or in local regions may have achieved higher temperatures, and hence flowed, destroying the external agglomerated slag characteristics. Tap slag is a fluid slag tapped as liquid from, and cooled outside, the furnace.

Generally the Millbrook material is an agglomerated slag, with some surfaces and zones showing run slag characteristics; there are a few examples resembling tap slag but it is clear that no slag was tapped here. The slag occurs in two forms, either as recognisable furnace bottoms, i.e. hemispherical in shape, or as amorphous irregularly shaped fragments.

There are 14 complete or near complete bottoms. One was exceptionally large measuring 30 x 25 x 15 cm deep and weighing about 5 kg. In plan it was sub-rectangular, with a depression several centimetres deep at the centre of the upper surface. The remaining bottoms vary in size, with a major diameter 10–20 cm (the majority 15–17 cm), minor diameter 9–15 cm (mostly 9–11 cm), and depth 1–7 cm, the mean being about 5 cm.

The surfaces of the bottoms have an agglomerated appearance, though occasionally they are vitrified. On sectioning the internal face is blue black in colour, vesicular (some vesicles having vitrified surfaces), with large inclusions of charcoal, (up to several centimetres long). Some specimens show a section suggestive of tap slag fabric: i.e. only slightly gassed and blue grey in colour.

The bottoms have two fracture characteristics. In the agglomerated zones the fracture is dull (probably largely finely crystalline) the vesicles are distinct, and the fractures often occur through charcoal inclusions. In the run zones the fracture is crystalline and few vesicles are apparent. Nearly all the specimens had both fracture characteristics.

The majority of furnace bottoms have some furnace lining attached, either to the base or sides of the bottoms. Nearly all had a slight depression in the upper surface; on several this extends over a large area of the surface. Several bottoms displayed weak magnetism, suggesing a small iron or magnetite content.

Three bottoms (A, B and C) were selected for limited chemical analysis, X-ray and microscope examination. Further specimens (D–G) were examined by appropriate individual techniques.

The specimens were diametrically sectioned and thick sections removed, part of which was mounted for microscopy, and part powdered for chemical and mineral analysis.

Specimen B, though externally appearing to be a typical slag, was found after sectioning and preparation to be iron ore. It has been identified as limonite ($Fe_2O_3.H_2O$) and contains 79.9% Fe_2O_3 (Table I). Unreduced fragments of limonite ore were also identified as inclusions on sectioning other furnace bottoms.

Kevex—X-ray analysis of A and C showed the presence of silicon, aluminium, calcium, iron, manganese and potassium. Powdered samples of A and C were subjected to X-ray diffraction (XRD) to determine mineral constitution. The resulting patterns could not be fully interpreted, only fayalite ($2FeO.SiO_2$) being clearly distinguished. The high iron content in A and C (Table II) made it important that the oxidation state of the iron oxide be determined. The magnetic fractions of the powdered samples were removed using a weak magnet, subjected to XRD, and gave a clear magnetite pattern.

TABLE II
Analyses of selected samples of slag

Sample	*A*	*C*	*D*	*E*
FeO	23.40	30.00	ND	ND
Fe_2O_3	34.38	14.06	50.20	82.70
SiO_2	21.48	28.41	29.80	12.50
CaO	1.30	4.60	9.70	1.24
Al_2O_3	9.10	11.05	5.56	0.78
CO_2	11.20	1.03	ND	ND
S	ND	0.16	ND	ND
P	0.21	0.32	0.31	0.68
MnO			3.76	1.22
MgO			1.84	0.17
TiO_2			0.44	0.22
V_2O_5			0.05	0.075
K_2O			0.93	0.15

ND = Not determined

The weight percentage of the magnetic and non-magnetic fractions was determined, being in the case of A 35.5% and 64.5% respectively; in C 6.25% and 93.75% (after two determinations). The other principal mineralogical constituents identified are fayalite and wüstite (FeO).

The chemical analyses (by K. Smith) of samples A and C are given in Table II together with XRF-analytical data provided for samples D and E by Stephanie Fells. The FeO/Fe_2O_3 ratio in each of the two slags A and C is significantly different, suggesting that conditions varied considerably from one smelting campaign to the other. Ratios as in A (where $FeO/Fe_2O_3<1.0$) rarely occur. In Table III the anorthite ($CaO.Al_2O_3.2SiO_2$) content was calculated as in Morton and Wingrove (1969). It may be assumed that at the time of slag formation iron oxide occurs in the form FeO so that, in order to apply the results to a ternary diagram, all Fe_2O_3 is conventionally converted to FeO. In both cases the composition falls in the fayalite field, giving an initial softening range of 1100–1175°C. The development of magnetite occurs at a later stage probably during the accretion of the furnace bottom.

Microscopical examination of the slags illustrates the problem of distinguishing between wüstite and magnetite. Samples were prepared from all the slag specimens (A, C–G). Generally, rounded iron oxide dendrites and either lath or elongated hexagonal fayalite crystals, or massive fayalite, occurred in a matrix approximating to an anorthite ($CaO.Al_2O_3.2SiO_2$) composition. Magnetite was clearly distinguished as angular dendrites in sample D. Also present in small quantities were hercynite ($FeO.Al_2O_3$), a potassium aluminium silicate, and small inclusions of metallic iron.

Conclusions

The Millbrook slag derives from a period when the level of iron working technology had declined. The slag was not tapped, and remained within the furnace, thus cooling under unknown conditions, which evidently varied from smelt to smelt.

It may be assumed that conditions near the bottom of the furnace were such that partial oxidation of wüstite (FeO) to magnetite (Fe_3O_4) took place; this is known to occur in the formation of smithing hearth bottoms, and on this site may indicate less controlled conditions and somewhat lower operating temperatures than those usually met elsewhere.

The Millbrook slags were certainly smelting slags, being found in large accretions, having predominantly run slag characteristics in their structure, and lacking the part-worked metallic iron inclusions and higher magnetite content typical of smithing slags.

TABLE III

Mineralogical constitution of slags A and C

	A	C
1. referred to 100% of major constituent		
FeO	29.52	41.40
Fe_2O_3	43.38	19.40
SiO_2	27.10	39.20
2. ratio $\frac{FeO}{Fe_2O_3}$ =	0.68	2.13
3. calculated anorthite (An) ($CaO.Al_2O_3.SiO_2$)	6.45%	22.82%
4. ternary mineralogical constitution (actual FeO content)		
	A	C
FeO 23.40	48.23 %	FeO 30.0	42.13 %
SiO_2 21.48	38.48	SiO_2 28.41	25.82
An 6.45	13.29	An 22.82	32.05
5. ternary mineralogical constitution (all Fe taken as FeO)		
FeO 54.33	66.05 %	FeO 42.65	45.43 %
SiO_2 21.48	26.11	SiO_2 28.41	30.26
An 6.45	7.84	An 22.82	24.31

DISCUSSION

The History of Bloomery Iron Smelting in the Weald

Although much research work remains to be done, significant trends have already emerged from the pioneer work of Straker (1931) and more recently from that of the Wealden Iron Research Group (Tebbutt 1981) and Cleere and Crossley (forthcoming). These postulate a small late Iron Age industry followed by a very large and regionally organised Roman one promoting exports and armanents. Of the Saxon period Millbrook is the only certain site so far discovered. During medieval times the industry seems to have been a small local one.

The Site in its Context

The site, so far unique among archaeological discoveries in the Weald, is of great interest in the context of Saxon penetration and settlement in the area of the High Weald. The subject of such penetration has been discussed by Brandon (1978) who states that archaeology has contributed nothing to the evidence, which rests solely on place names. It is thus perhaps significant that a concentration of early place names occurs in the neighbourhood of nearby East Grinstead. The controversial Domesday 'ferraria' in East Grinstead hundred, although at least 250 years later in date, may have some relevance.

Unfortunately the presence of flint pebbles, foreign to the area, in the furnace does not help in determining the origin of the iron workers. The nearest similar pebbles occur both in river gravels north of Edenbridge and to the south near Piltdown. They are also of course common on Sussex sea beaches.

Of the actual landscape, Brandon (1978) considers that the Low Weald was always more heavily wooded than the High Weald, but that place name evidence supports a view that much clearance and settlement took place in the former area in early Saxon times. The High Weald meanwhile retained open heathland as commons. Of Ashdown Forest itself, although some of the more fertile parts may have been under the plough in Roman times it seems unlikely that the site of the bloomery was ever cultivated. It was within the area of the medieval deer park pale, but subject to local common rights established at an early date.

The metallurgy

The principal ore was clearly obtained very locally. The 'bell pits' mentioned above are, however, not likely to be of that shape as all mine pits so far examined in the area have been found to be basin shaped (G. Swift, personal communication) similar to those found at West Runton (Tylecote 1967).

Although the ferruginous sandstone specimens found are more striking in some ways, both in the 'iron colouring' and particularly the magnetic character of the roasted form, and evidently represent a workable ore, they are unlikely to have been used at Millbrook unless there were deposits close enough to make it more than the curiosity it would here seem to be. The limonite, on the other hand, is more likely to have been nearer at hand and more thoroughly exploited.

In the absence of any roasted ore 'fines' it is not possible to comment on the preparation of the ore at Millbrook. Some roasted ore fragments are present and clearly roasting would have been essential, but there is no evidence of a roasting hearth or any process of selection or crushing. None was found at Ramsbury either (Haslam *et al* 1980), in contrast to Stamford (Tylecote *et al* 1982) where deposits of fines constituted the bulk of the residues. The furnace can only be described as a bowl furnace — it is wider than its depth. In the collapsed fired-clay lining/superstructure there were some broken tuyere fragments. It seems probable that they came from areas of the furnace like the shaped 'rim', which were just above ground level and close examination indicates a significant slope.

It is clearly a rather primitive structure without facilities for slag tapping. As such it compares well with the earlier of the furnaces found at Ramsbury (Haslam *et al* 1980) but it is important to remember that this type continued in backward parts of Britain until the seventeenth century as at Muncaster Head (Tylecote & Cherry 1970; here, however, some tap slag was present). The Millbrook furnace probably belongs to the more northerly ironmaking tradition known from Iron Age Eastern Europe. The distribution of this and the other, more

southerly (shaft type), group are best illustrated by Pleiner (1964).

The slag-tapping shaft furnace was dominant in Roman Britain but until recently virtually nothing was known about Anglo-Saxon iron smelting, although the skill of the smiths of that period has always been well attested. Recent excavations have now provided evidence of iron smelting in two towns from the Middle Saxon period. Both in Northampton (Williams 1979) and at Ramsbury the simple process was in use, although at the latter site a (not much) later slag-tapping 'developed bowl' furnace was also found.

There had been some indications that the non-tapping pit furnace design (Tylecote 1973) might have come across the North Sea with the Jutes and Angles. But structures of this time are so variable — almost idiosyncratic — that a direct link would be hard to demonstrate. This is so especially since at many sites, such as Joldelund (Hingst 1957: Fig d), none of the characteristic huge 'bears' of slag (Schlackenklötze) have been found, but only some smaller discrete lumps, and also because all furnace shafts must in the circumstances remain conjectural. However, there is clear evidence at both Millbrook and Ramsbury as well as in Schleswig-Holstein for the re-use of these relatively large furnace bowls — and indeed also elsewhere in Britain and, again, also on earlier sites as at Wakerley (Jackson *et al* 1978). They were repeatedly relined for successive smelts, becoming progressively smaller, and new superstructures were erected — at Millbrook resting on part of the previous charcoal fill.

The general concept of such introductions into Britain of a NW European iron extraction technique is thus hard to resist. However, at Millbrook it would represent late usage since the more efficient tapping tradition of Roman Britain reappears at about that time in Ramsbury. More dated Anglo-Saxon furnaces are needed before a convincing case could be made out.

The furnace lining confirms the impression of a somewhat primitive process involving neither adequate temperatures nor long periods so that only minimum smelting conditions were satisfied in general. At the same time, a considerable amount of work had clearly gone into the preparation of the actual lining, and the structural aspect had received adequate attention — it seems that only the amount of heat (temperature x time) was insufficient. This could have been due to lack of knowledge, but it was possibly a difference in emphasis — less stress being laid on the size of agglomerated metal in the raw bloom than on the smith's competence to forge out any actual metal that was produced.

In this connection it is interesting to consider the relationship to the furnace of its ancillary structures. There can be little doubt that Hearth 1 was for forging (cf. Fox 1954) and it might have been used for compacting the bloom. But it is conceivable — taking the size of Hearth 2 in relation to furnace bottoms, and the actual presence of one in it — that this structure was in effect an extension of the furnace, for compacting the bloom under reducing conditions.

Furthermore, if it can be accepted as a separate feature from the adjoining charcoal-saturated area with which it would seem at first sight to be connected, then the latter could represent a charcoal burning trench making fuel for the furnace but also suitably near Hearth 2 to supply a charcoal blanket for efficient bloom compaction. No hammerscale was seen.

It is very important and valuable to have recovered evidence of non-functional structures as well as the more usual components for such furnaces and hearths. The plan clearly suggests that the actual furnace superstructure was supported by stakes forming an arc of about 270°, (the 'open end') facing a ?hurdle screen (through B) that was external to the furnace proper. If the gap between A and D were real, it might indicate some form of access, from the putative fuel source (at J).

The 'shelter' for Hearth 1 is equally clearly delineated, and there are also vestiges at the E

end of the putative charcoal trench. The overall enclosure of the complex, suggested above, is less well preserved but seems no less likely. Again there are parallels at Ramsbury and, indeed, at Cheddar (Biek 1979).

Examination of the slags further supports the notion of generally limited quantities of heat experienced by the furnace and its contents. It reflects the lack of uniformity within a charge and between charges, and also indicates the presence of unreacted ore as well as fuel. Nevertheless, in some areas of the furnace, at least, a sort of tap slag was evidently beginning to form although there is no evidence of its being actually tapped.

The work has again underlined the problem of distinguishing between magnetite and wüstite in such material and, hence, between smelting and smithing residues. Indeed, it is fortunate that good quality ore was prominent, not only virgin (Samples B and S) and roasted, but also in the slag where it is of course most diagnostic. In its absence, many of the slag fragments might have been referred back to a smithing hearth rather than a smelting furnace.

The alumina content in the slag must be due to its absorption from the furnace lining, which we know to be possible (Merkel, forthcoming). The lime content arises from the fuel as well as the ore; the phosphorus will have come mainly from the ore. In general the analyses of both the limonite ore and some slags compare well with those from Muncaster Head, but there the furnace bottoms were much larger, in some cases weighing over 20 kg.

One further aspect of the Millbrook bloomery perhaps requires further comment: the flint pebbles found in the furnace, lining and slag. At first it was thought that some 'foreign' tradition for producing a fluid slag (Tylecote and Clough, forthcoming) — rather than any technology relating to the highly reducible local siderite ores — had dictated the addition of the pebbles. However, careful reconsideration of the evidence clearly indicates that the flint could have entered the furnace in the limonite ore.

ACKNOWLEDGEMENTS

Among the many people to whom thanks are due I must first acknowledge the valuable cooperation of the Conservators of Ashdown Forest, the staff of the Mid-Sussex Water Company, and the machine driver J. M. Farrow. Members of the Wealden Iron Research Group rallied at very short notice to complete the excavation, recording and photography. The drawings and much of the typing have been done by my wife. For specialist reports and comments I am grateful especially to Anthony J. Clark who answered an urgent call, to Professor R. J. Tylecote, and to all the staff of the Department of Metallurgy and Materials, University of Aston. Anthony D. F. Streeten's analysis and drawing of the pottery has added much interest. Leo Biek has been helpful throughout, and Dr. Henry Cleere has given much helpful advice.

The finds will go to Barbican House Museum, Lewes.

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REFERENCES

Allen, P. *et al.* 1973. 'Isotopic ratios and Wealden Environment', *Palaeontology* **16**, 607–21.

—— 1975. 'Wealden of the Weald: a new model', *Proc. Geol. Ass.* **86** (4), 389–437.

Anderson, F. W. 1967. 'Ostracods from the Weald Clay of England', *Bull. Geol. Surv. Gt. Brit.* **27**, 237–69.

Bell, M. G. 1977. 'Excavations at Bishopstone', *Sussex Archaeological Collections* (hereafter *S.A.C.*) **115.**

Biek, L. 1979. in P. A. Rahtz. *The Saxon and medieval palaces at Cheddar: excavations 1960–62,* BAR 65 92–4.

—— and Bayley, J. 1978. in P. J. Drury, *Excavations at Little Waltham 1970–1,* CBA Research Report 26, 59–62.

Brandon, P. 1978. *The South Saxons* Chichester: Phillimore.
Bristow, C. R. and Bazley, R. A. 1972. 'Geology of the country around Royal Tunbridge Wells', *Mem. Geol. Surv. UK.*
Clark, A. J. 1980. 'Magnetic dating', *S.A.C.* **118,** 7–12.
Clark, R. M. 1975. 'A calibration curve for radiocarbon dates', *Antiquity* **49,** 251–66.
Cleere, H. F. 1972. 'The classification of early iron-smelting furnaces', *Antiq. J.* **52** (1), 8–23.
—— and Crossley, D. W. *Ironworks of the Weald* Forthcoming.
Down, A. 1978. *Chichester excavations 3* Chichester: Phillimore.
Drewett, P. L. 1974. 'Excavations in Old Town, Croydon', *Surrey Archaeology Society Research Volume* **1,** 1–45.
Fox, A. 1954. 'Excavations at Kes Tor', *Trans. Devon Assn.* **86,** 21–62.
Fraser, J. G. 1932. *The Golden Bough* (abridged edn.) London: Macmillan.
Haslam, J. *et al.* 1980. 'A middle Saxon smelting site at Ramsbury, Wiltshire', *Med. Arch.* **24,** 1–68.
Hingst, H. 1957. 'Vor- und frühgeschichtliche Eisenverhüttung in Schleswig-Holstein', *Neue Ausgrabungen in Deutschland,* 258–67.
Hodges, R. 1980. 'Potters, pottery and marketing A.D. 700–1000', *S.A.C.* **118,** 95–104.
Hole, C. 1940. *English folklore* London: Batsford.
Jackson, D. A. *et al.* 1978. 'Excavations at Wakerley, Northants 1972–75', *Britannia* **9,** 151–66.
Lethbridge, T. C. 1936. 'A cemetery at Shudy Camps, Cambridgeshire', *Cambs. Antiq. Soc. Quarto Pub.* new series **5.**
Merkel, J. F. 'Reconstruction of Bronze Age copper smelting—experiments based on archaeological evidence from Timna, Israel', Ph.D. thesis, University of London (unpublished). Forthcoming.
Money, J. H. 1977. 'The Iron Age hill fort and Romano-British iron working settlement at Garden Hill, Sussex', *Britannia* **8,** 339–50.
Morton, G. R. and Wingrove, J. 1969. *Journ. Iron and Steel Inst.* **207,** 1556.
Pittioni, R. 1974. 'Hüttenlehm', *Archaeol. Austriaca* **55,** 127.
Pleiner, R. 1964. *'Die Eisenverhüttung in der "Germania Magna" zur römischen Kaiserzeit,* (45. Bericht Röm-Germ Komm).
Straker, E. 1931. *Wealden Iron* Bell.
Streeten, A. D. F. 1979. 'Medieval and post-medieval pottery of the Hartfield area', in D. J. Freke. 'The excavation of an early sixteenth-century pottery kiln at Lower Parrock, Hartfield', *Post-Med. Arch.* **13,** 116–20.
Sutermeister, H. 1976. 'Burpham; a settlement site within the Anglo-Saxon defences', *S.A.C.* **114,** 194–206.
Tebbutt, C. F. 1979. 'The excavation of three Roman bloomery furnaces at Hartfield, Sussex', *S.A.C.* **117,** 47–56.
—— 1981. 'Wealden bloomery iron smelting furnaces', *S.A.C.* **119,** 57–64.
Tylecote, R. F. 1967. 'The bloomery site at West Runton', *Norfolk Archaeol.* **34,** 187–214.
—— 1973. 'The pit-type iron smelting shaft furnace: its diffusion and parallels', *Early Medieval Studies* **6,** 42–7.
—— *et al* 1982. in C. Mahany *et al, Excavations in Stamford, Lincs., 1963–9,* Soc. Med. Arch. Monograph Series No. 9, 135–44.
—— and Cherry, J. 1970. 'The seventeenth-century bloomery at Muncaster Head', *'Trans. Cumberland and Westmorland Antiq. Archaeol. Soc.* **70,** 69–109.
—— and Clough, R. E. in *Proc. of 1980 Conf. of Com. Sid. Anc. d'Union Intern. Etud. Pré- et Proto-hist. Senkelmark, Schleswig* Forthcoming.
Weymouth, J. W. and Mandeville, M. 1975. *Archaeometry* **17,** 61–9.
White, G. M. 1934. 'A settlement of the South Saxons', *Antiq. J.* **14,** 393–400.
Williams, J. H. 1979. *St. Peter's Street, Northampton: Excavations 1973–76.*
Worssam, B. C. and Gibson-Hill, J. 1976. 'Analyses of Wealden iron ores', *J. Hist. Metallurgy Soc.* **10,** 77–82.

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Sussex Archaeological Collections **120** (1982), 37–43

EXCAVATIONS AT THE DEVIL'S DITCH, BOXGROVE, WEST SUSSEX 1981

by Owen Bedwin

A section was cut across the Chichester dykes (known locally as the Devil's Ditch) at Halnaker, towards the eastern end of the dyke system. The ditch was shown to be 1.6 m deep, 6.0 m wide at the top and 2.0 m wide at the bottom. Medieval pottery was recovered from layers throughout the ditch, down to within 20 cm of its floor. The implications of this finding for the dating of the dyke system as a whole are discussed.

INTRODUCTION

The Chichester dykes (or entrenchments) are a complex series of linear earthworks running across the northern edge of the West Sussex Coastal Plain just north of Chichester (Fig. 1; centre). These earthworks (banks and ditches) consist of a number of east-west stretches, with some (generally shorter) north-south stretches. The overall length is 10 km from east to west, and 4.5 km from north to south (Fig. 1). For much of their length, the dykes survive as substantial earthworks, with wide, flat-bottomed ditches, up to 2.0 m deep, and large, broad banks, often tree-covered, up to 1.5 m high. Along some stretches, however, the ditch has been largely filled in and the bank reduced, or even levelled. The local name for much of the dyke system is the Devil's Ditch.

The date and purpose of these earthworks have long been the subject of discussion. Probably the first comprehensive field survey and description of the dykes was that of Williams-Freeman (1934). On the basis of their surface appearance and proximity to the Roman city of Chichester, he favoured a Roman date for the dykes, citing their long, straight character as singularly 'un-British'. The dykes were thus considered to have been built to defend Roman Chichester.

More recent writers (e.g. Murray 1956; Bradley 1969 and 1971) have suggested a late Iron Age origin for the dykes, a date which has become widely accepted. This dating is based on the direct evidence from excavation (summarised below), and also on analogy with other dyke systems in southern England, notably the Lexden dykes at Colchester, which form the western defences of the 'tribal capital' of Camulodunum (Hawkes and Hull 1947). On the basis of this late Iron Age dating, the Chichester dykes are interpreted as defensive outworks protecting a late Iron Age tribal capital somewhere on the Coastal Plain. The location of such an important centre of late Iron Age settlement has not yet been definitively established, though the amount of material, especially coins, eroding from the shoreline to the east and west of Selsey Bill has led to the suggestion that it was in the vicinity of Selsey.

Three excavated sections across the Chichester dykes have been published; their locations are shown in Fig. 1 (centre and bottom). These are summarised as follows:

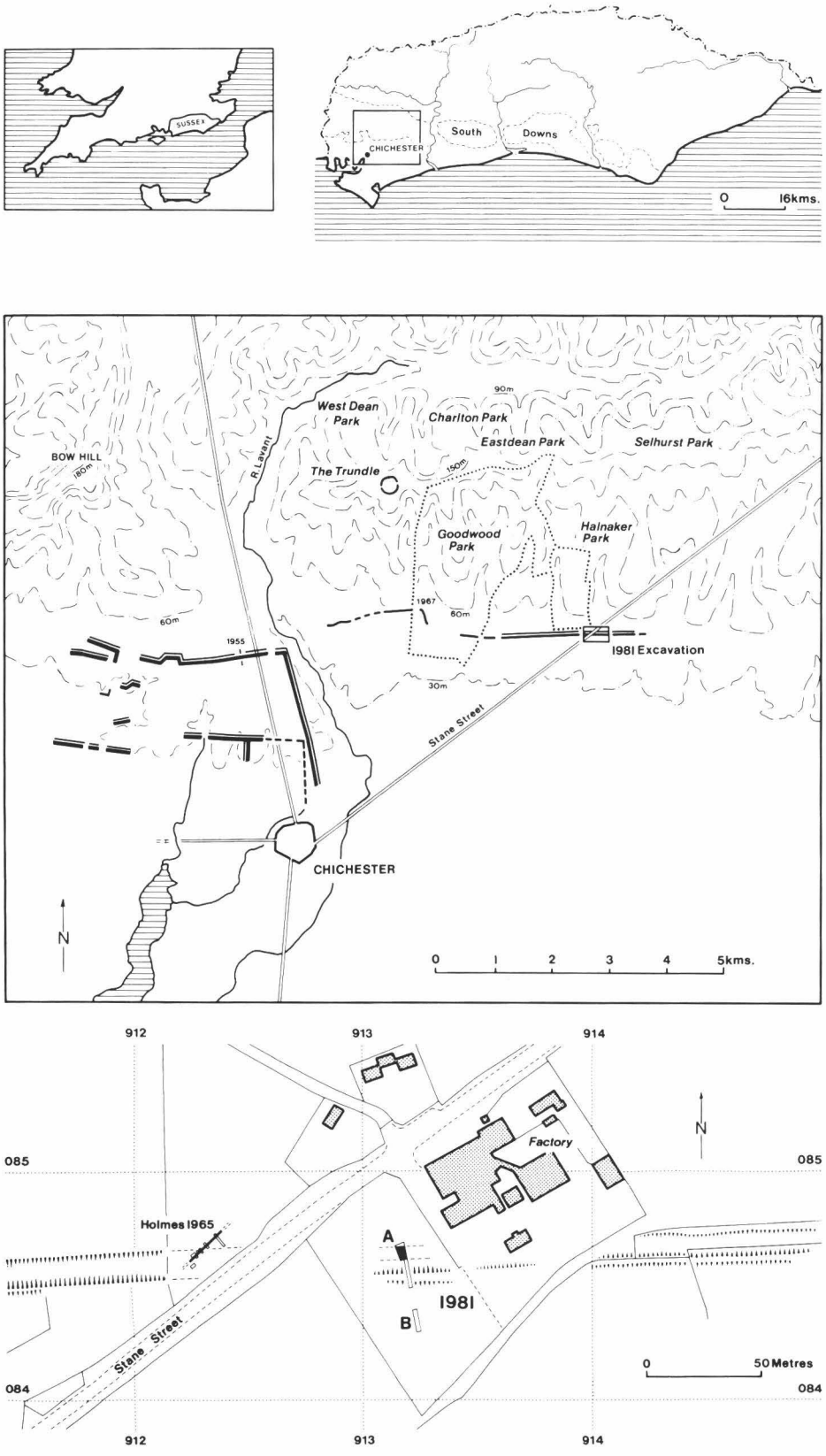

Fig. 1. Devil's Ditch, Boxgrove 1981. Site location and general plan (by F. G. Aldsworth).

(i) West Lavant House 1954–5 (Murray 1956)

A section through the earthwork near the centre of the dyke system showed the ditch to have been dug in a symmetrical V-shape, 2.7 m deep. The bank was a simple gravel dump, 1.5 m high. The dating evidence consisted of a sherd of saucepan pottery (second/third century B.C.) from 1.8 m down in the ditch, and, more crucially, two joining sherds of late Iron Age pottery (first century B.C.) from beneath the bank, providing a *terminus post quem.*

(ii) Goodwood Park 1967 (Bradley 1971)

A section through the bank showed that it has been cut through by two gullies, both of which contained pottery of the second century A.D. Beneath the bank, a single sherd of first century B.C. pottery was found. These findings neatly bracket the construction of the earthwork to between the first century B.C. and the second century A.D. The ditch was not excavated.

(iii) Halnaker 1965 (Holmes 1968)

On this occasion, only the ditch was excavated, towards the eastern end of the dyke (the corresponding bank does not survive). Th excavation was sited so as to reveal the relationship between the dyke ditch and the side ditch of Roman Stane Street (Fig. 1; centre and bottom) and showed that the former cut the latter. (It should be pointed out that no finds were mentioned from this side ditch, so its dating is not absolutely secure). The clear implication is that the dyke ditch is *later* than the construction of the Roman road: but how much later? The answer was provided by two sherds of thirteenth-century pottery lying on the subsoil forming the sloping edge of the ditch. The dyke ditch profile was completely different from the deep V-shape recorded at West Lavant House (above). At Halnaker, it was considerably shallower, only 1.5 m deep, and with a wide, flat bottom. The excavator interpreted the earthwork here as the southern boundary of the medieval deer park known as Halnaker Park (Fig. 1; centre), and was able to quote documentary evidence in support of this.

At first glance, it would appear difficult to reconcile the results of the excavation at Halnaker with those from Goodwood Park and West Lavant House. However, one explanation (Bradley 1969) might be that the ditch at Halnaker really is of Iron Age origin, but was re-cut and/or cleaned out in the medieval period to provide part of the deer park perimeter; i.e. an existing boundary was re-used. This would have entailed less work than digging a completely new barrier, but would probably have removed all traces of Iron Age artefacts from meaningful contexts in the ditch.

Such an interpretation can only be checked by further excavation, and the Sussex Archaeological Field Unit was glad to take the opportunity of examining a short stretch of the dyke (the Devil's Ditch) at Halnaker, in the parish of Boxgrove, *c.* 60 m east of John Holmes' 1965 section, on the other side of Stane Street. Planning permission was granted in September 1981 for the construction of a new factory by J. G. Read (Poultry) Ltd, over a scheduled length of the earthwork (south-west of the 'old' factory shown in Fig. 1; bottom). Excavation was carried out for three weeks in October 1981 under the direction of the author.

EXCAVATION

The threatened part of the dyke (SU 9132 0846) was an unimpressive earthwork. The ditch was almost completely filled in, and the bank, where it survived at all, rose to a height of only 0.4 to 0.5 m. The subsoil in the area was gravel.

Trench A (Figs. 1 and 2) was a hand-excavated section 4 m wide across the top of the ditch, and 1.5 m wide through the bank. A cutting only 1.5 m wide was finally cut through to the floor of the ditch (Fig. 2) and this provided sufficient pottery for dating. It has been intended to put a section through the complete width of the bank, in a gap between two horse chestnut trees. However, the tangled mass of tree-roots had caused such disturbance that artefacts found within or beneath the bank could not justifiably be considered as coming from securely stratified contexts, and so this part of the trench was abandoned. It was possible to infer only that the bank had been a simple gravel dump; whether there had been a berm or not was difficult to assess.

The ditch was shown to be 1.6 m deep, 6.0 m wide at the top, with a broad, flat bottom, 2.0 m across, and with symmetrical, gently sloping sides (Fig. 2). A number of recent post holes (contexts 2, 4, 6, 12 and 17 in Fig. 2) were found cut into the upper ditch fill (context 11) or adjacent subsoil. Post holes 2, 4, 6 and 12 probably represent a fence line; all were similar in

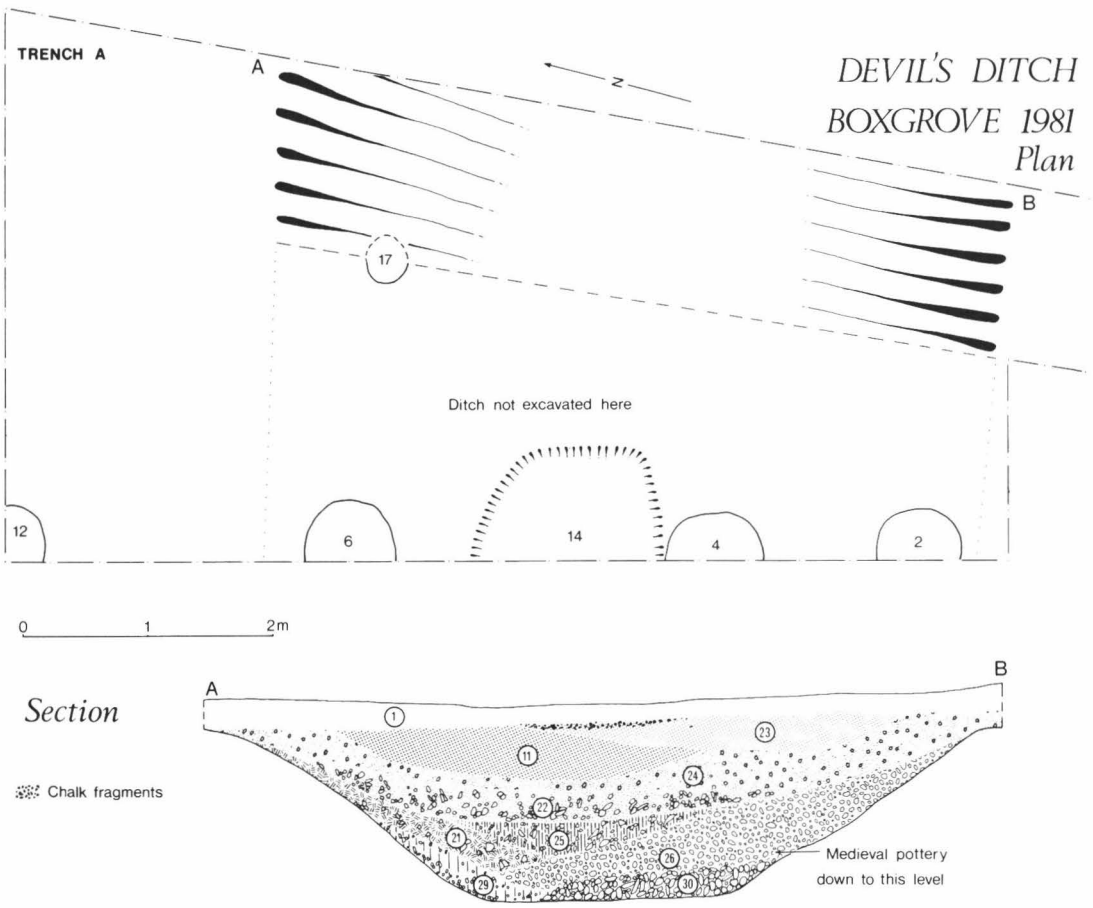

Fig. 2. Devil's Ditch, Boxgrove 1981. Plan and section of trench A. Key to layers: 1 Topsoil, 11 Occasional small gravel in sticky orange-brown clay matrix, 21 Occasional small gravel in silty orange-brown clay, 22 Small gravel in grey-brown clay matrix, 24 Fine gravel in mid-brown clay matrix, 25 Much gravel and a little chalk in grey-brown clay matrix, 26 Much gravel in orange-brown clay matrix, 29 Much fine gravel in orange clay matrix, 30 Loose gravelly flint in yellow-brown sandy clay matrix.

profile and infill, and post hole 12 even contained a piece of rotted wood. Context 14 was a shallow scoop containing a little medieval pottery.

Several layers were identified within the ditch; all consisted of gravel flint of varying quantity and coarseness in a sticky, clayey soil. Medieval pottery (153 sherds; late thirteenth to early fifteenth century) was found throughout the ditch fill from the uppermost layer 11, down to layer 26, within 20 cm of the ditch floor. Most of the pottery was in large, unabraded sherds; those from upper layers were broadly contemporary with those from lower layers, indicating rapid infilling. Also found were fragments of unglazed medieval roof and floor tile, a few pieces of sandstone, animal bone and marine shell, and a little charcoal (oak and hawthorn). Some rather indeterminate flintwork, presumably residual, was also recovered, mostly from the topsoil, with only a few pieces from the ditch silts.

The sequence of ditch infilling is interpreted as follows; layers 29 and 30 (both barren of finds) represent a rapid accumulation of stony primary silt. The layers above these (i.e. 26 to 11) all contain late medieval pottery and other domestic debris; in fact, it seems as if this part of the ditch may simply have been a rubbish dump. The source of the debris is difficult to establish; it could perhaps have been a contemporary dwelling just to the north of the ditch (Fig. 1). This area lay outside the limits of the planned factory and so was not available for rescue excavation. One further observation should be stressed; there was no sign in the ditch section of a buried turf line. This suggests that the ditch was filled in soon after being dug, before a soil and vegetation had time to develop.

Trench B (10 m x 1.5 m) was hand-excavated to sample the area to the south of the dyke. Apart from a single modern post hole, it was devoid of features.

DISCUSSION

These results confirm the findings of the 1965 excavation at Halnaker (Holmes 1968). The earthwork forming the extreme eastern end of the dyke system consists of a simple dump bank, and a ditch 1.5 to 1.6 m deep, with a wide, flat bottom. As such, the ditch profile differs considerably from that of the West Lavant House section (Murray 1956). In addition, it is clear from the pottery that the ditch at Halnaker had been filled in by the early fifteenth century, and, as argued above, that this infilling took place soon after the ditch was dug.

The stretch of the Chichester dykes in the vicinity of Stane Street would therefore *appear* to be medieval. It is, of course, still possible to argue for an Iron Age origin, with a medieval re-cut eliminating the earlier profile. Indeed, if this was the case, the ditch profile here would not be expected to match the one at West Lavant House (? first century B.C.). However, a medieval re-cut 1.6 m deep could not obliterate a profile 2.7 m deep (as at West Lavant House), so that if the dyke at Halnaker does have an Iron Age origin, its shape must in any case be quite different from that towards the centre of the dyke system. Does this therefore imply more than one phase of dyke construction *within* the late Iron Age?

Clearly, this kind of speculation relies too heavily for comfort on 'what might have been'. What is necessary is a series of sections through the dykes at regular intervals, and in particular through its easternmost stretch outside the limits of medieval Halnaker Park (refer to Fig. 1; centre), to avoid ambiguity arising from the possibility of re-cuts. For the moment, it is perhaps best to assume that the results from each excavated section have only a restricted, local validity, and that broad generalisations should be avoided.

THE FINDS

The pottery

A total of 194 sherds weighing 1800 g were recovered; of these, 153 (1620 g) came from medieval layers in the ditch. Within the assemblage, three fabrics were recognised:

1. Fine textured sandy ware.
2. Medium textured sandy ware.
3. Fabric with variable inclusions (up to 4 mm across) of multi-coloured quartz.

Of the 153 sherds in sealed medieval contexts in the ditch 44% were of fabric 1, 22% of fabric 2, and 34% of fabric 3. Glazed sherds (mostly green but with a few brown) accounted for 8% of the total. Apart from glazing, there was little in the way of decoration except for applied, thumb-impressed bands. The general date for the pottery covers the period from the late thirteenth century to the early fifteenth century, with the bulk fitting comfortably into the middle of the range, i.e. the fourteenth century. Seven sherds are illustrated (Fig. 3) and are described as follows:

1. Dish (or curfew) with applied diagonally thumb-impressed cordon. Fabric 1; context A/11.
2. Rim of jug with part of 'face' surviving, i.e. one impressed eye. Fabric 1; context A/23.
3. Everted, flat-topped rim sherd with applied, thumb-impressed cordon. Fabric 3; context A/23.
4. Sherd with two parallel thumb-impressed cordons. ? From a bung-hole pitcher, though the hole appears to be rather small. Fabric 3; context A/23.
5. Rim sherd of cooking vessel with crude applied thumb-impressed cordon just below the rim; also feebler, vertically applied decoration. Fabric 3; context A/24.
6. Rim sherd of dish (or curfew) with diagonally thumb-impressed applied strip. Slight fluting on the outside of the rim, and splashes of green glaze. Fabric 1; context A/25.
7. Rim sherd of dish (or curfew) with applied, thumb-impressed strip below rim. Fabric 3; context A/26.

Tile

A total of 92 fragments of unglazed roof tile (85 from medieval layers in the ditch) and five fragments of unglazed floor tile were found. In no case was it possible to establish the complete dimensions of a tile; only the thickness could be measured.

Roof tile Thickness varied from 8 to 11 mm; colour from orange through to dark purple-brown.

Floor tile All fragments had a thickness of 24 mm, with a chamfered edge.

Flintwork (by Caroline Cartwright)

A total of 91 pieces of worked flint (73 from the topsoil) were found. These were mostly rough cores, waste flakes (several notched), with one or two rough scrapers. As an assemblage, it is virtually impossible to classify; the scrapers may suggest a Neolithic/Bronze Age date, but are almost as undiagnostic as the rest.

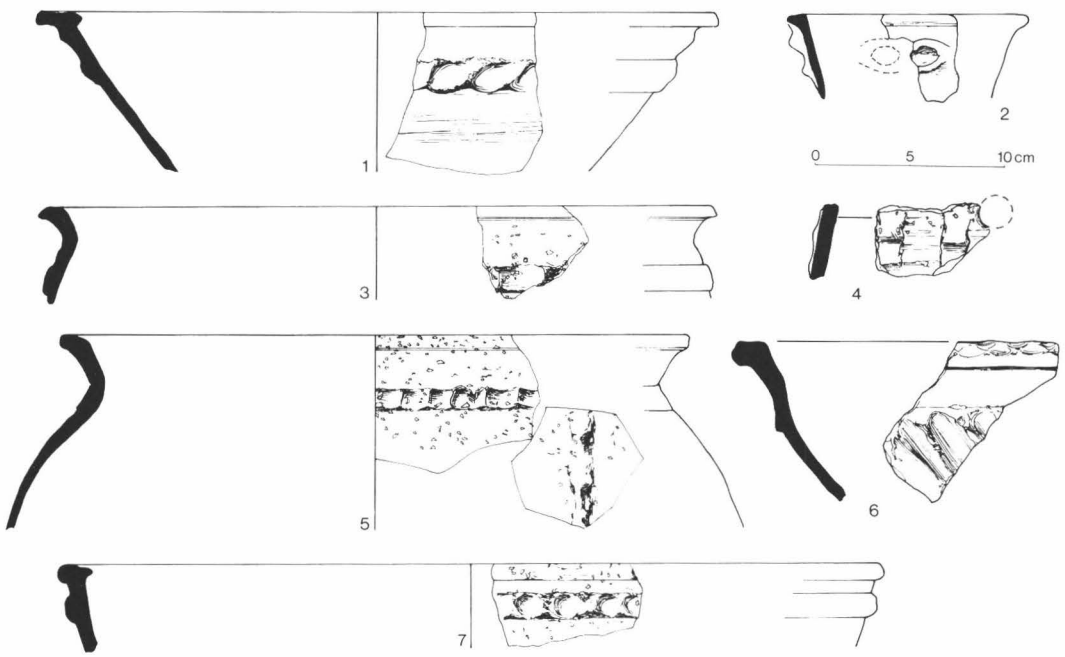

Fig. 3 Devil's Ditch, Boxgrove 1981. Pottery.

Animal bone and marine molluscs

In spite of the acid nature of the gravel subsoil, some bone and shell did survive (though often in decayed condition) in the ditch silts. Since the pottery indicates that layers 11 to 26 (Fig. 2) are broadly contemporary, the bone and shell has been grouped together and is summarised as follows:

Bos 6 fragments *Ovis* 2 fragments *Sus* 6 fragments
Equus 1 fragment *Gallus* 1 fragment
Ostrea edulis (oyster) 14 fragments
Mytilus edulis (mussel) 1 fragment.

Presumably, these animals and molluscan remains reflect the nature of late medieval diet, but the sample is so small that generalisations would be unwise.

ACKNOWLEDGEMENTS

The author is grateful to J. G. Read (Poultry) Ltd for their kind co-operation, and to James Hadfield, David Rudling, Mark Roberts and Philippa Price for helping on site. Thanks are also due to F. G. Aldsworth for Fig. 1, Alec Down for his assistance in dating the pottery, Lys Drewett for Fig. 3 and Caroline Cartwright for specialist identifications.

The finds have been placed in Chichester Museum, and are accompanied by a copy of the archive. A second copy of this archive is retained at the Institute of Archaeology in London.

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References

Bradley, R. J. 1969. 'The Chichester dykes—a dissenting judgement', *Sussex Archaeological Collections* (hereafter *S.A.C.*) **107**, 137–40.

—— 1971. 'A field survey of the Chichester entrenchments', in B. Cunliffe, *Excavations at Fishbourne* vol. I, Rep. Res. Comm. Soc. Antiq. Lond. **26**, 17–36.

Hawkes, C. F. C. and Hull, M. R. 1947. *Camulodunum,* Rep. Res. Comm. Soc. Antiq. Lond. **14.**

Holmes, J. 1968. 'The Chichester dykes', *S.A.C.* **106**, 63–72.

Murray, K. M. E. 1956. 'The Chichester earthworks', in A. E. Wilson, 'The beginnings of Roman Chichester', *S.A.C.* **94**, 139–43.

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A MEDIEVAL AND SEVENTEENTH-CENTURY HOUSE AT WALDERTON, WEST SUSSEX, DISMANTLED AND RE-ERECTED AT THE WEALD AND DOWNLAND OPEN AIR MUSEUM

by F. G. Aldsworth B.A., F.S.A. and R. Harris M.A., A.A.Dip.

The village of Walderton lies on the southern slopes of the South Downs at the south end of Stoughton parish, at a point where a tributary joins the River Ems (Fig. 1). The descent of Walderton Manor is known from at least 1244 but it was divided before the seventeenth century, two manors being referred to in 1623.[1]

There are no early detailed maps of the area and the original layout of the village can only be deduced from its form on a survey of 1818;[2] *the Stoughton Tithe Map of 1849; surviving buildings; and earthworks indicating the former sites of houses and field boundaries (Fig. 2). Only two timber-framed medieval houses appear to survive today in the village, Downland Cottage and Mount Pleasant Cottage, and in both cases little more than the original roof timbers are present since both have been underpinned in brick and flint, probably in the first half of the seventeenth century. A third timber-framed building, henceforth in this report referred to as Walderton Cottage (Site 1), had also been underpinned in brick and flint and this was dismantled in 1980 for re-erection at the Weald and Downland Open Air Museum, at Singleton. During and immediately after the dismantling an archaeological excavation was undertaken to determine the extent and period of occupation on the site. Whilst this was in progress a field survey of the village was undertaken and several house sites were recorded as earthworks, both in the field to the east of Walderton Cottage and in the field, referred to on the Stoughton Tithe Map as 'Pildare', to the south of Manor Farm (Fig. 2). The latter example was surrounded by a bank and a ditch and lay close to the top of the hill. In 1981 an excavation was undertaken on this house site (Site 2) prior to destruction by ploughing, in an attempt to determine the nature of occupation on it.*

This report concerns the investigations on the two sites and includes a brief account of the history of the ownership of Walderton Cottage based on documents retained with the deeds of the property.

SITE 1: WALDERTON COTTAGE

PERIOD 1: Medieval (circa 1270–1400)

The earliest occupation on the site was represented by a gully and a collection of pottery sherds[3] sealed beneath the earliest recognisable floor surfaces of Periods 2, 3 and 4. The gully, which was about 20 cm wide and 24 cm deep, was traced over a distance of 9 m from the western extremity of the excavation almost as far as the Period 2 wall (Fig. 3), but the nature of the gravel into which it was cut made identification impossible beyond this point. There was, in fact, little to differentiate the gully fill from the surrounding gravel except that the gully contained oyster shell with its gravelly fill and this gave it a slightly whiter appearance. Whilst it could be argued that the gully may have carried a sill beam for a timber-framed building it

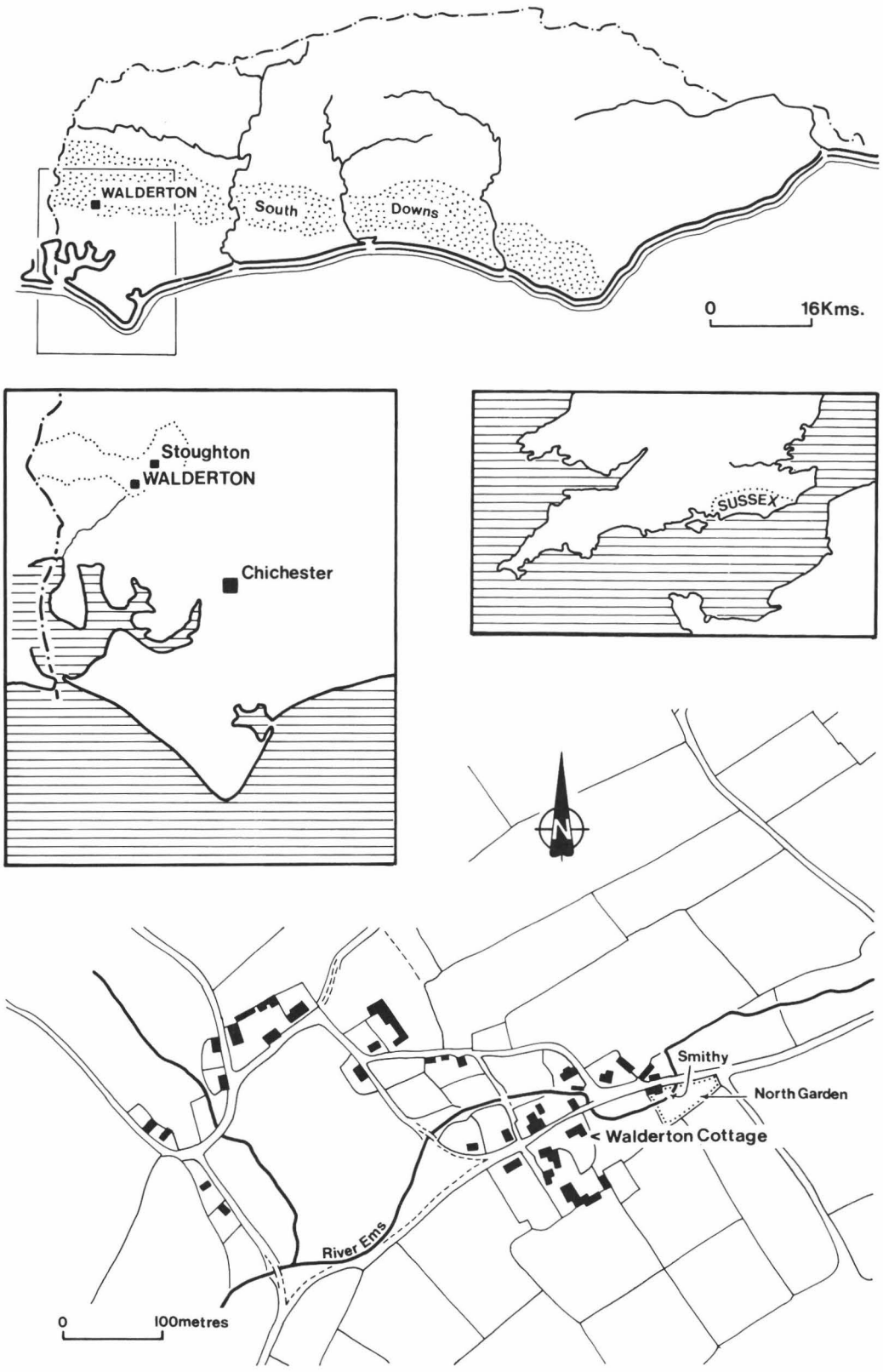


Fig. 1. The Location of Walderton Cottage. The plan of the village of Walderton (below) is based on the Stoughton Tithe Map of 1840.

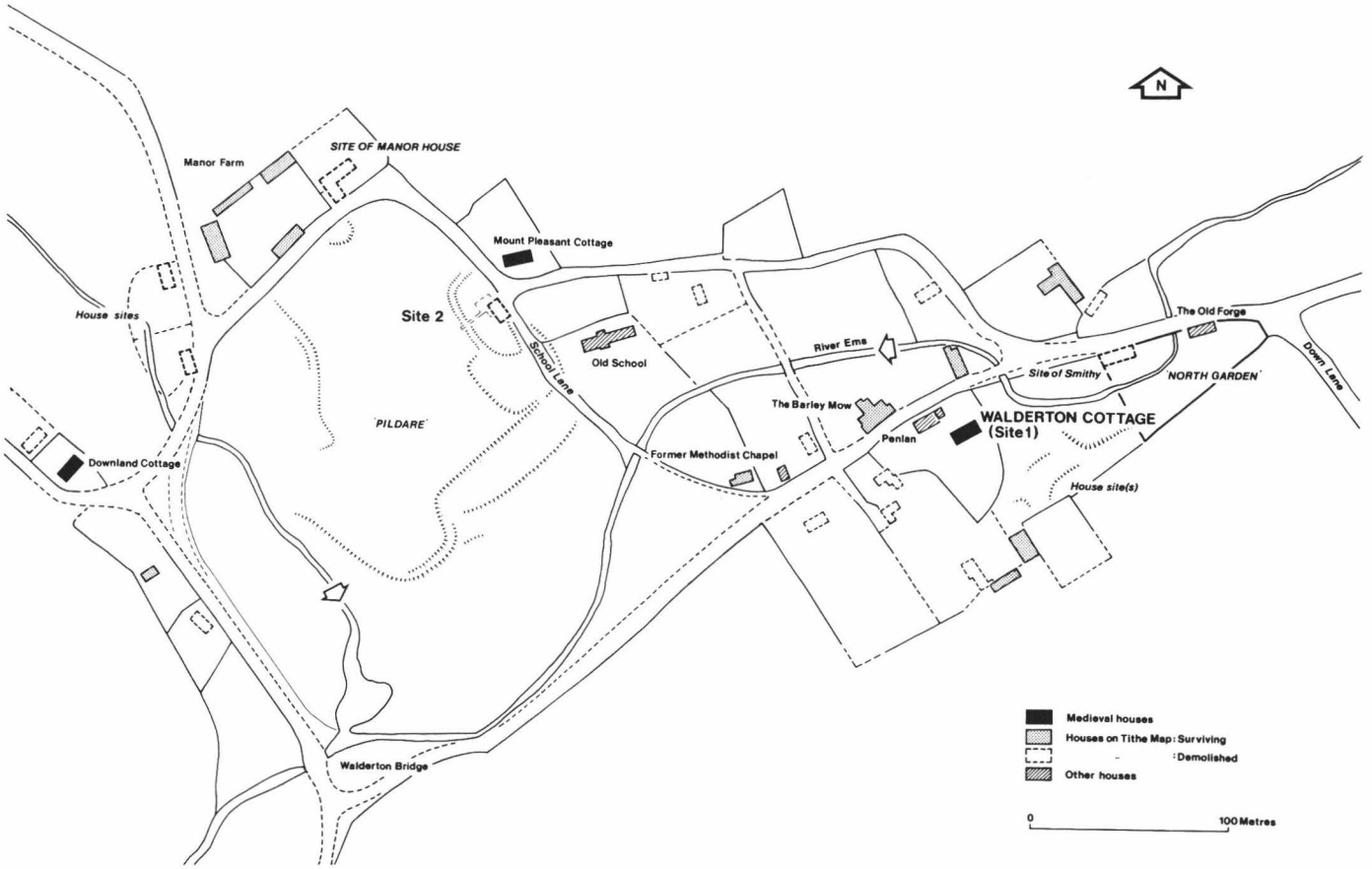


Fig. 2. Walderton, showing the location of the two sites investigated and the older buildings in the village.

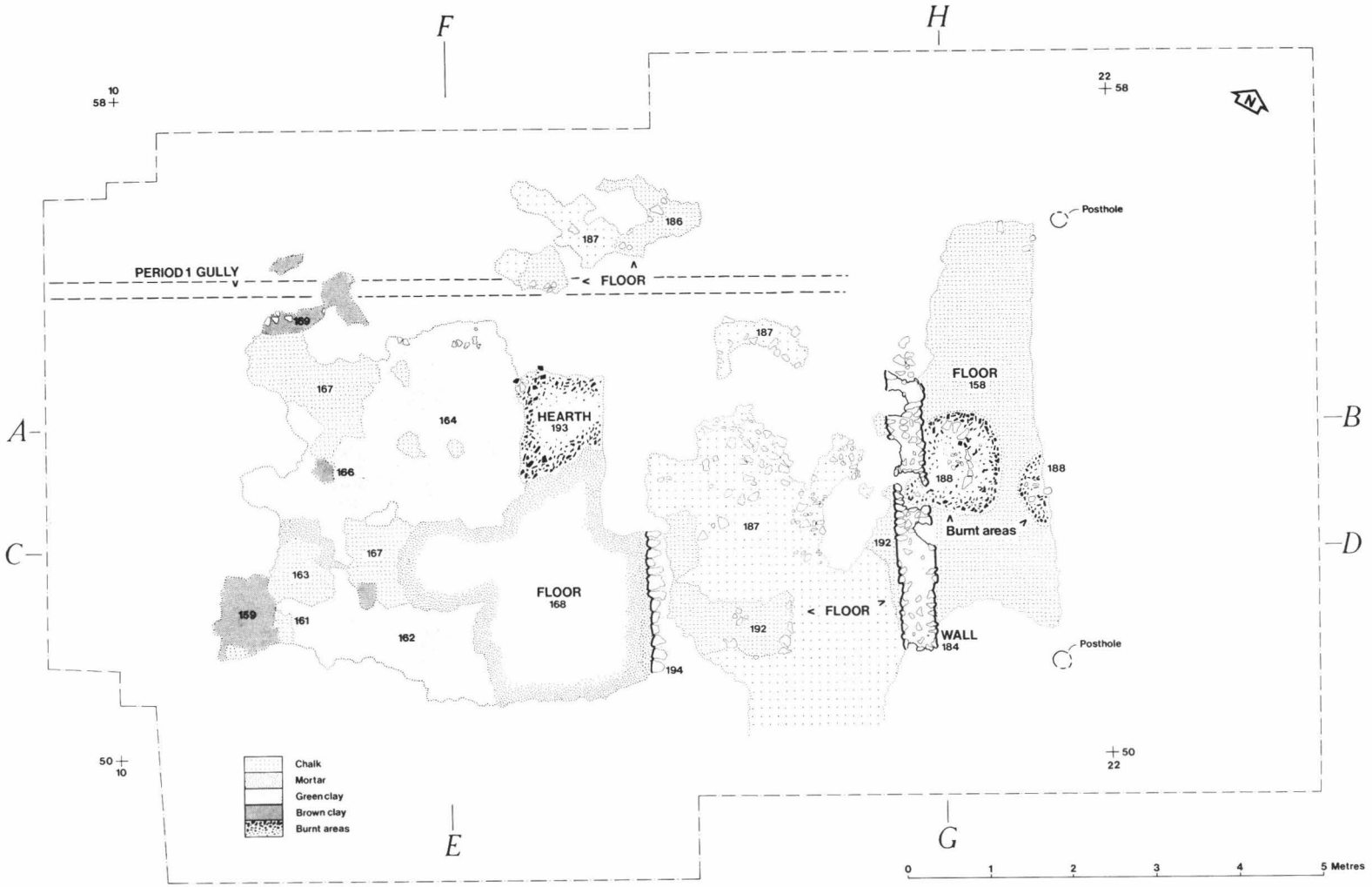


Fig. 3. Periods 1 and 2a: Ground plan as revealed by excavation.

seems more likely that it represents a drainage channel associated with agricultural activity prior to the construction of the first recognisable building on the site.

The small group of pottery from the gravel (Layers 160, 190 and 191) underlying the earliest floor levels of Period 2, was sealed in places only by the floors of Periods 3 and 4 and can, therefore, not be regarded as an uncontaminated group. Much of the material is medieval, ranging in date from the late thirteenth to the fifteenth century, but it includes several Painted Ware sherds (Fig. 21, No. 8) and a vessel with external strapping (Catalogue No. 18 — not illustrated), which could push the date into the first part of the sixteenth century. Assuming, however, that the late material is intrusive, the small amount of medieval pottery together with the early material which appears as residual in later levels (see p. 80) would suggest occupation or use of the site in the medieval period, perhaps between about 1270 and 1400, for which the only identifiable feature was the gully.

PERIOD 2: Later medieval (circa 1400–1550)

The earliest recognisable house plan was preserved at ground level in the form of a wall; three or four floor surfaces, two of which were separated by a line of flints; and two postholes which may or may not be related to this period (Fig. 3).

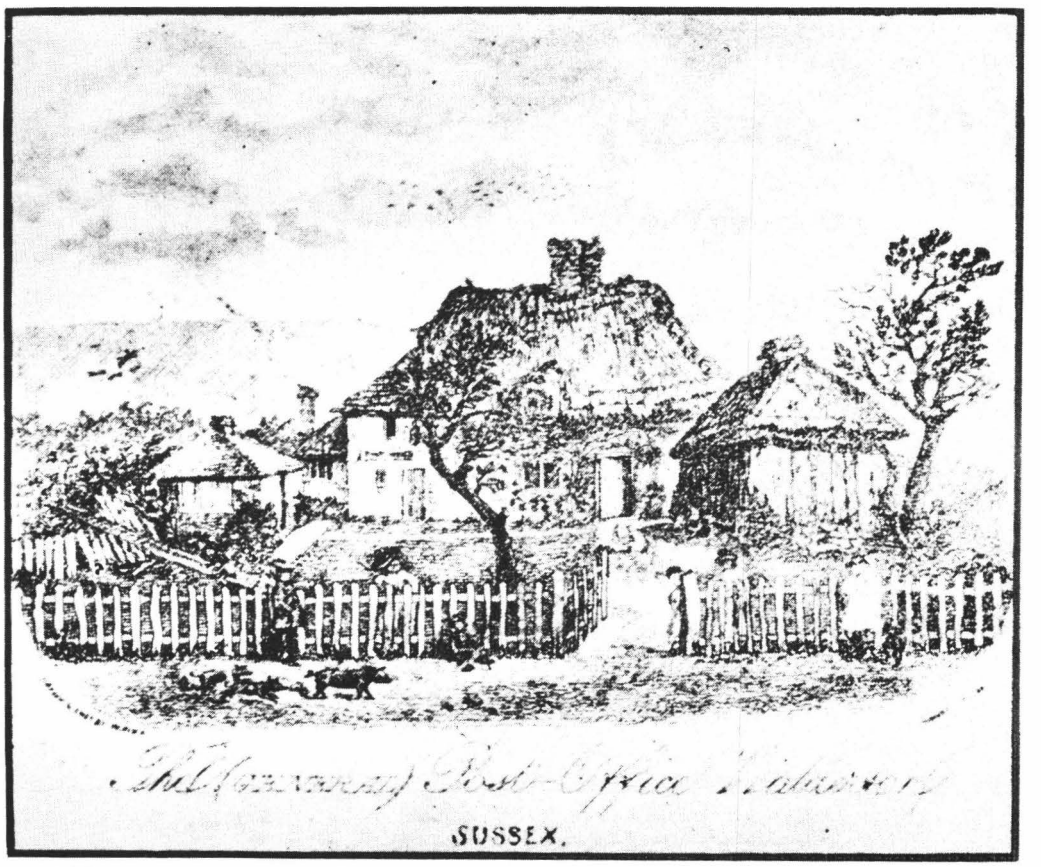


Plate I. Walderton Cottage, from a drawing made at the end of the nineteenth century. This shows the east end in use as a Post Office. The building in the right foreground is the shop, built between 1874 and 1898 and extended as a house in 1901 (see p. 84). Reproduced with the kind permission of Mr. M. Uniacke.

The wall (Layer 184) comprised one course of flints in yellow mortar, about 48 cm wide, which was traced over a distance of 4.4 m. Abutting the east side of the wall was a puddled chalk floor (Layer 158) over large unmortared flint nodules (Layer 189). The floor was overlaid by two areas of burning (Layer 188), which both contained fragments of brick, tile, and pottery, and one of these partially overlay the wall. To the west and north-west of the wall were patches of chalk rubble (Layer 187) over the surface of which were the remains of a puddled chalk floor or floors (Layers 186 and 192).

The wall, burnt areas and floors were overlaid by a further puddled chalk floor (Layer 127) and this was cut by the foundation trenches of Period 3 wall footings (Figs. 4 and 5). At the bottom of the foundation trenches two postholes, each about 20 cm in diameter, were cut a few centimetres into the underlying gravel. Whilst they may relate to this, or an earlier period, their character and position suggests that they are more likely to relate to a later phase of reconstruction (see p. 62).

The line of flints in yellow mortar (Layer 194), set in a shallow foundation trench, separated the chalk floor (Layer 192) from a further series of floor surfaces to the west. The earliest, immediately over the natural gravel, was green clay (Layers 162 and 164), up to 10 cm thick, and this was overlaid by patches of brown clay (Layers 159, 166 and 169) and chalk (Layers 161, 163 and 167) which are probably best seen as repairs to a worn surface. Partly overlying these and immediately adjoining the west side of the line of flints was a more extensive floor surface of broken flint in a hard yellow mortar (Layer 168). An area of burning to the north of this contained brick and tile fragments (Layer 193) and this is probably best seen as the remains of a hearth. These features were overlaid by the Period 4 wall footing and floor surfaces (Layers 172 and 175).

The later medieval pottery associated with these features[4] can be used to date them. The floors are dated by material lying both in and on them, and in view of the way in which many of the sherds appear to have been broken and then crushed into the floor surfaces, it seems likely that these, and the spindle whorl (Fig. 23 No. 2) can be considered to have been dropped while the floors were still in use.

At the east end the puddled chalk floors (Layers 127 and 158) and the two burnt areas (Layer 188) produced material (Catalogue Nos. 33–51) with a date range from the fifteenth to sixteenth century probably from about 1400 to 1550. This includes a rim sherd of a necked bowl in Painted Ware (Fig. 21 No. 11); neck and body sherds of a large Painted Ware pitcher (Fig. 21 No. 12); the bunghole of another Painted Ware pitcher (Fig. 21 No. 14); two thumbed base sherds (Fig. 21 Nos. 18 and 27); a rim sherd from a jug with splashes of external glaze (Fig. 21 No. 21); and a rim sherd from a shallow dish with an applied thumbed strap decoration (Fig. 21 No. 22).

In the central area the puddled chalk floor (Layer 186) and the rubble chalk layer (Layer 187) included a small group of sherds (Catalogue Nos. 52–60) which range in date from the late thirteenth to the fifteenth century. Even assuming that some of this material is residual from Period 1, a slightly earlier date than the east end seems likely.

At the west end the earliest, clay, floor surface (Layers 162 and 164) included some residual late thirteenth century sherds but most of the material is centred on the late fourteenth and fifteenth centuries (Catalogue Nos. 19–32), typified by sherds from two vessels in a fine sandy fabric (Fig. 21 Nos. 19 and 20), one with splashes of glaze, and part of the handle of a jug (Fig. 21 No. 28). Two sherds from a repair to this floor (Layer 168) cannot be dated with any degree of accuracy.

SECTIONS

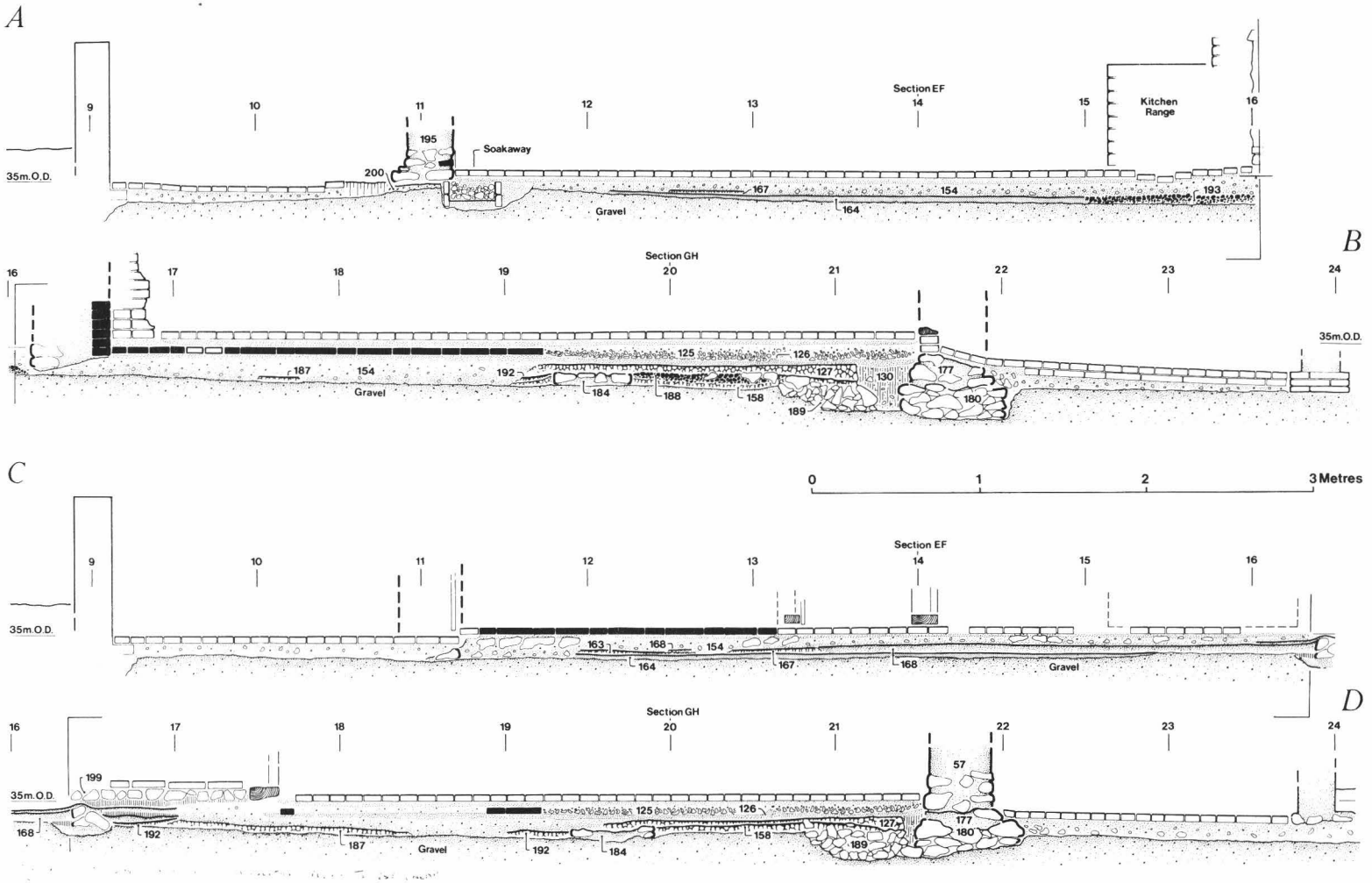


Fig. 4. Archaeological sections, east-west.

SECTIONS

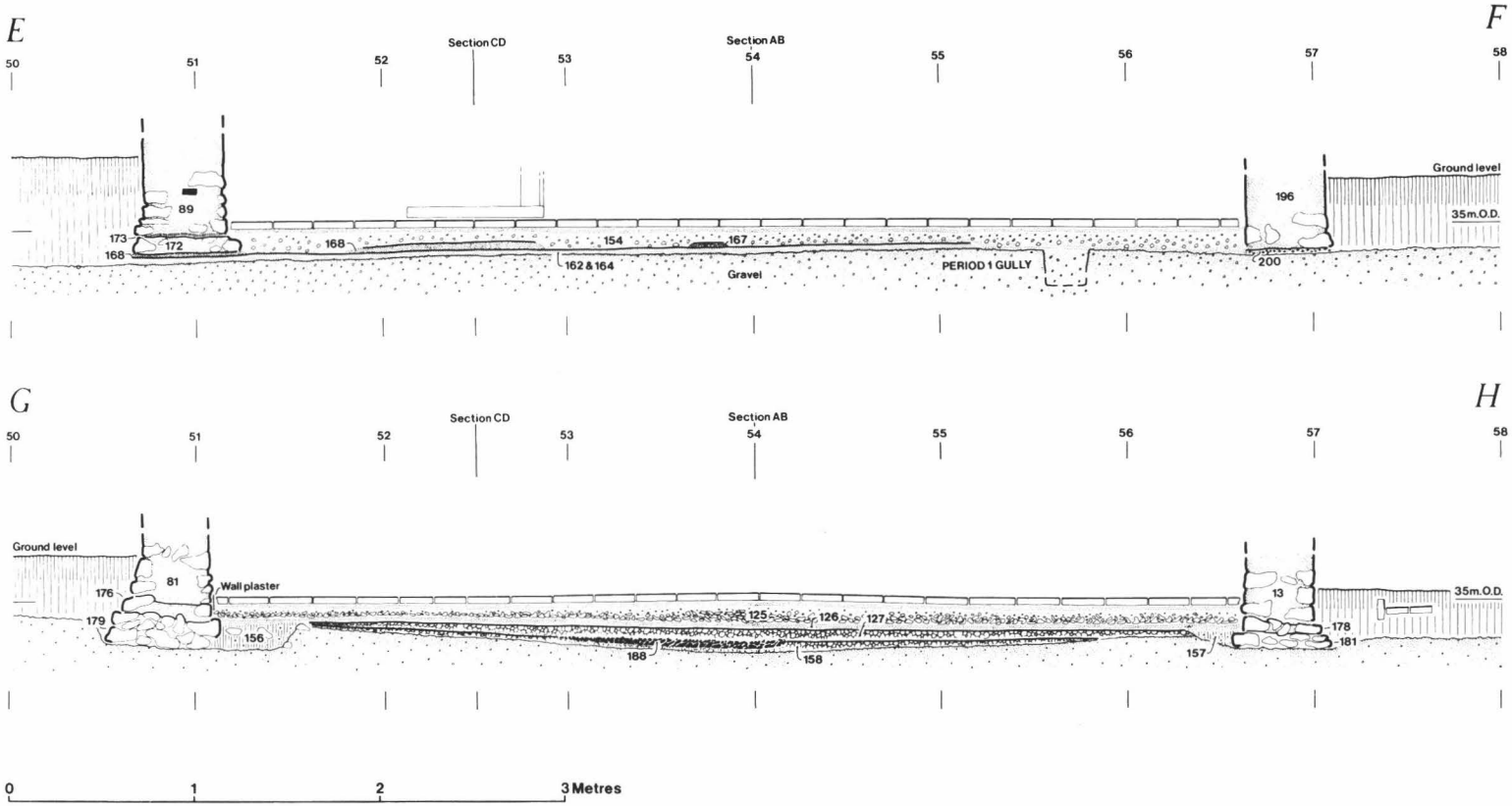


Fig. 5. Archaeological sections, north-south.

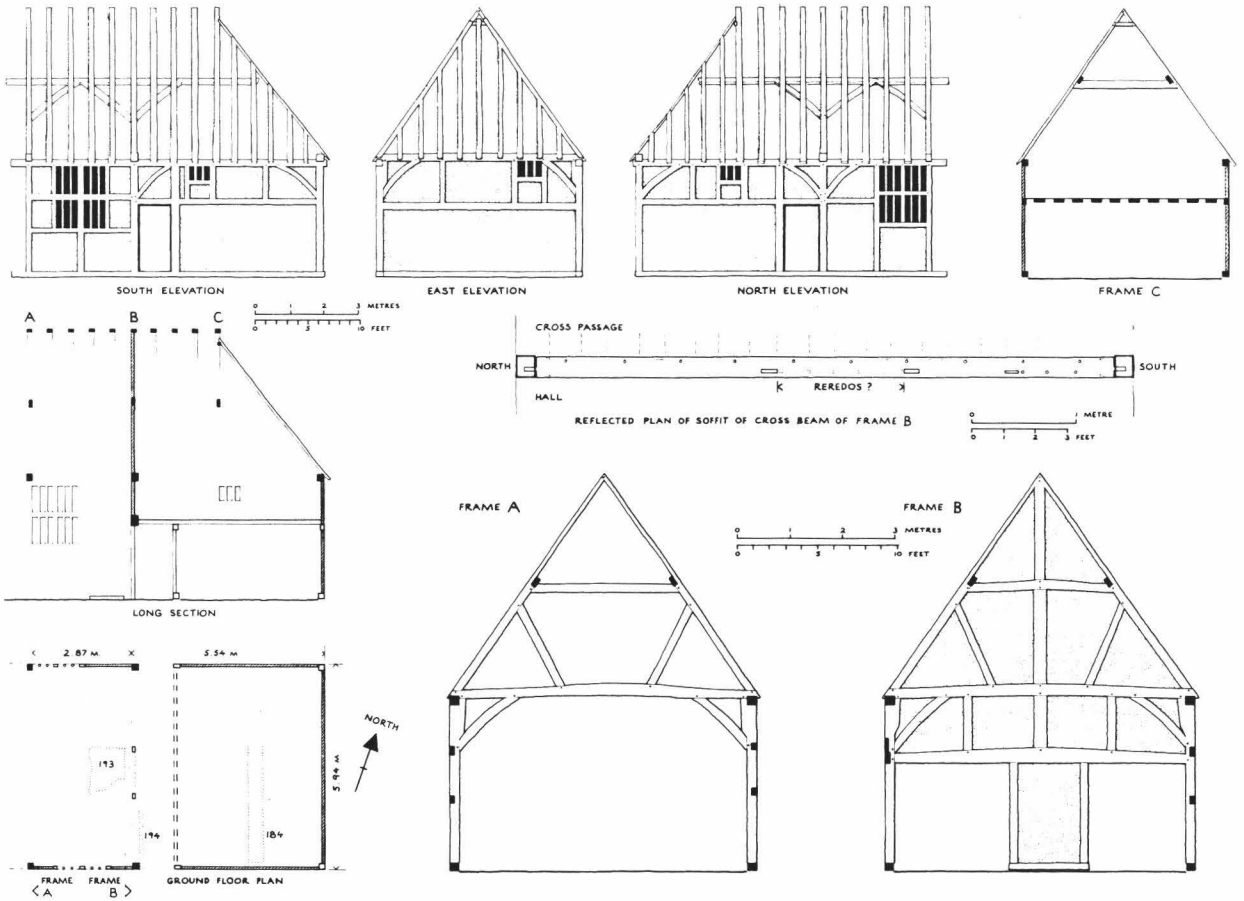


Fig. 6. Period 2b: The timber-framed building. Frames are shown reconstructed as far as the evidence allows. In the ground floor plan the archaeological layer numbers are shown.

Thus it seems likely that the earliest recognisable house plan on the site dates from *c.* 1400–1550. It extended over an area at least 10 m long and 6.3 m wide and enclosed at least three rooms. The western room contained a hearth, indicating that it functioned as an open hall. There was no evidence to indicate the nature and extent of the surrounding walls but two divisions survived as a wall footing and a line of flints. The significance of these features will be discussed after consideration of the evidence offered by the surviving medieval building.

The Timber-Framed Building

The earliest part of the surviving building was a timber-framed structure (Fig. 6). The wall plates, tie beams, trusses and rafters of this building were largely intact but below wall-plate level the only external remains were the short surviving sections of four of the six main posts and a length of rail in the south wall (re-used in the seventeenth century as the mantel beam of the chamber fireplace). The central cross-frame of the two-bay building also retained its framing and infill panels from the tie beam down to the main cross beam at first floor level (Fig. 9). The original east end tie beam survived but was re-used at the west end of the building during the radical alterations of the seventeenth century.

The roof contained two full trusses with tie beams, A and B (Figs. 8 and 9). Truss A was originally an open frame with no infill panels but containing a collar and two raking struts, while B was a closed truss with a central stud above and below the collar in addition to the raking struts. The side purlins were clasped between collar and diminished principal rafters, and wind-braced to the two main trusses. The original roof was fully hipped at the east end, the top of the hip being taken on an intermediate truss C.

Plate II. Walderton Cottage, a view of the north side in about 1950. This shows the east outshot and the corrugated tin extension in use as a Post Office. Reproduced with the kind permission of Mr. M. Uniacke.

From the evidence of mortices and surviving timbers the plan of the building consisted of an open hall at the west end, which was heavily soot-blackened from the open fire, and a ground floor room at the east end, probably with a cross passage dividing the two. The upper floor at the east end covered the cross passage as well as the ground floor room to give a large upper chamber.

The main uncertainty in this interpretation concerns the west end of this timber-framed structure. Originally truss A was not infilled above the tie beam and contained no framing at all below except for a diagonal brace at each side. Its upper face faced into the hall (as also did that of truss B). Both the wall plates continued for exactly 42 cm beyond the west face of the posts of truss A and in that distance neither plate had a stave hole, mullion mortice, scarf joint, or rafter seating. Also the remains of the main posts of frame A, of which 117 cm survived beneath the wall plate on the north side and 97 cm on the south side, had no mortices or other evidence to suggest that the timber-framed structure continued towards the west. The only conclusion that can be drawn is that the building depended on another, presumably earlier, structure to close or continue the west end of the hall. The axis of this structure could either have been in line with or at right angles to the surviving building. The only clue we have to its form is that at the western end of each wall plate there is a mortice in the top surface which might indicate a vertical post rising to a higher roof level of the earlier structure. At ground level, however, the lowest floor of the hall (Layers 162 and 164) continued without change for a further 2 m beyond the west side of truss A, indicating that the adjoining structure added at least that distance to the west end of the open hall. This suggests that the adjoining structure is likely to have been in line with the surviving building rather than forming a cross wing to it.

The cross beam of frame B at first floor level also presents a difficulty. Dividing the cross passage from the hall this would normally show evidence for short screens at each side of a wide central opening. In this case, however, the mortices, stave holes, and chamfers beneath the beams do not suggest any unambiguous interpretation (Fig. 6). There are three mortices, quite cleanly marked and cut but not pegged. From south to north along the soffit of the beam, in the first 92 cm there are three cleanly drilled stave holes before the first mortice, with a roughly chopped hole near the south end. The next gap of 82 cm between stud mortices has no stave holes and may well represent a doorway, whereas the next gap is nearly 122 cm long and has six roughly chopped shallow stave holes which almost certainly represent inserted wattle and daub infill. The chamfer on the east side is continuous between stops at each end but that on the west side (facing the open hall) disappears for the length of this 122 cm gap. The absence of chamfer combined with the absence of original stave holes suggests this as the position of a length of reredos wall behind the open fire but no supporting evidence of comparable examples in this area can be cited. The final gap between the third mortice and the north end also contains no original stave holes but was chamfered on both sides. A possible interpretation of this evidence would be that the central 122 cm gap represents an original reredos wall flanked by two wide openings (Fig. 6), into one of which a doorway was later inserted. Although this is a most unconventional arrangement the interpretation is supported by the position of the area of burning (Layer 193) interpreted archaeologically as a hearth in periods 2 and 3 (Fig. 3). Pushing speculation even further, a series of seven peg holes which are set in a meandering line on the west (hall) face of the beam in the position of the reredos wall might conceivably have been used for hook-pegs from which to hang meat for smoking (Fig. 9).

The existence of opposed doorways in the north and south walls on the east side of frame B is suggested but not proved by mortices in the wall plate at each side, the positions of which

Fig. 7. Plan at 38 m O.D., as found. The wall plates and tie beams are shown in reflected plan so that the mortices and stave holes are seen.

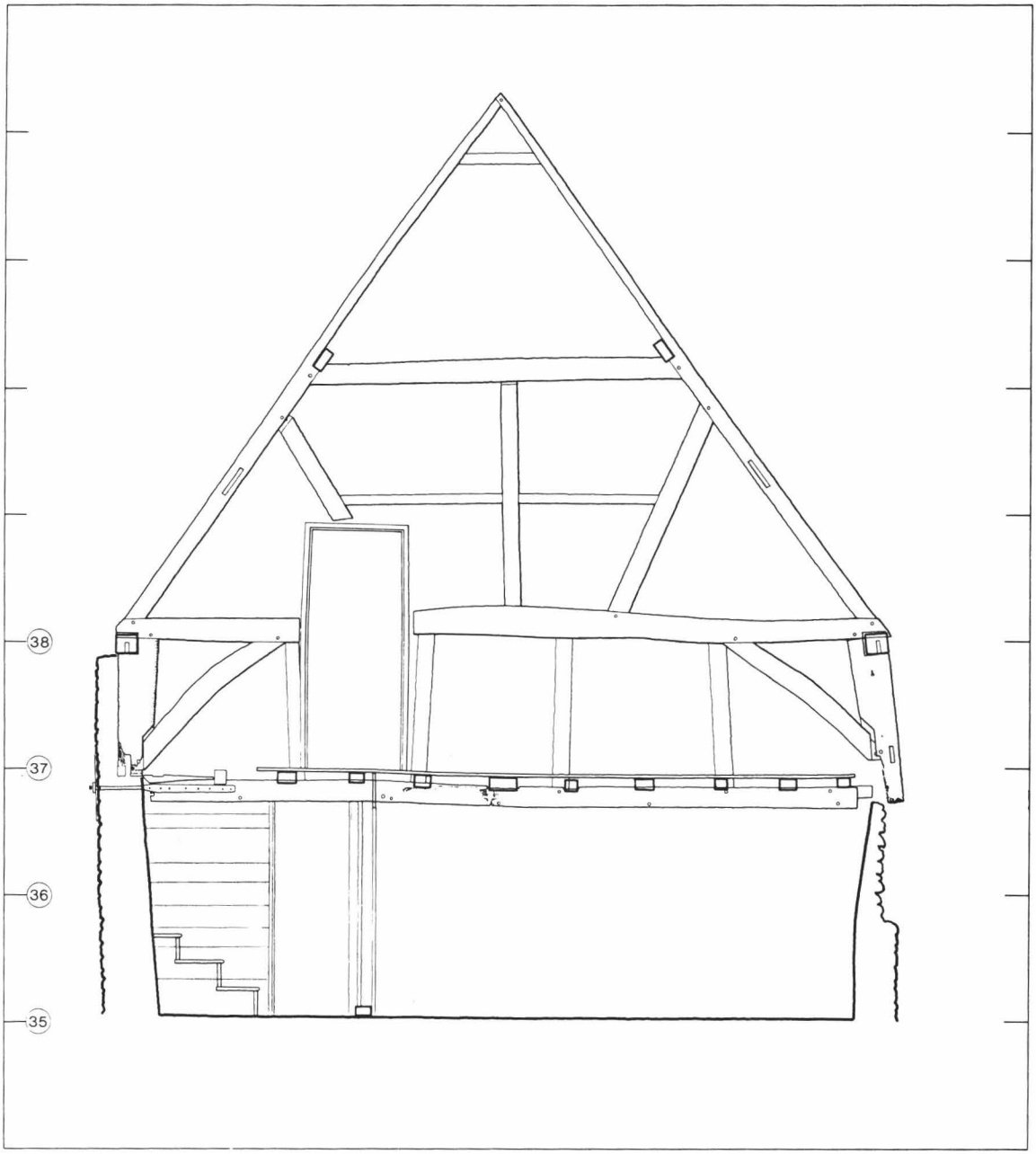


Fig. 8. Frame A, as found, east face.

would yield doorways 97 cm wide (Fig. 6). In timber-framed medieval houses the position of a main doorway is sometimes marked by a stud in the first floor frame as well as the ground floor: in this case the substantial length of the bay between cross frame B and the east end wall

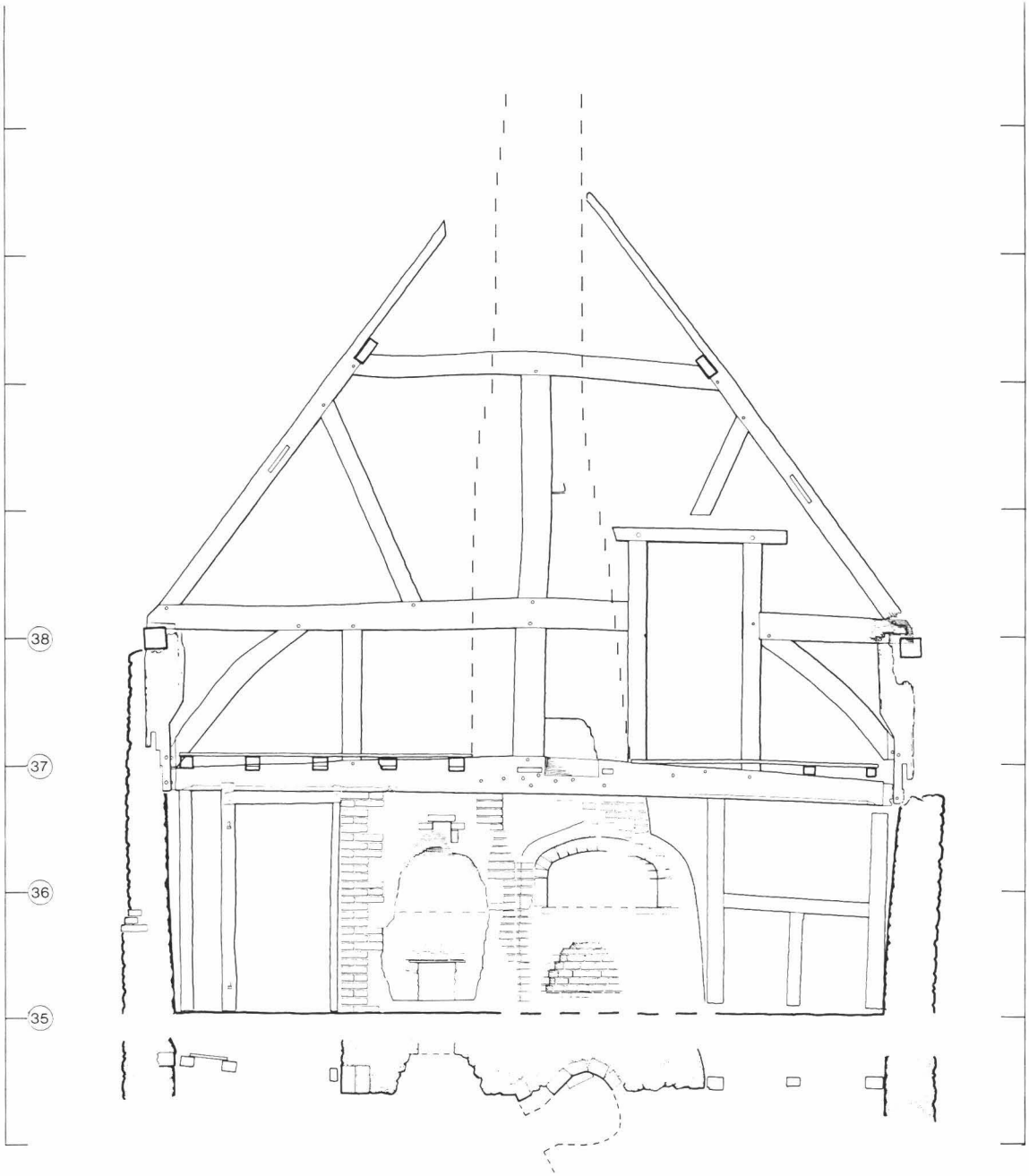


Fig. 9. Frame B, as found, west face. The frame is shown after removal of the chimney inserted in, or soon after, 1797.

(5.33 m) suggests that the studs forming the east side of the doorways may have been full-height, thus reducing the length of the mid rail (Fig. 6).

The original upper floor at the east end had not survived but its form was clear from mortices in the eastern face of the main cross beam of frame B. These were about 30 cm long at 59 cm centres, 3.8 cm deep and with the bottom of the mortice approximately 3.8 cm from the chamfered soffit of the beam. The floor structure must therefore have consisted of unusually wide joists spaced only 25 cm apart, strongly suggesting that the floor boards were laid parallel in rebates in the top edges of the joists rather than transversely over the top of the joists in the more usual way.

The windows on either side of the open hall were the very common double-height arrangement with twelve lights and diagonally-set mullions, but for some reason they were not opposite one another, the window on the south side being positioned centrally in the bay while that on the north side occupied the western half of the bay and abutted frame A. The chamber windows were also unevenly placed with the north window roughly central but the east and south windows off-centre, possibly suggesting a stair position in the south-east corner of the building. The mullion mortices in the east and south windows of the chamber were rectangular, 7.6×3.8 cm (Fig. 7), possibly indicating that these mullions were moulded and that the south and east were the more important elevations of the building.

In summary the earliest surviving phase of the timber-framed house consisted of an open hall, ground floor room, undershot cross passage, and chamber, added as an extension to a pre-existing building to the west. The suggested arrangement of an open fire built against a reredos wall between the hall and cross passage is extremely unusual but is supported by architectural and archaeological evidence.

The wall base revealed archaeologically (Layer 184) is most unlikely to belong to this phase as it would have formed a transverse partition wall within the lower bay of the house, an arrangement for which few if any precedents could be found. The line of flints in yellow mortar (Layer 194) also conflicts with the architectural evidence as it lies in the position of the suggested opening into the hall beneath the southern end of frame B. It is therefore likely that Period 2 consisted of two phases, and a possible interpretation of these is shown diagrammatically in Fig. 18. In Period 2a the wall (Layer 184) is suggested as the east end wall of the house, with an extension to the east under an outshot roof. In Period 2b the surviving timber-framed building is shown as replacing the eastern bay of the earlier hall and the east end of the earlier house, the open hearth in the hall remaining in the same position in the two phases. The upper chalk floor (Layer 127), sealing the earlier wall (Layer 184), and the yellow mortar floor (Layer 175 and Fig. 11) can then be seen as features of the Period 2b reconstruction.

PERIOD 3: Post-Medieval to Seventeenth Century (circa 1550–1620)

The archaeological features associated with the alteration of the building immediately after Period 2 are difficult to understand because they cannot be stratigraphically related to each other and because they cannot be directly associated with alterations to the surviving building. They are grouped together here because they clearly pre-date the rebuilding of the house in brick and flint in Period 4.

During this period the building covered an area measuring some 11.0 x 6.4 m and no obvious trace of an internal division was observed at ground level, but all external wall lines were represented (Fig. 11).

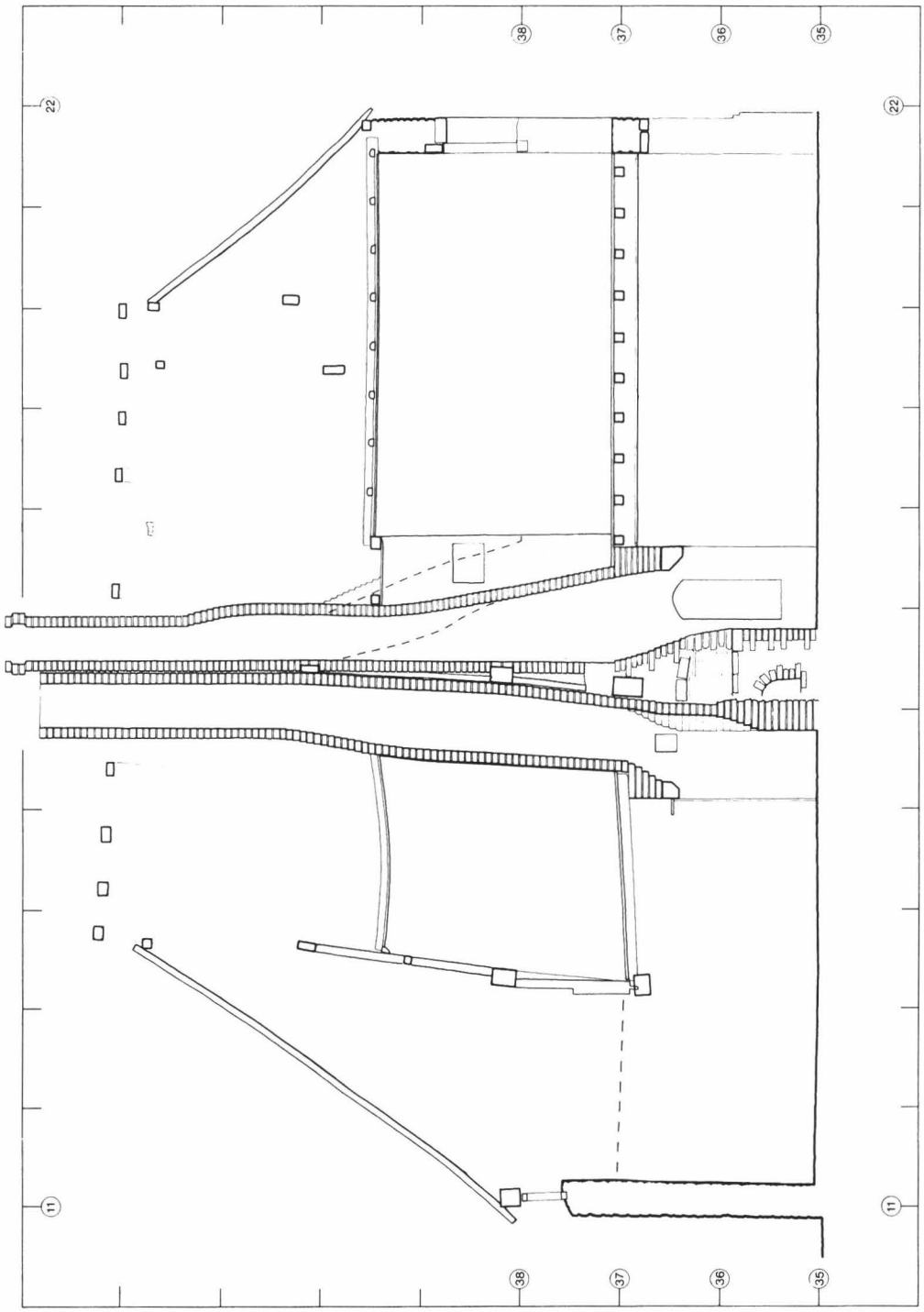


Fig. 10. Long section, as found, looking north.

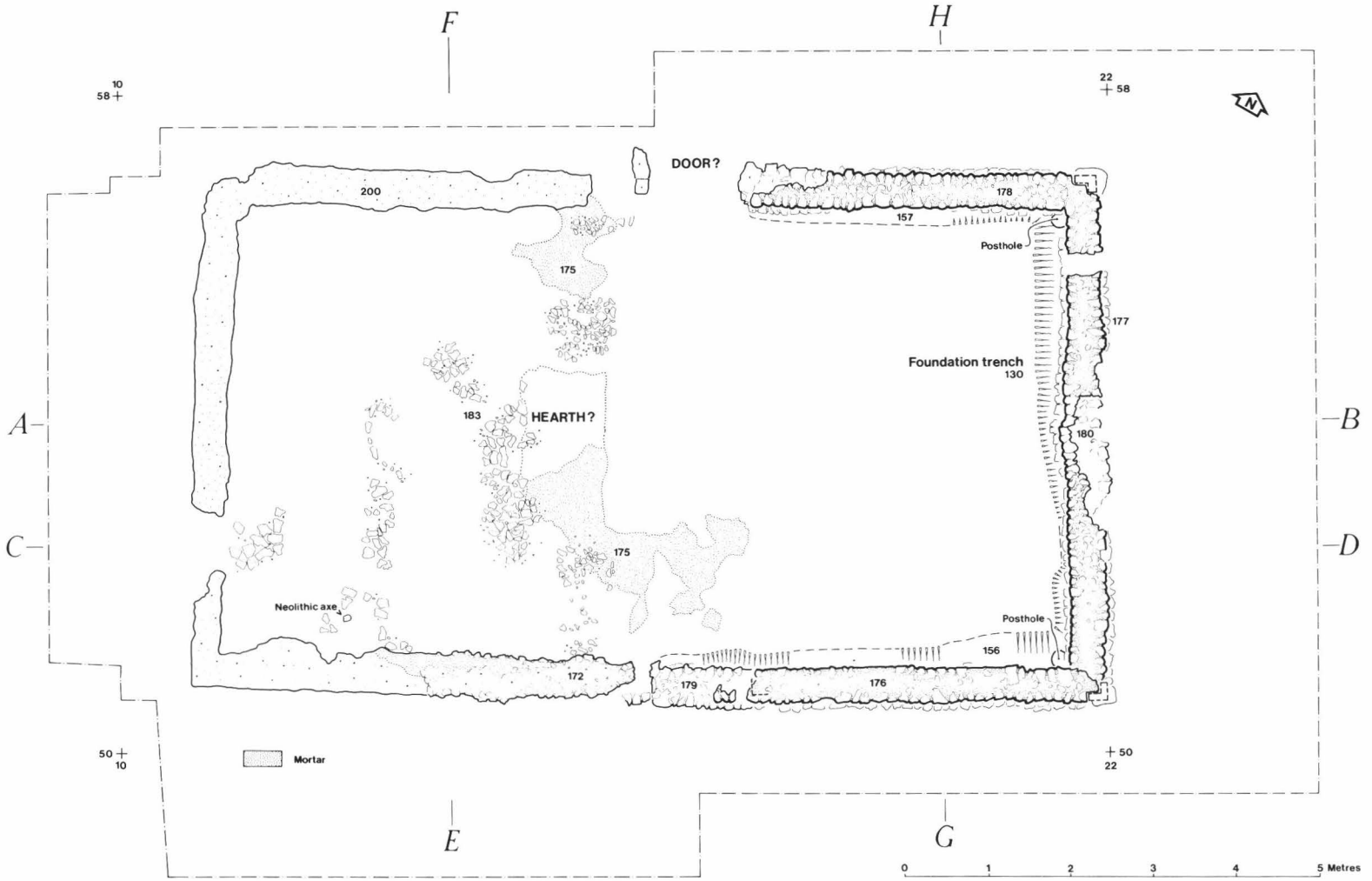


Fig. 11. Periods 2b and 3: Ground plan as revealed by excavation.

The walls of the eastern half of the building were provided with substantial flint foundations (Layers 179, 180 and 181), up to 60 cm wide, laid without mortar in a trench (Layers 130, 156 and 157) cut through the chalk floors of the Period 2 building. On the north side the foundations terminated in a block of brown sandstone which probably represented one side of a doorway — the other side also being represented by a similar block of stone. The foundation supported a wall, up to 46 cm wide, which survived as from one to two courses of flint in a yellow mortar (Layers 176, 177 and 178). Whether this wall represents the remains of a plinth-wall which supported the sill beam of a timber-framed building could not be determined, but the top of it, where overlaid by the flint wall of the Period 4 rebuilding, survived up to 12 cm higher on the south wall than on the north and east walls.

On the internal angles at the north-east and south-east corners, traces of shallow postholes were observed cut into the bottom of the foundation trench (see p. 50). These may have either supported the bases of timber scaffolding during a period of rebuilding or have been the remains of earlier postholes.

The lines of the walls at the western end may have been represented by a patchy layer of clay and gravel (Layer 200), over the floors of the Period 2 structure and the natural gravel and sealed beneath the Period 4 walls. However, on the south side there were traces of a flint footing (Layer 172) which included some mortar. This, again, overlaid the Period 2 floors and was sealed by a layer of soil (Layer 173) and the flint wall (Layer 89) of the Period 4 reconstruction.

Within the enclosed area there were no features which could be directly related to the surrounding walls, but it seems likely that the open hearth of Period 2 may have remained in use until the insertion of the fireplace in Period 4. Two patches of yellow mortar (Layer 175) represent floor surfaces, also in use prior to the insertion of the Period 4 fireplace, that to the south sealing the Period 2 floors and line of flints (Layer 194). These are probably best seen as belonging to the Period 2b reconstruction (see above).

Elsewhere it was difficult to differentiate between the floor surfaces of Period 3 and the make-up for the brick floor of Period 4. At the west end the Period 2 floors and the two patches of yellow mortar (Layer 175) were overlaid by flint cobbles mixed with mortar (Layers 154, 155 and 183) containing pottery and part of a Neolithic stone axe (see p. 81 and Fig. 23 No. 1). At the east end the Period 2 chalk floor (Layer 127) was overlaid by orange/brown mortar (Layer 126) which on a line about 90 cm from the inner face of the east wall survived in the form of a pronounced ridge (Fig. 19). The ridge would appear to indicate the former existence of some internal feature at the east end of the building but it is not clear whether this belongs to Period 3 or Period 4.

The post-medieval pottery from these features[5] can be used to date them. The wall foundations at the east end are dated by pottery associated with them and by material in the fill of the foundation trenches in which they were laid. Much of this material is residual and includes a rim sherd from a Painted Ware jug (Fig. 21 No. 13); part of the slashed handle of a Painted Ware jug (Fig. 21 No. 15); the rim of a bowl (Fig. 21 No. 24); the rim of a lid (Fig. 21 No. 25); a body sherd from a green glazed vessel with herring-bone decoration (Fig. 21 No. 26); and the thumbed base of a late-medieval jug (Fig. 21 No. 29). The latest material which provides the closest dating is a group of sherds (Catalogue Nos. 77 to 80), all of the seventeenth century, which closely resemble material from kilns recently located at Crane Street, Chichester[6] and at Graffham near Midhurst[7] and these include a rim of a small bowl with internal brown/green glaze (Fig. 22 No. 30); and base sherds from two vessels (Fig. 22 Nos. 34 and 35), one of which (No. 34) has an internal olive-green glaze.

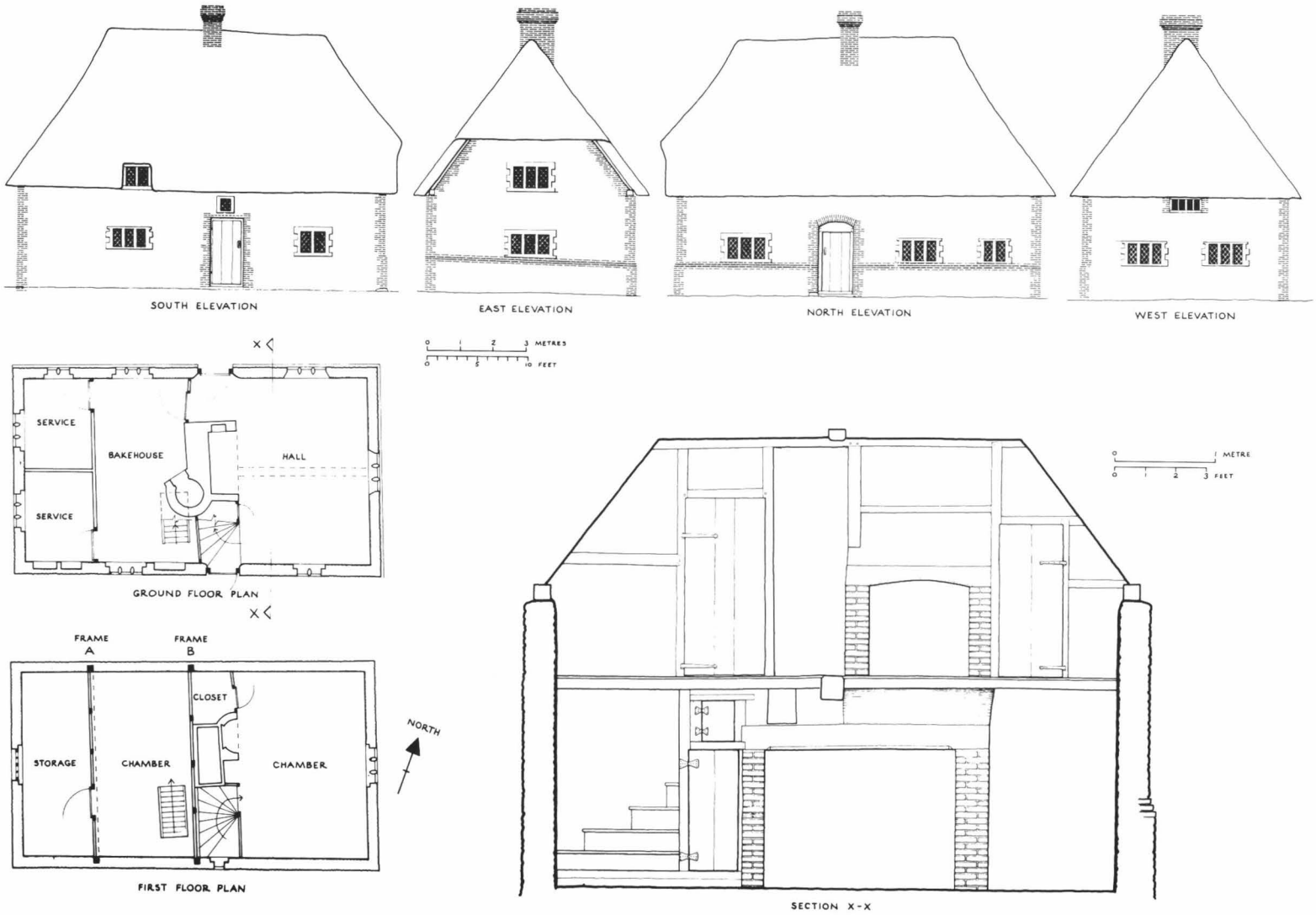


Fig. 12. Period 4: The seventeenth century house.

The wall footings at the east end appear to have been constructed in the first quarter of the seventeenth century but it is difficult to relate these to the surviving remains of the building above ground, because they are too late in date to represent the original plinth wall of the medieval timber-framed building but pre-date the footings of the seventeenth century rebuilding. They are perhaps best interpreted as a phase of underpinning or repair to the medieval building. The flint footing on the south side at the west end may date from the same time or a little earlier and may be related to alterations which could be observed in the surviving medieval structure. At some point while an open fire was still being used in the hall frame A was converted from an open to a closed frame (Fig. 8). The roof truss was filled in with extra framing members and wattle and daub panels. A beam was inserted at first floor level with studs and panels between it and the tie beam above. It was impossible to tell from the assortment of rotted and altered mortices underneath the inserted first floor beam whether the frame was also closed below first floor level in this phase, but the absence of any archaeological evidence for a division along this line at ground level suggests that it was not. The infilling of the truss retained heavy sooting. Below the tie beam the sooting was largely removed when the wall was plastered in the seventeenth century but some small patches remained.

The purpose and result of this alteration is not clear, partly because it is not known whether there were simultaneous alterations west of this frame involving the adjoining structure. The two main possibilities are that either the whole of frame A was closed as a reaction to demolition or alteration of the structure beyond, or that an upper chamber was inserted above the western part of the open hall. In view of the lack of archaeological evidence for a partition at ground level the latter interpretation seems more likely (Fig. 18). In this case it is probable that the walls at the west end were established at this stage on the lines which they retained in the seventeenth century rebuilding, producing the traces of footings found archaeologically. Slight traces of soot adhering to the soffit of the floor joists running between frame A and the west wall suggest that they may date from this alteration rather than from Period 4.

PERIOD 4: Seventeenth Century

The seventeenth-century refurbishment amounted almost to a complete rebuilding (Figs. 12 and 18). The exterior walls were entirely rebuilt in flint and brick, a new upper floor was inserted in the open hall and the east end, and a brick chimney stack was built in the position of the earlier cross passage with hearths serving the ground floor room and chamber at the east end and an oven in the middle room (the old open hall). The internal walls, whether wattle and daub or new brick and flint work, were plastered and white painted. A brick floor was laid on top of the earlier floor levels. The roof was modified to give a half hip at the east end, and was re-thatched.

The work of rebuilding was carried out in identifiable stages. First, the walls of the east end ground floor room were rebuilt including the east jambs of the north and south doorways. The next operation must have been the building of the ground floor part of the chimey stack, onto which the spine beam of the new floor in the east end rested. Then the rest of the walls were built up to support the original wall plate and encase the four surviving fragments of main posts. Finally the chimney was completed. This sequence was shown by the unmistakable yellow colour of the sand in the mortar used in the bricks in the ground floor part of the east end walls (Figs. 16 and 17), by the existence of a horizontal straight joint at the level of the upper floor in the east end, and by the re-use of two pieces of the original timber frame in new

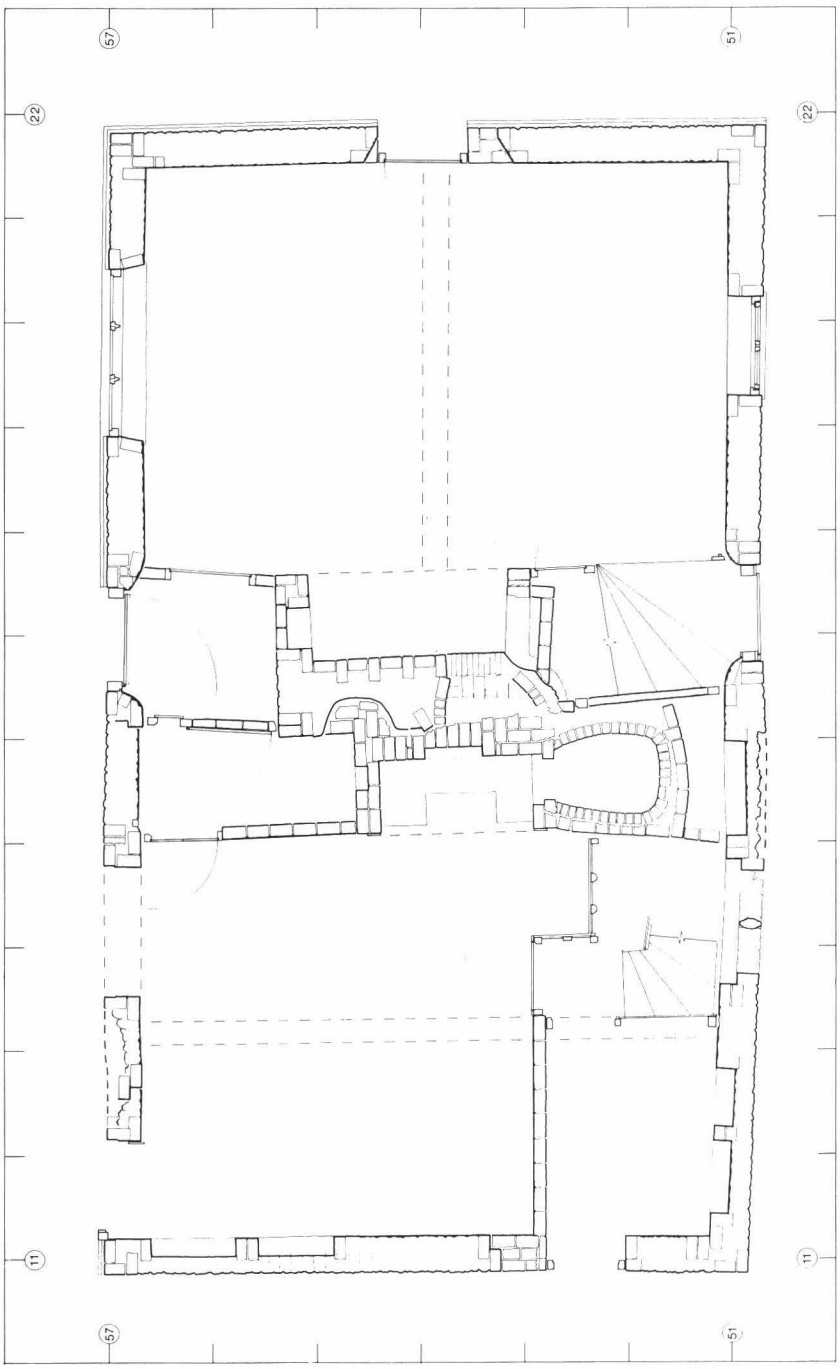


Fig. 13. Plan at 36 m O.D., as found.

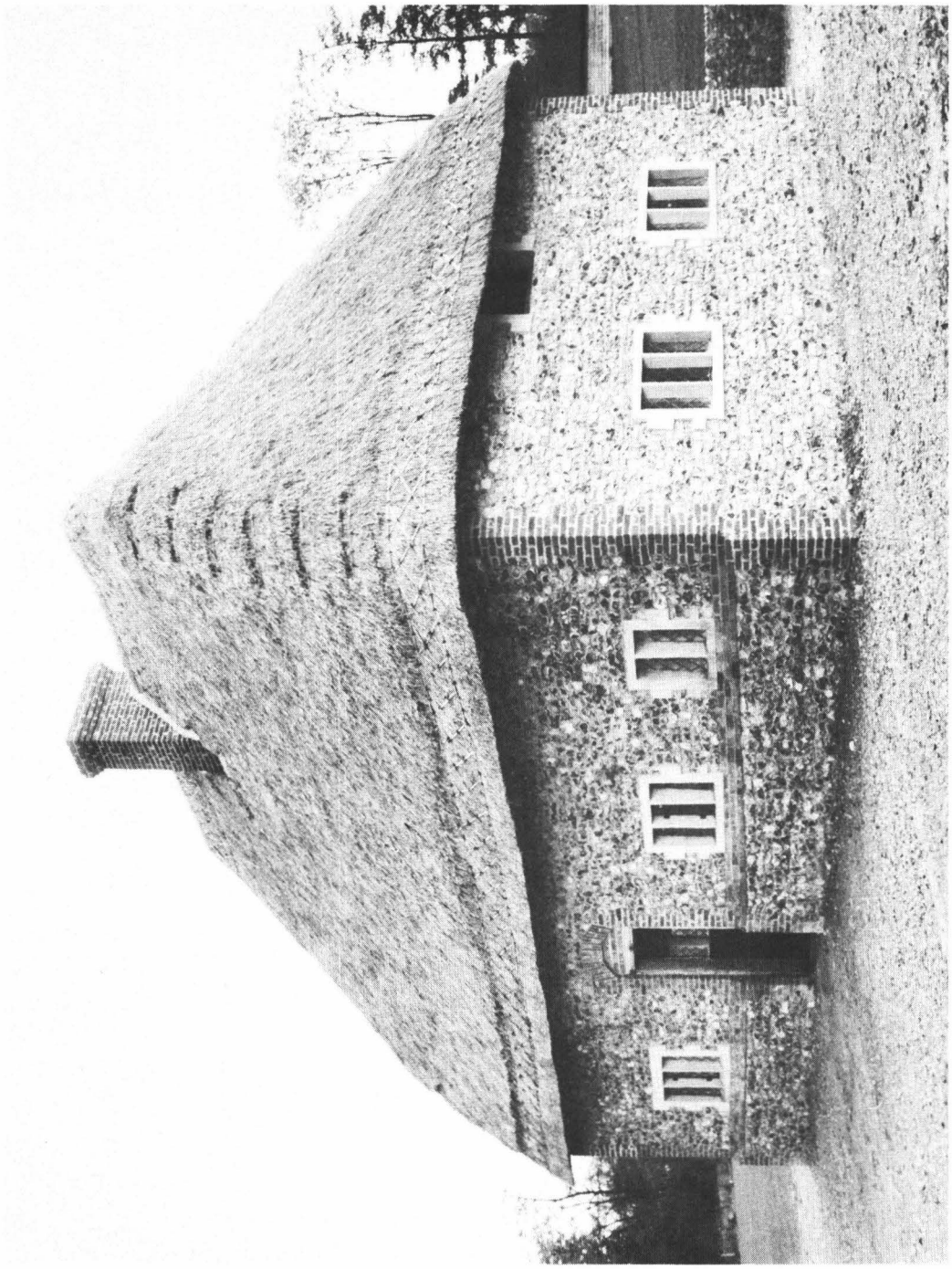


Plate III. Walderton Cottage, as reconstructed at the Weald and Downland Open Air Museum. North and west elevations.

Plate IV. Walderton Cottage; as reconstructed at the Weald and Downland Open Air Museum. South and east elevations.

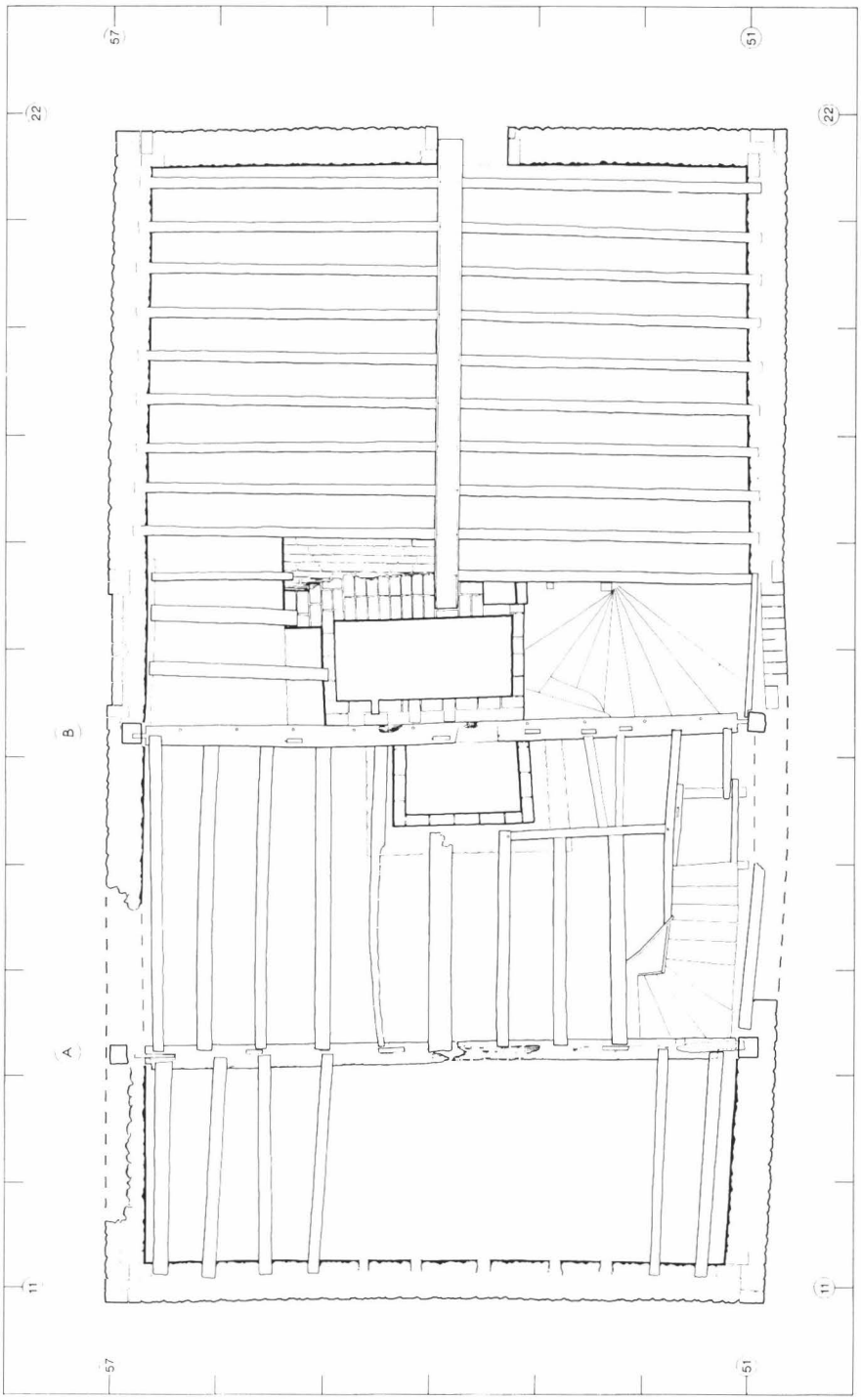


Fig. 14. Plan at 37 m O.D., as found.

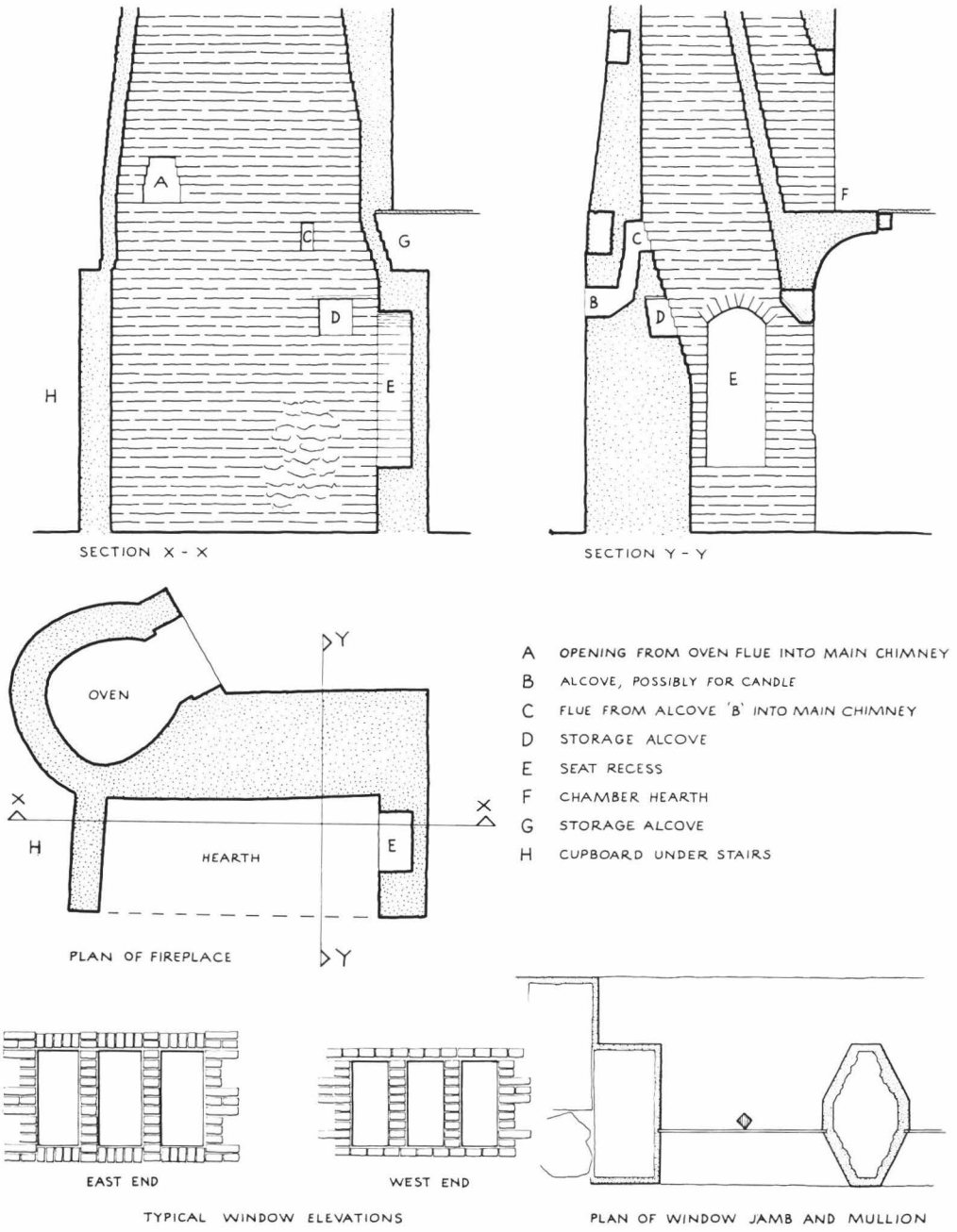


Fig. 15. Period 4: Chimney and window details.

positions: a rail from the south wall as the mantel beam of the chamber fireplace and the medieval east end tie beam re-used in the equivalent position at the west end. This tie beam was joined to the ends of the original wall plates by two timbers which were also re-used but could not be related to the surviving medieval building (Fig. 7).

The walls were constructed of flint, with brick quoins and plinth offset courses. The external flints were roughly coursed (Figs. 16 and 17), the courses averaging 8 cm except in the eastern gable where they were only 6 cm. The external flint work contained a proportion of knapped flints, rather more on the north and east elevations than on the south and west. The thickness of the north, east and south walls varied between 33 cm and 36 cm, while the south wall was noticably thicker at 38 cm. The plinth only existed on the north and east walls, and the offset averaged 6 cm. No moulded or chamfered bricks were used, the window mullions and sills being formed of bricks roughly cut to shape (Fig. 15). An intriguing and unexplained feature was that the plinth on the east elevation was built sloping down 14 cm from south to north (Fig. 17). The bricks varied between 21 x 10 x 4 cm (8¼ x 4 x 1¾ in) and 22 x 11 x 6 cm (8¾ x 4¼ x 2¼ in) in size (the average can be taken as 22 x 10 x 5 cm, 8½ x 4 x 2 in), and were laid in courses varying between 5.7 and 6.3 cm, the overall average being about 6.2 cm.

The structural differences between the east and west ends noted in the dismantling continued to be observed down to ground level. At the east end the brick and flint walls, some 40 cm thick at ground level, were laid almost directly upon the flint walls of the Period 3 alteration although on the south and east sides they did not coincide precisely leaving a step which indicated the junction of the two (Figs. 4 and 5). The lowest courses of brickwork on the outside of the north-east and south-east quoins were set, but not mortared, into the Period 3 wall and did not continue into the inside faces of the wall. The east jamb of the south door survived intact but the remaining door jambs of the north and south doors had been rebuilt at their lowest levels.

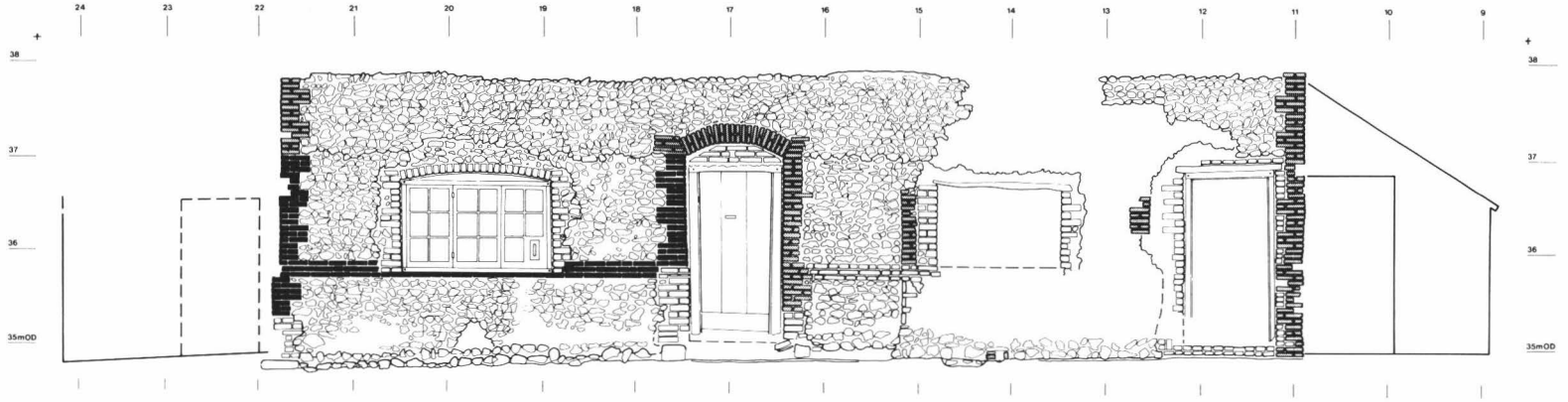
At the west end the brick and flint walls, varying between 36 and 44 cm in thickness at ground level, had no foundations but were built directly on traces of the Period 3 walls. On the south side layers of soil (Layers 173 and 174) were recorded between the two. The north-west and south-west quoins were constructed in brick through the full width of the wall down to their lowest courses.

The design of the brick mullion windows differed slightly between the east and west ends (Fig. 15). Those at the east end are arguably better detailed than those at the west end and this may be an expression of the superior status of the eastern half of the house, the dwelling as opposed to the service rooms. There were sufficient fragments surviving to indicate that all the window mullions and surrounds had originally been plastered. In one case (the upper window in the east end) the surviving original plaster even preserved the impression left by the glass but sadly no fragments of glass survived. No traces of plaster were found on the quoins, plinth offset, or door jambs.

The accommodation created by these alterations seems to have been in two halves separated by the new chimney stack and the remains of the earlier cross frame B and intercommunicating only via the lobby inside the north doorway. The eastern half provided two heated living rooms. An inventory of 1634 that probably refers to this site (Appendix 3) mentions a Hall and Chamber, with fireplace equipment in the Hall at least (the document is incomplete). It is likely that this describes the house after the reconstruction and gives valuable evidence that the two eastern rooms were known as the Hall and Chamber and were used for living and sleeping respectively. A winding staircase positioned between the chimney stack and

WALDERTON COTTAGE

NORTH ELEVATION



SOUTH ELEVATION

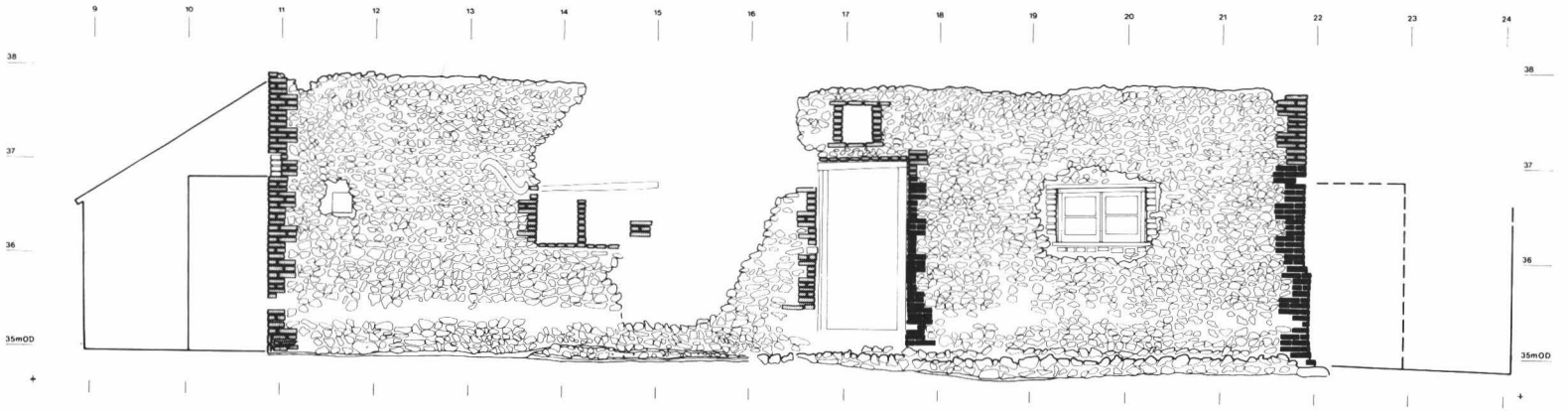


Fig. 16. North and south elevations, as found. The two phases of the Period 4 brickwork are shown in black (Phase 1) and stippled (Phase 2).

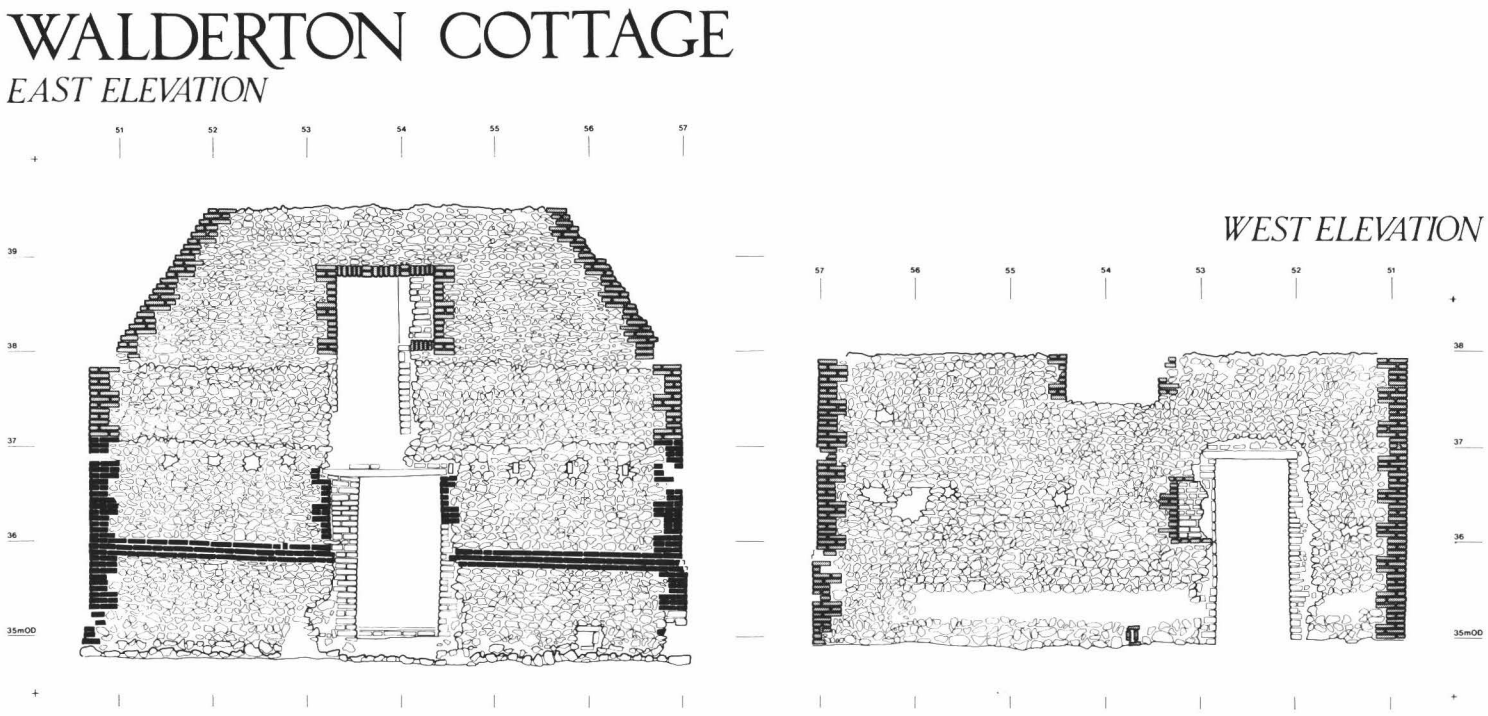


Fig. 17. East and west elevations, as found. The two phases of the Period 4 brickwork are shown in black (Phase 1) and stippled (Phase 2).

the south doorway provided access between the two rooms. Most of the original treads and risers of this staircase survived intact under later re-covering. The western half of the house probably provided five unheated rooms, three downstairs and two upstairs. Of these the only one which can be interpreted functionally is that which occupied the position of the earlier open hall. This contained an oven, of which only fragmentary remains survived due to successive rebuildings but which can be reconstructed with some confidence (Fig. 15). As it opened into a room rather than an inglenook it was provided with a flue which broke through into the main volume of the chimney just above first floor level (Fig. 9). The old hall had therefore become the bakehouse: it did not contain a hearth so cannot have been a full kitchen. The rest of the ground floor accommodation, between frame A and the west end wall, probably consisted of two rooms side by side: there was no surviving evidence for the central partition between them but the inserted beam in frame A had mortices which suggest that in this phase there were two doorways beneath, one at each end. The staircase in this half of the building rose over the oven in the bakehouse, its position being clearly indicated by the remains of the trimmed floor joists. In the chamber above the bakehouse the only recognisable seventeenth century features were the white plastered walls and ceiling and the evidence of a dormer window set on top of the south wall plate. Access to the west end chamber was through an opening, 107 cm square, in the inserted infill framing of frame A. As this end chamber had an unglazed wooden window below the west end tie beam and such inconvenient access that it may be assumed that its function was mainly storage.

The chimney provided hearths for the two dwelling rooms on the east, and an oven for the bakehouse on the west. The ground floor hearth originally possessed a brick alcove or seat in its north flank wall and, adjacent to it on the back wall of the hearth, a storage recess 23 cm square (Fig. 15). The hearth area originally measured approximately 191 cm wide by 79 cm deep, the brick floor being continuous with the brick floor of the room. Having been able to examine and record each course in plan — the bricklayer's view — it is possible to assert that the back wall was originally built without a projecting section of brickwork behind the fire: this was added later, presumably to repair the fire-damaged original brickwork. The upper hearth, serving the chamber, possessed concave sides characteristic of the seventeenth century. There was fairly clear evidence that the brick surfaces inside the chamber fireplace had originally been painted with a thin skim of white limewash but there was no evidence for decorative designs having been painted on this or any of the other original surfaces of this phase.

The ground floor fireplace was flanked on the south side by original doors opening into a cupboard under the winding stairs; the doors retained their original butterfly hinges. Upstairs there was a timber-framed partition surrounding the brick front of the fireplace (Fig. 12). This contained a doorway entering the room from the stairs, an open alcove between this doorway and the fireplace, and on the north side a smaller doorway leading into a closet above the entrance lobby.

Although there was no stratigraphic evidence in the excavation to date the fireplace (Layer 143), the evidence of the dismantling showed that it was constructed at the same time as the brick and flint walls. Its lowest courses of re-used brick and flint were laid in a foundation trench cut through earlier floors but there were no traces of the original oven noted at a higher level during the dismantling.

The floor of the building was mainly brick paviors (Layers 123, 129 and 141) laid on mortar (Layers 126 and 154) though at the west end these had been mostly removed and replaced during the nineteenth century. The former position of a partition under the medieval

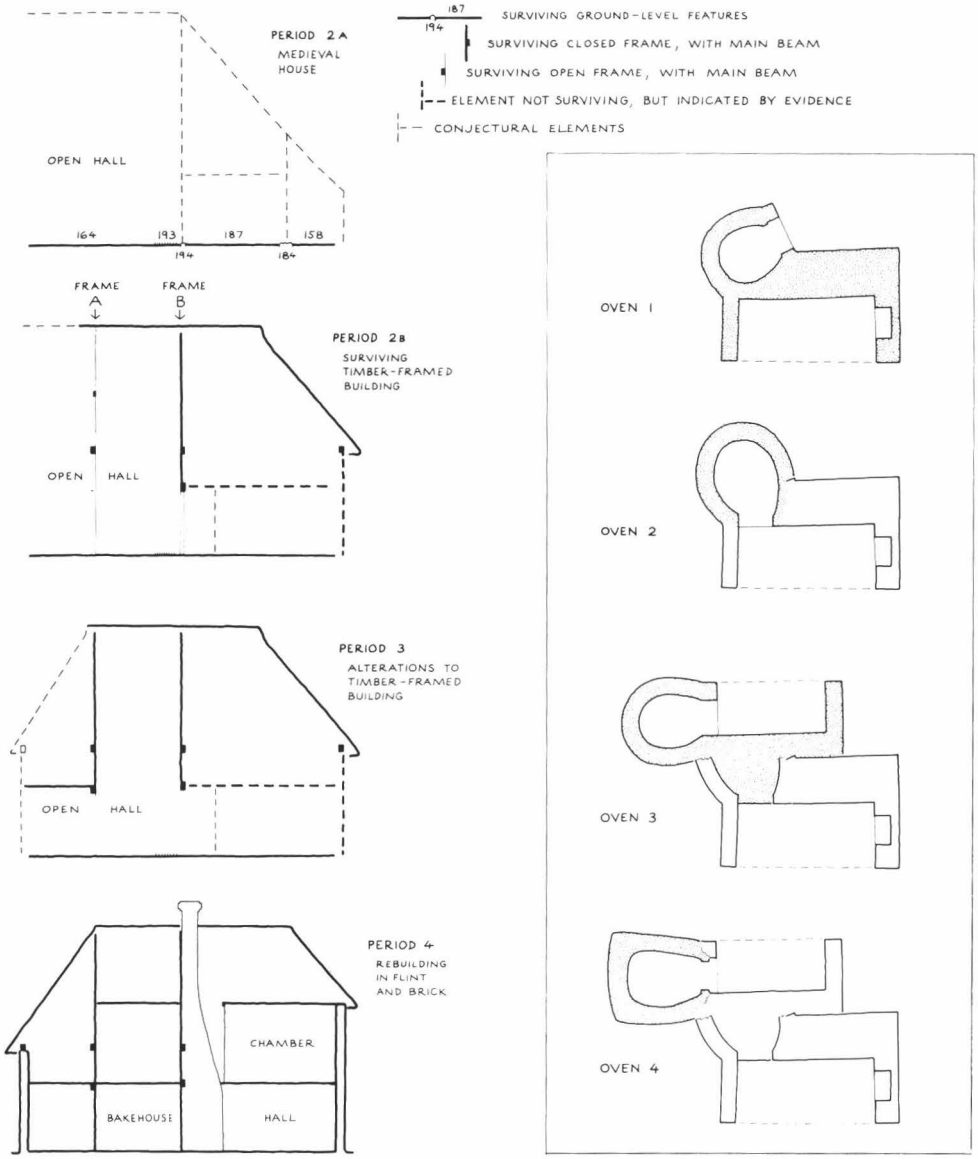


Fig. 18. Left: diagrams showing phases of development of the house. The diagrams are based on the long section looking north (Fig. 10). Right: phases of oven rebuilding.

frame A may be indicated in the west end by extending the distinctive pattern of surviving paviors (Fig. 19).

In the east end only part of the floor was covered by paviors (Layer 129) but a spread of bedding mortar (Layer 126) further east suggests that the floor was formerly more extensive. A ridge of mortar some 90 cm from the east wall may indicate the former existence of an internal feature in either Period 3 or Period 4.

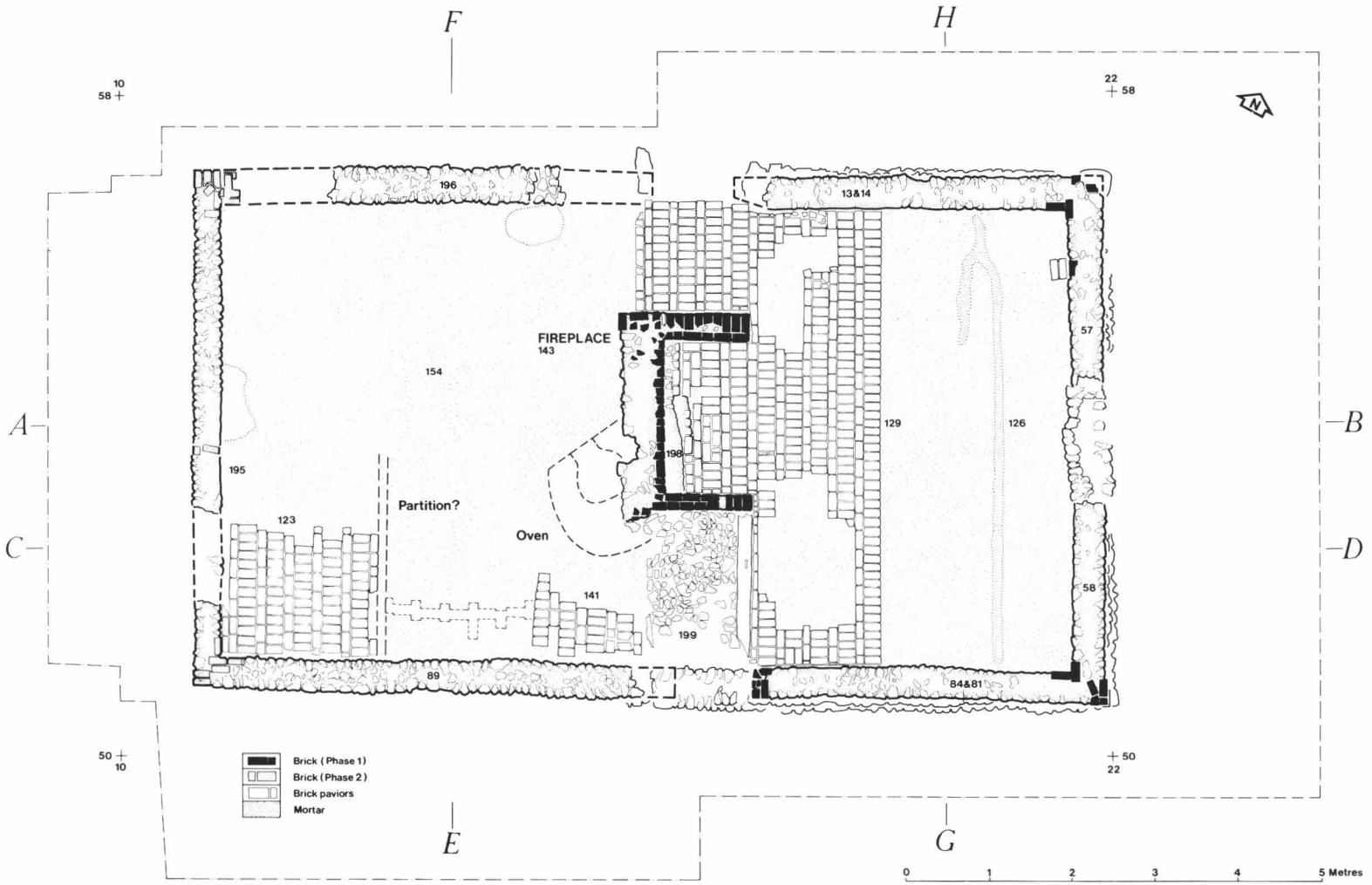


Fig. 19. Period 4: Ground plan as revealed by excavation.

To the south of the fireplace there were no traces of a floor but a layer of flint nodules (Layer 199) which would have been located under the staircase.

The rebuilding of the cottage in flint and brick can be dated by the latest pottery sealed in and under the walls and by pottery sealed beneath the brick floors.[8] Three comparatively large sherds were found built into the south wall near the south-west angle (Layer 89) and these comprise the base of a seventeenth century pipkin with internal green glaze (Fig. 22 No. 36); a rim sherd of a sixteenth century vessel in Painted Ware fabric with traces of glaze and external white painted decoration (Fig. 21 No. 17); and the rim of a seventeenth century pipkin with dark green glaze on the inside (Fig. 22 No. 31). Two of these (Nos. 31 and 36) were probably made in the Crane Street, Chichester, kiln.[9] Soil beneath this wall (Layers 173 and 174), which sealed features belonging to Period 3, contained medieval to seventeenth century sherds including a rim sherd from the same seventeenth century pipkin as No. 31 (i.e. Catalogue No. 114); the rim of a thirteenth or fourteenth century storage jar or cooking pot (Fig. 21 No. 2); and part of a late sixteenth century dish which is probably late Painted Ware (Fig. 21 No. 9).

Three sherds were recovered from the west wall (Layer 195) and these included a fragment from a late sixteenth or seventeenth century stoneware jug, possibly from Raeren, Germany (Catalogue No. 116); and a seventeenth century sherd with internal brown glaze (Catalogue No. 118). A single sherd from the north wall at the west end (Layer 196) was featureless.

The east wall (Layer 57) included two sherds — a residual fourteenth century piece with applied strap decoration (Fig. 21 No. 4); and a body sherd from a sixteenth or seventeenth century vessel with internal green glaze, probably from the Graffham area.[10]

Sealed beneath the surviving brick floor in the south-west corner, in a layer of mortar and flint nodules (Layer 155), was a quantity of medieval and late medieval sherds, including a substantial part of a fourteenth century cooking pot with internal green glaze (Fig. 21 No. 5); and pieces from another medieval cooking pot (Fig. 21 No. 6), as well as a rim sherd from a seventeenth century plate with scalloped rim with 'Tudor Green' glaze (Fig. 22 No. 32), of a type produced at both Crane Street, Chichester, and Graffham;[11] Painted Ware sherds; and another probable seventeenth century sherd, probably from Graffham.

There was no archaeological evidence to date the fireplace with any degree of accuracy but the repair to the back wall (Layer 198) included sherds from a seventeenth or eighteenth century slipware dish with internal orange glaze over white slip decoration (Fig. 22 No. 37) which may have been produced in the Crane Street kiln.[12]

PERIOD 5: Eighteenth and Nineteenth Century

A number of alterations were made to the house in this period, including subdivision of rooms at the west end, repeated rebuilding of the oven and the addition of a new fireplace, the formation and alteration of door and window openings, and the addition of an outshot at the east end and a porch on the north front. It was impossible to date most of these alterations or to deduce precisely how the pattern of life in the cottage evolved, but the main change seems to have occurred in, or soon after, 1797 when a new fireplace was built in the west end (see below). The cottage was probably divided into two dwellings at this time although the documentary evidence does not refer to a sub-division until 1837.

The four successive ovens provide the clearest sequence of events and some other alterations can be associated with them (Fig. 18). The first oven, which was integral with the Period 4 chimney, survived as four fragments: a section of its flint base under the spiral stairs; the line of bricks remaining where its angled front joined the main west face of the chimney,

Plate V. Walderton Cottage, the Period 4 oven, as reconstructed at the Weald and Downland Open Air Museum.

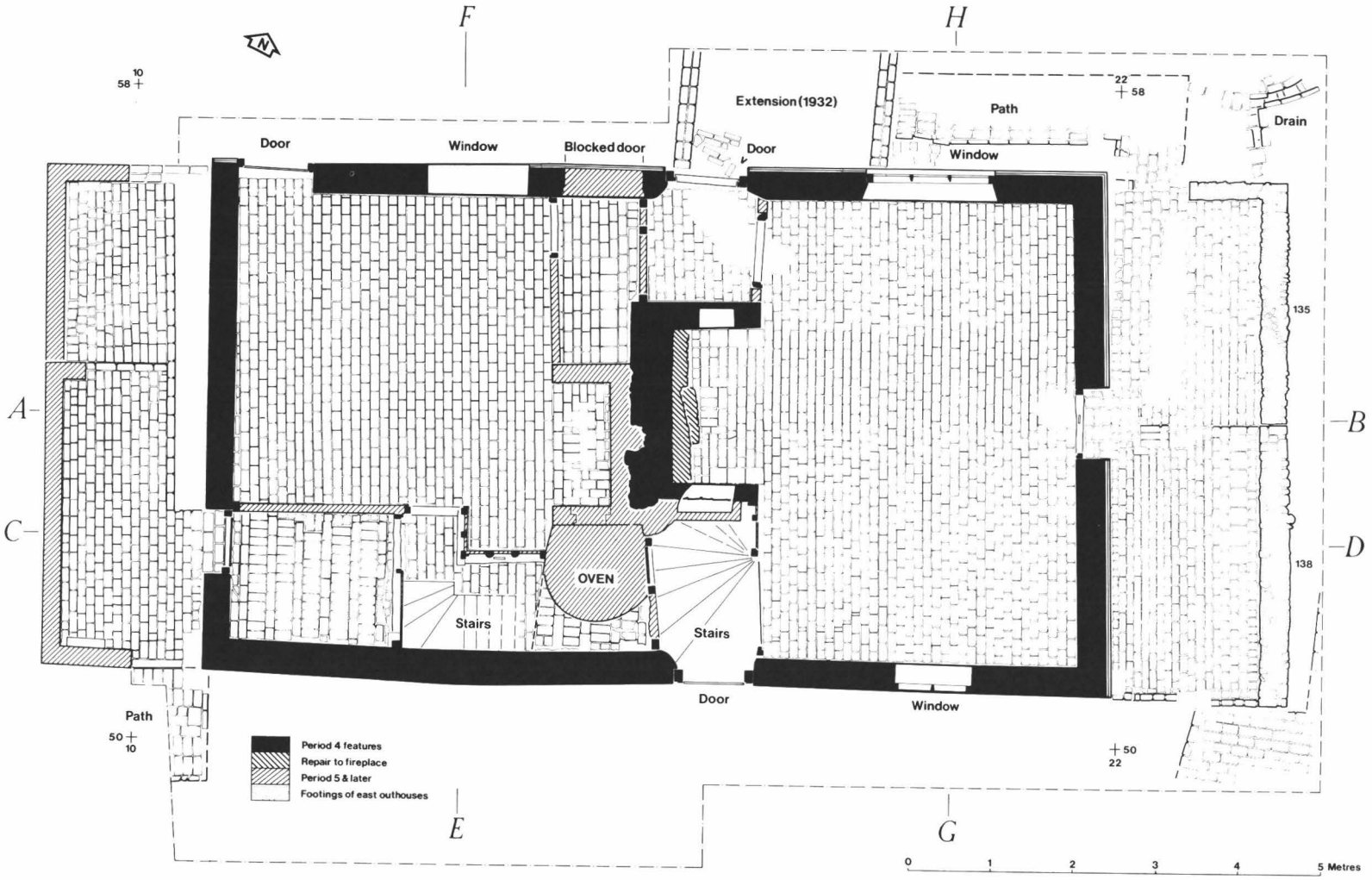


Fig. 20. Period 5 and later: Ground plan.

including a brick on edge which is interpreted as representing its floor; the opening provided for its flue to enter the main flue of the chimney; and part of the under-oven chamber, including some bricks of its floor (Fig. 9). To the north of this oven the west face of the chimney had contained an alcove which also had its own, very narrow, flue leading into the main flue. The height of this alcove is unknown, as only the top survived, but its width was 15 cm: its purpose has been suggested as for standing a candle or lamp (Figs. 9 and 15).[13]

The first rebuilding of the oven (Fig. 18, Oven 2) is undated but probably early or mid eighteenth century. Its form was changed so that it opened into the inglenook fireplace, and the floor and dome were completely rebuilt on the same base as the original oven. Possibly at the same time, the west face of the chimney below the candle recess was hollowed out to insert a partially recessed copper. The upper part of this recess was plastered and fragments of the firebox below the copper survived, but the arrangement of its flue was not clear. The house at this stage still only had the two hearths of Period 4 and must therefore have been in single residential occupation. It is possible that this rebuilding of the oven entailed also the removal of the Period 4 stairs which had risen over the original oven, and that the doorway in frame B at the top of the spiral stairs was inserted in order to give access to the chambers at the west end. In order to form this doorway the tie beam of frame B was cut, and the spiral stairs were provided with two extra steps at the top to lead up to the door, the piece of tie beam cut out being re-used as the top tread of these extra steps. The door frame was made of oak, approximately 10 cm square, the jambs being tenoned and pegged to the head and tenoned into the cross beam of frame B.

The third oven (Fig. 18, Oven 3) was built as part of a completely new hearth and chimney inserted into the middle room on the west side of frame B. A penny of 1797 which was found built into the chimney just below first floor level shows little evidence of use and can be assumed to fix the building of this chimney at that date or a little after. The second oven was dismantled, together with the base and under-oven chamber of Period 4, to give a roughly level face on the west side of the original chimney against which the new chimney was built. The remains of the second oven were blocked up and remained concealed until dismantled in 1980.

The hearth of the new chimney, heating the ground floor room, originally measured 145 cm wide by 71 cm deep. In its north side wall was an original opening into the main flue: this was probably designed to receive the flue from a copper which would have stood in the small room adjoining the north side of the fireplace (Fig. 13). The brick wall dividing this room from the main living room contained some re-used paviors, possibly indicating that the Period 4 floor was taken up and replaced at this time. In the south wall of the fireplace were the openings into the third oven and its associated under-oven chamber. This oven was built on a base consisting mainly of chalk. The pattern of the surviving floor joists (Fig. 14) suggests that a new staircase was built above it, rising from west to east and similar in form to the stairs which were later built a little further west above the fourth oven, which survived until dismantling.

The provision of a new chimney and staircase suggests that at this stage the building was divided into two separate dwellings but it is not clear which of the three external doorways inserted in the western half of the cottage would have been used as the main entrance to the new dwelling. Two of these doorways were in the north wall, one at its west end and one next to the Period 4 north doorway. The former would have opened into the north-west corner of the room formed by the removal of the partition which is believed to have existed beneath Frame A in Period 4. The latter would have led into the small room containing the copper, but it had later been blocked with brick and flint and might either pre-date or post-date this set of alterations.

The third doorway was inserted through a window of Period 4 at the south end of the west wall and led into a small room in the south-west corner of the house. It could not be established whether this room and doorway were formed at this stage or were contemporary with the last major alteration in this area, the building of the fourth oven.

The base of the third oven was retained but enlarged slightly to form the base for the fourth oven, and this arrangement survived until dismantling (Figs. 13 and 18). A new staircase was also built at this time. In its final form the dwelling in the western half of the cottage consisted of a main room 3.8 m square, heated by a cooking range inserted into the hearth, lit by a nineteenth century window in the north wall, and with access from the door in the north-west corner, together with the small rooms north of the fireplace and in the south-west corner. The main room was also provided with an alcove adjoining the south side of the fireplace, which was possibly intended for a fireside chair. Upstairs the space between frames A and B was divided into a landing and bedroom by a boarded partition (Fig. 7), and a doorway had been provided from the landing into the west end bay by cutting through the tie beam of frame A. The door in frame B had been nailed shut, and the door leading west from the Period 4 north entrance lobby had been bricked up with the door still in place.

THE FINDS

a. *The Pottery*[14]

The pre-eighteenth century pottery has already been discussed within the context of the layers in which it was found, but it remains to give a brief account of the three principal assemblages.

The medieval material, perhaps dating from *c.* 1270 to *c.* 1400 A.D., mainly survived as residual in later layers. It includes (Fig. 21 Nos. 1–7) the rim of a small cooking pot of grey fabric with chalk and flint inclusions (Fig. 21 No. 1); the rim of a storage jar or cooking pot of a coarse sandy fabric with splashes of internal glaze (Fig. 21 No. 2); the thumbed base of a jug in a pale grey sandy fabric (Fig. 21 No. 3); a sherd of a fine grey fabric with applied strip (Fig. 21 No. 4); part of a cooking pot of fine grey fabric, oxidised buff, with applied strip and internal green glaze (Fig. 21 No. 5); another cooking pot with applied strip (Fig. 21 No. 6); and a sherd from a green glazed anthropomorphic jug showing the right shoulder and arm of what was probably a squatting human figure with hands raised up to the shoulders (Fig. 21 No. 7).

The late medieval material, perhaps dating from about 1400 to about 1550, includes a group of Painted Ware vessels (Fig. 21 Nos. 8–18) and other wares (Fig. 21 Nos. 19–29). The Painted Ware vessels like those found at Chichester,[15] are generally fine grey fabrics with a little sand tempering. They are usually oxidised buff and have sometimes been given a terminal reduction to black on the outside, perhaps to enhance the white slip decoration, applied to the outside with a brush or rag. Several of the vessels have splashes of glaze indicating that they were fired in a batch with glazed wares. They may have been produced in the Graffham area[16] and probably date from about 1450 to the early sixteenth century. They include rim sherds from two bowls with splashes of internal glaze (Fig. 21 Nos. 8 and 9); another rim sherd (Fig. 21 No. 10), the rim of a necked bowl (Fig. 21 No. 11); body and neck sherds from a large pitcher (Fig. 21 No. 12); a neck sherd from another pitcher (Fig. 21 No. 13); the bunghole from a jug (Fig. 21 No. 14); part of a slashed handle with splashes of white paint (Fig. 21 No. 15); part of another slashed handle (Fig. 21 No. 16); a neck sherd with traces of glaze near the rim (Fig. 21 No. 17); and a base sherd (Fig. 21 No. 18).

The other late medieval material includes a rim sherd of a fine sandy fabric (Fig. 21 No. 19); body sherds from a vessel in a fine sandy grey fabric with splashes of glaze (Fig. 21 No. 20); a rim sherd of a jug in a fine light grey fabric with splashes of external glaze (Fig. 21 No. 21); a rim sherd from a shallow dish of a handmade soft black fabric, with coarse sand, and an applied thumbed strap decoration (Fig 21 No. 22); rim sherds from two cooking pots in grey sandy fabric (Fig. 21 Nos. 23 and 24); a lid sherd in a black sandy fabric (Fig. 21 No. 25); a body sherd from a jug in a sandy fabric with exterior herring bone decoration and green glaze (Fig. 21 No. 26); base sherds from two pitchers with thumbed bases (Fig. 21 Nos. 27 and 29); and part of a rod handle in a pale grey fabric with flint inclusions (Fig. 21 No. 28).

The post-medieval material, perhaps dating from *c.* 1550 to 1620, is almost all from either the Crane Street kiln at Chichester, or the kilns in the Graffham area.[17] It is all of a fine sandy fabric and includes (Fig. 22 Nos. 30–36) the rim of a small bowl with internal brown/green glaze (Fig. 22 No. 30); the rim of a pipkin in hard dirty white fabric with internal dark green glaze (Fig. 22 No. 31); the rim of a plate in a pale creamy/buff fabric with 'scalloped' rim and 'Tudor Green Glaze' (Fig. 22 No. 32); the base of a goblet-shaped cup in a pale grey fabric with olive green glaze internally and externally (Fig. 22 No. 33), the full form of which is known on the Hampshire-Surrey border;[18] base sherds from two jars with internal olive green glaze (Fig. 22 Nos. 34 and 35); and the base of a pipkin with dark green internal glaze (Fig. 22 No. 36).

Later pottery from the site includes a seventeenth or eighteenth century slipware dish of a reddish/buff fabric with internal orange glaze over white slip decoration (Fig. 22 No. 37) found in the repair to the fireplace (see p. 76) which may have been produced in the Crane Street kiln at Chichester;[19] and part of a small salt glazed stoneware vessel (Fig. 22 No. 38), probably made in Staffordshire in about 1730–50.[20]

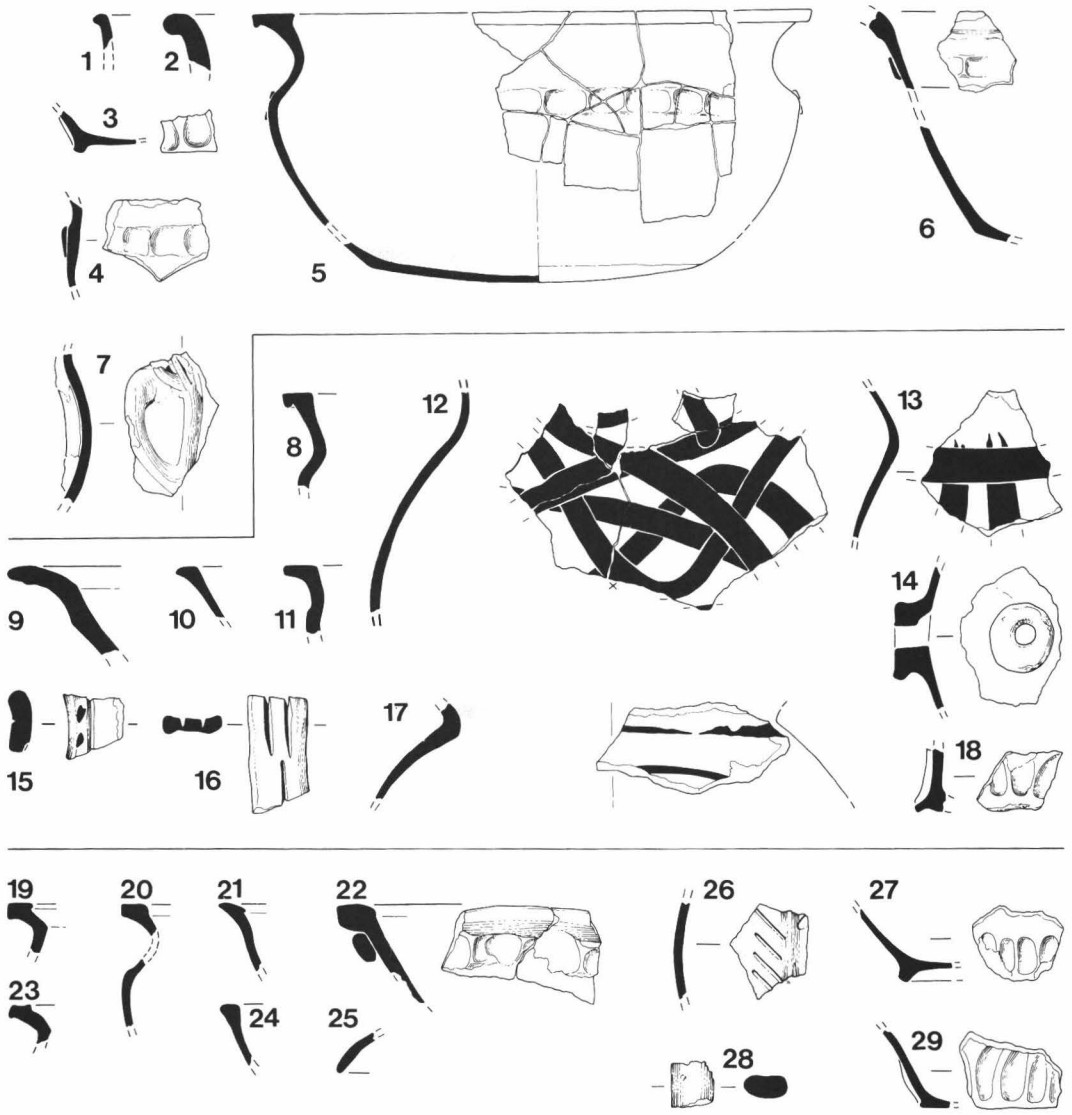


Fig. 21. Walderton, Site 1: Medieval and late medieval pottery Scale 1/4.

b. *Stone Objects*

1. Part of a Neolithic stone axe (Fig. 23 No. 1), 100 x 65 x 32 mm, recovered from layer of flint cobbles and mortar (Layer 154) under the brick floor of the seventeenth century house.

Dr. A. R. Woolley, of the Department of Mineralogy, British Museum (Natural History), has arranged for the implement to be thin sectioned and has kindly provided the following note.

'Axe (Number 5033, Sussex County Number 172) from Medieval cottage at Walderton, West Sussex. A fine grained rock consisting of irregular, inclusion-filled crystals of cordierite, somewhat turbid, usually irregular but sometimes prismatic, crystals of andalusite, set in a matrix of brown biotite, felspar, probable quartz and ore. The rock is a cordierite-andalusite-biotite hornfels and probably came from the aureole of one of the granites of Devon or Cornwall, but could also conceivably originate in the aureole of the Skiddaw granite of Cumbria. The rock is a very close match with Sussex 29, and also Hampshire 72 and Kent 47.'

2. Medieval spindle whorl, 35 mm in diameter and 18 mm high of hard chalk, decorated with incised lines (Fig. 23 No. 2). Found on clay floor (Layer 164) of Period 2a medieval house.

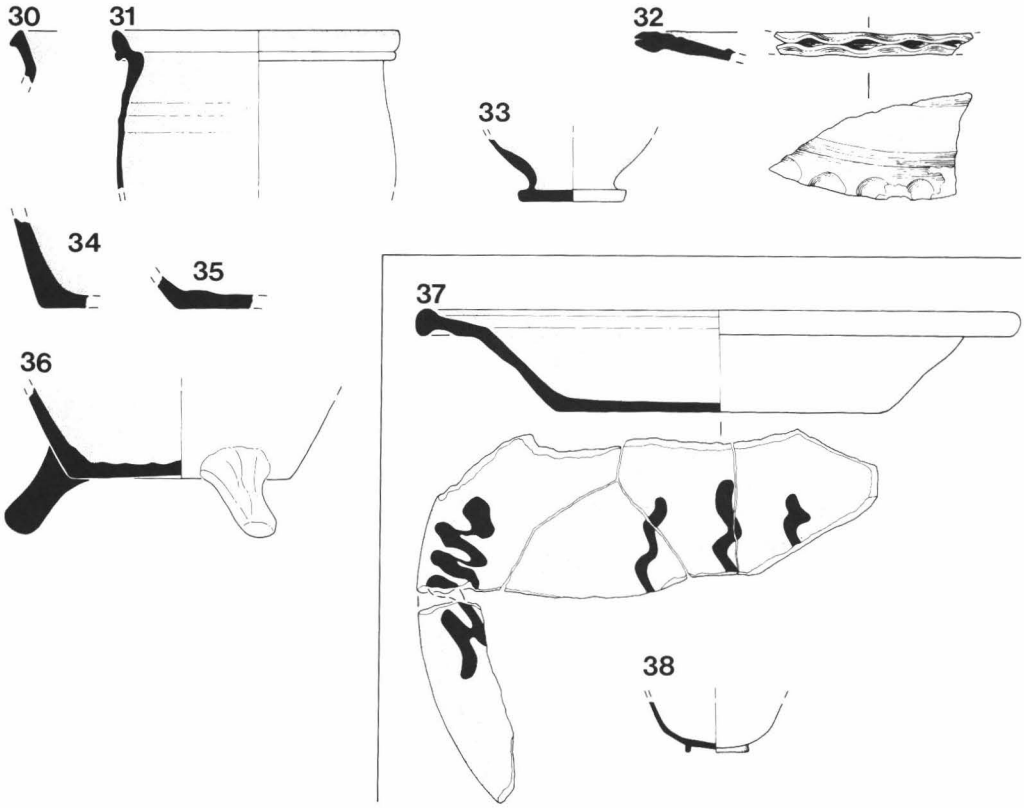


Fig. 22. Walderton, Site 1: Post-medieval pottery. Scale 1/4.

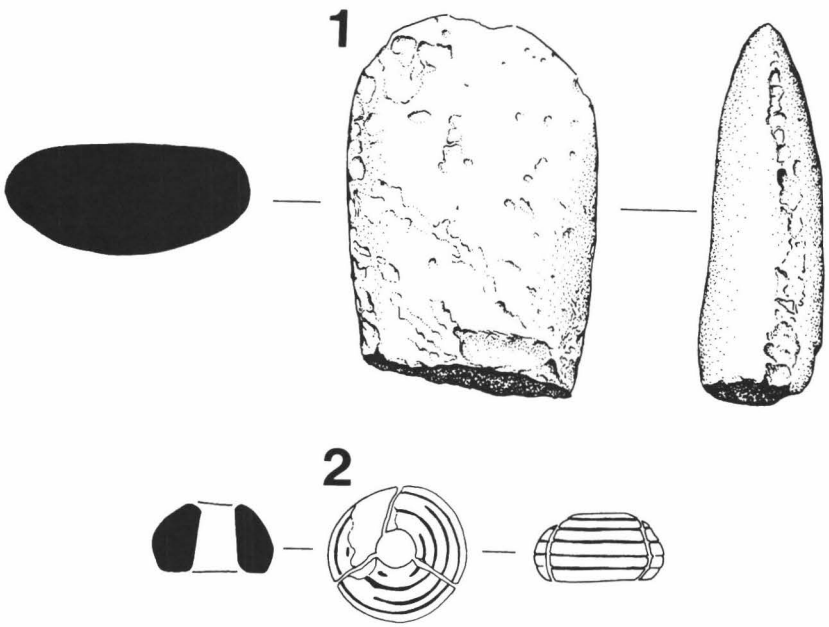


Fig. 23. Walderton, Site 1: Small finds. Scale 1/1.

3. Stone pillar base, 16 cm in diameter and 7 cm high, with two round mouldings, of a type encountered locally as for example in the remains of the late medieval Chapter House at Hardham Priory. Probably of Sussex 'Winkle stone'. Found in a nineteenth century context in the rubble underpinning of the north doorway of the seventeenth century house.

c. *Coins and Token*

1. These were all found in eighteenth or nineteenth century contexts
2. Victoria half farthing 1844.
3. George II copper coin 2.3 cm in diameter 1736 or 1756.
4. Illegible copper token 1.0 cm in diameter.
5. Almost illegible copper token 3.2 cm in diameter and 3 mm thick.[21]
   It is probably a penny token issued by the Parys Mine Company, of Anglesey, between 1787 and 1791 of which large numbers are known to have been minted. The catalogue entry for this coin[22] is as follows:
   Obv. Druid's head left in wreath of oak
   Rev. PMCO cypher
   Edge legend — various forms which includes that which appears in part in the Walderton example — ON DEMAND IN LONDON (LIV)ERPOOL (OR ANG)LESEY.

OWNERS AND OCCUPIERS OF WALDERTON COTTAGE

In January 1980 the cottage was in the ownership of two people, the west end was held by Miss Ruth Mills and the east end was held by Mr. R. G. Hurst, and since they both retained documents relating to a property, or properties, in Walderton it seems likely that the documents relate to the cottage dismantled for re-erection at the Weald and Downland Open Air Museum. It is conceivable that some, or all, of the documents have descended with the wrong property but, in view of the internal consistencies in the ten documents and the supporting evidence from other sources, this seems unlikely, and in this discussion it is assumed that the five documents retained by Hurst (Appendix 1 *Hurst Nos. 1–5)* and the five retained by Miss Mills (Appendix 2 *Mills Nos. 1–5)* all refer to the cottage.

In 1614 the property was held by JOHN CATCHLOW or CATCHLOVE (*Hurst No. 1* and *WSRO Add MS 6888*) and it was described as a house, garden, and orchard of about half an acre. There was another house to the east which no longer survives, although the 'house platforms' noted in the adjoining field (Fig. 2) may indicate its former site.

It is possible that the John Catchlove referred to is one of the sons of William Catchlove who made his will on 25 March 1585 (*WSRO STCI/13 f184b*). In this he bequeathed to his sons John, Edward, William and Robert, and his daughters Joan, Jane and Mary, but there is no specific reference to his property, and it is not clear whether the son John is the one referred to in the 1614 lease (*Hurst No. 1*). Indeed the picture is confused by the fact that there was more than one John Catchlove in Walderton at that time, one died in 1634 (see below) and another was, according to the parish register, buried on 16 September 1640.

The 1614 lease also refers to another piece of land called 'North Garden' which was also held by John Catchlove and this can be identified further east (Fig. 2). 'North Garden' is referred to again when another lease of 1614 is recited in a lease of 15 April 1682 (*WSRO Raper Archives Uncatalogued Box PP, Accession Number 652*) and here it specifically states that there was a dwelling on the land in 1614. This property descended through John Thorndon, John Thorndon (junior), Joan (his wife), then to their daughter Alice, who married John Scardeville, of Funtington, and then, in 1682, to Edward Lock, blacksmith, of Walderton. There are surviving probate inventories for John Thorndon, dating to 24 February 1657 and Edward Lock, 16 June 1690 (*WSRO* EpI/29/189/31 and 35) and the house, shop, forge and adjoining orchard, are shown in an undated plan (*WSRO Raper Archives*). According to the Stoughton Tithe Map, of 1840, the blacksmith's shop and garden were then owned and occupied by James Cook. The old smithy survived until rebuilt a little further east some time between 1874 and 1898 (*Ordnance Survey Plans*). This new building is now a house called The Old Forge.

A property leased to a John Catchlove is referred to in conveyances of 18 May 1610 (*WSRO Add MS 5441–2*) and 16 May 1623 (*WSRO Add MS 5445*). It is not clear which of the two properties, Walderton Cottage or 'North Garden', is referred to, but the earlier document describes it as a 'messuage, barn, garden, gateroom and certain common now or late in the tenure or occupation of Thomas Catchlove and John Catchlove'. In his will, made on 7 May and proved on 21 June 1634, John Catchlove left all his goods to his two daughers, Katherine and Martha (*WSRO* STCI/18 f.326) and the Bishop's transcripts covering baptisms, marriages, and burials in Stoughton parish from 1625–1671 includes an entry for his burial on 27 May 1634. A probate inventory of John Catchlove, made on 20 June 1634, though incomplete (*WSRO* Ep.I/29/189/12; Appendix 3; and Plate 6) indicates that his house included a 'halle' and a 'chamber', but again it is not clear which property is referred to.

The cottage was leased by William Catchlove to NICHOLAS POWELL on 15 March 1645/1646 (*Hurst No. 2*) and is described as in the earlier lease. It is probably the same William who appears in Lowes' description of the Manor of Walderton which comprises a list of the copyhold lands with acreages and state of cultivation, and a list of quit rents (*WSRO Add MS 5434*). This is undated but is thought to be mid-seventeenth century. It includes the entry:

'William Ketchlow — 2 hay, 2 harvest days and 2 capons if demanded — as quit rent payable to the Lord of the Manor'

There is a gap in the documentation between the lease by William Catchlove of 1645/6 and the will of Mathew Catchlove [senior] in 1730 (see below), but it is possible that it passed to Mathew from Mathew Catchlove the elder, of Walderton — possibly his father — who, in his will dated 1 September 1725 (*WSRO STCI/33f.320*), left his messuage, tenement and garden in Walderton to his son Mathew and also bequeathed to his son Edmund, his wife Elizabeth, his daughter Sarah, and two daughters of his late son William — Sarah and Susanna.

The property was leased to RICHARD PAY, of Westbourne, by Elizabeth Page, of Emsworth, and Mathew Catchlove [junior], of Westbourne, on 19 april 1759, when the house, garden, and orchard, then occupied by JOHN TRIPP (*Hurst No. 3*), were described as they had been in 1614. This particular lease also recites that of 1614 (*Hurst No.*

1 and *WSRO Add MS* 6888), as well as the will of Mathew Catchlove [senior], dated 5 March 1730, and a mortgage by Mathew Catchlove [junior] to Elizabeth Page dated 28 December 1751. In his will Mathew Catchlove [senior] bequeathed to his wife Mary, his sister Sarah, his sons Mathew, Edmund and Francis and his daughter Mary, and it was his son Mathew Catchlove [junior] who received the messuage or tenement at Walderton then occupied by John Tripp (*WSRO STCI/35 f.48*). A probate inventory for Mathew Catchlove [senior] survives (*WSRO Ep.I/29/189 No. 177*) but it is clear from the above that he did not live at Walderton.

The Land Tax Returns from 1780 to 1786 record a RICHARD PAY as an owner of property in Walderton but this must have been a descendant to whom the property had passed through the wills of Richard Pay, dated 30 April 1770, and then the will of WILLIAM PAY, dated 16 May 1775, who left it to his daughter, PRISCILLA PAY wife of John Russell (Recited in *Hurst No. 4*). The property was subsequently leased to WILLIAM CLEVERLY by Richard Pay and John Russell on 14 March 1787 (*Hurst No. 4*) although it is John Russell's name which appears in the Land Tax Returns from 1787 to 1793.

On 10 April 1793 the property was leased to THOMAS LOWE, of Westbourne, by William Cleverly and John Russell and his wife Priscilla (*Hurst No. 5*). It is described as before and was in use as a poorhouse for the tything of Walderton but this need not necessarily imply that it accommodated anything more than a family whose rent was paid by the overseers of the poor in the parish of Stoughton. Thomas Lowe, Low or Loe, is recorded in the Tax Returns from 1794–1831 and died on 7 March 1837. In his will, dated 22 February 1837 (Recited in *Mills No. 3*) he divided the property between his son, THOMAS LOWE [junior] and his daughter JANE, wife of Thomas MILLS. The will actually describes details of the arrangement of the property and how this was to be divided —

> '. . . all that tenement or cottage adjoining the said washhouse and garden and also the shoemakers shop and the ground in front thereof used by the said Thomas Mills and which said cottage and ground were then in the said testators occupation unto his daughter Jane the wife of the said Thomas Mills and the said testators declared to be his will . . . his said son Thomas Low should have and enjoy eight feet of land in width from the back door of the tenement so demised to the said Jane Mills to the two boundary posts belonging to himself and Mr. Tube at the south-west end of the said premises and that the said Thomas Low was not to have any garden ground at the back of the said two tenements and that the said Thomas Low and Jane Mills should use the said washhouse as tenants in common'.

It appears that Thomas Low [junior] received the west end of the cottage whilst Jane Mills received the east end, together with the shoemaker's shop, and they shared the washhouse. The ownership of the two parts of the building can then be traced through the descendants of Thomas Lowe [senior] to the present day.

Thomas Lowe [junior] was born in about 1796 and appears to have spent his working life as a farm labourer. He married Mary Ann in about 1830 and they had three childen according to the Census Population Returns for 1841 — Jane, Thomas and Louisa. He died on 15 January 1869 and in his will, dated 5 March 1869) (*Mills No. 1*) he left the tenement and garden to his wife. By the time that the 1871 census was compiled the west end of the divided propety was occupied by MARY ANN LOWE, then a 74 year old widow, whilst the east end was occupied by THOMAS MILLS.

Thomas, born in 1820, was the eldest son of Thomas Mills, born in 1792, who married Jane Lowe on 17 January 1819. Both Thomas Mills [senior] and Thomas Mills [junior] were cordwainers or shoemakers, and Thomas [junior] inherited the property from his father who died in about 1857. His mother died later, in 1881.

Mary Ann Lowe died on 24 October 1876 and in her will, made on 24 January 1871, she left her property to her daughter, LOUISA, wife of Alexander McBAIN, of London, in trust to sell it and divide the proceeds equally between herself and her three sisters (*Mills No. 2*). Louisa and Alexander McBain leased a messuage and garden in Walderton to THOMAS MILLS, shoemaker of Walderton, on 25 August 1877 (*Mills No. 3*) and the document specifically refers to this as 'being part of a house, garden, and orchard . . . with the highway to Stoughton on the north and west . . .'. The lease recites the 1614 lease to John Catchlove (*Hurst No. 1* and *WSRO Add MS 6888*), the assignment to Thomas Lowe in 1793 (*Hurst No. 5*), and the wills of Thomas and Mary Ann Lowe. Since the east end of the property can be shown to have descended continuously through the Mills family from 1837 until 1975 it seems likely that the August 1877 lease refers to the west end of the house which was leased to Thomas Mills for just a few years so that he held the whole property from August 1877 to August 1881. On 5 August 1881 it was probably the west end which was leased to JAMES STENNING by Alexander McBain and Michael Burke (*Mills No. 4*) and it was probably the same end which was leased to WALTER MILLS by Michael Burke and his wife, Elizabeth, on 21 May 1885 (*Mills No. 5*). Walter Mills was born in 1841 as one of the nine children of Thomas Mills and Jane Lowe

By 1900, therefore, it was Walter 'Gaffer' Mills, the local blacksmith, who owned the west end, whilst the east end was owned by the Thomas Mills who was born in 1820. Thomas was not only the local shoemaker, he became parish clerk in about 1860, and was the first postmaster of Walderton from 1874 until he died in 1901. The east end of the property then descended through his son THOMAS 'Donkey' MILLS (1861–1946), his son THOMAS MILLS (1886–1958) and then his sister, MARY BROWN. It was sold to Mr. and Mrs. R. Hurst in about 1977.

The western half of the cottage descended from Walter 'Gaffer' Mills to CHARLES MILLS and then RUTH MILLS. It was occupied by LUCY MILLS, who married a Mr. SMITHERS, and that part of the house has not been occupied since about 1930.

A small brick building was built, as a shop, to the north of the cottage between 1874 and 1898 (Plate 1), according to the Ordnance Survey maps of those dates, and in 1901 this was extended by Walter 'Gaffer' Mills as a house for one of his sons, CHARLES MILLS (1868–1952), who became postmaster in about 1904, and his wife Annie. Miss RUTH MILLS, daughter of Walter 'Sammy' Mills has lived in this house, now called 'Penlan' since 1967.

APPENDIX 1

An Abstract of the Documents in the Possession of Mr. R. G. Hurst in 1980

No. 1 This is a copy, probably eighteenth century, of an original which is in the West Sussex Record Office (WSRO

ADD MS 6888).
25 March 1614
A Ten thousand year lease by Hugh Speke, of Chichester, and Mathew Woodward, of London, to John Catchlow, of Walderton, husbandman.
House, garden, and orchard (½ acre) adjoining the house of Edward Pay, to the east, the garden of Robert Catchlove, to the south, and the highway to Stoughton to the north and west.
Also a plot called North Garden (½ acre) adjoining a garden of Edward Pay to the south, a field of Edward Pay to the east, near the end of the lane leading from Walderton to the downs, commonly called Down Lane.
Both properties being in Walderton, and in the occupation of John Catchlow.
Rent: Six harvest days work or 1s; and 2 capons at Easter, or 6d.
Consideration: 'diverse good causes'

No. 2 15 March 1645/6
A Mortgage for £20 by assignment of a one thousand year lease, by William Catchlove, of Walderton, husbandman, to Nicholas Powell, of Westbourne, tailor.
Property as in No. 1.

No. 3 19 April 1759
An Assignment of a ten thousand year lease by Elizabeth Page of Emsworth, spinster, and Mathew Catchlove, of Westbourne, husbandman, to Richard Pay, of Westbourne, baker.
House, garden and orchard in occupation of John Tripp
Consideration: £35.18.4d to Elizabeth Page
£27.1.8d. to Mathew Catchlove
Recites: 25 March 1614 Ten thousand year lease
5 March 1730 Will of Mathew Catchlove the elder
28 December 1751 Mortgage for £30 by Mathew Catchlove to Elizabeth Page.

No. 4 14 March 1787
Mortgage for £20 by assignment of Ten thousand year lease by Richard Pay, of Westbourne, cordwainer and John Russell, of Midlavant, labourer, and Priscilla, his wife, to William Cleverly, of Midlavant, yeoman.
Property as before
Recites: 30 April 1770 Will of Richard Pay
16 May 1775 Will of William Pay

No. 5 10 April 1793
Assignment of Ten thousand year lease by William Cleverly, of Stedham, yeoman, and John Russell, of Midlavant, labourer, and his wife, Priscilla to Thomas Lowe, of Westbourne, labourer.
Property, as before, now rented by the Overseers of the Poor for the parish of Stoughton and used as a Poorhouse for the Tything of Walderton.
Consideration: £27.10s.0d. to William Cleverly
£25.0s.0d. to John Russell

APPENDIX 2

An Abstract of the Documents Retained by the Solicitor of Miss R. Mills in 1980

No. 1 5 March 1869
Probate of the Will of Thomas Lowe, of Walderton, leaving the tenement and garden in which he lives to his wife, Mary Ann.
Will made 3 January 1863
Testator died 15 January 1869.

No. 2 26 February 1877
Probate of the Will of Mary Ann Lowe, of Walderton, widow, leaving her property to her daughter, Louisa, wife of Alexander McBain, now residing at Molcomb Street, Belgrave Square, in trust to sell it and divide the proceeds equally between herself and her three sisters.
Will made 24 January 1871
Testatrix died 24 October 1876

No. 3 25 August 1877
Assignment of 10,000 year lease by Louisa McBain, and her husband, Alexander McBain, of Shepherds Bush, Middlesex, gent., to Thomas Mills, of Walderton, shoemaker.
Messuage and garden in Walderton, being part of a house, garden and orchard (½ acre) with the highway to Stoughton on the north and west which is mentioned in the early deeds.
Consideration: £100
Recites: 25 March 1614 10,000 year lease by Hugh Speke and Mathew Woodward to John Catchlove, husbandman.
10 April 1793 Assignment by William Cleverly and John and Priscilla Russell to Thomas Lowe.
5 March 1869 Will of Thomas Lowe
26 February 1877 Will of Mary Ann Lowe.
Endorsed: 27 August 1877 Assignment of 10,000 year lease by James Dridge Newell to Alexander McBain.
Consideration: £100

No. 4 5 August 1881
Assignment of 10,000 year lease by Alexander McBain, now of Eastbourne, gent., and Michael Burke, of

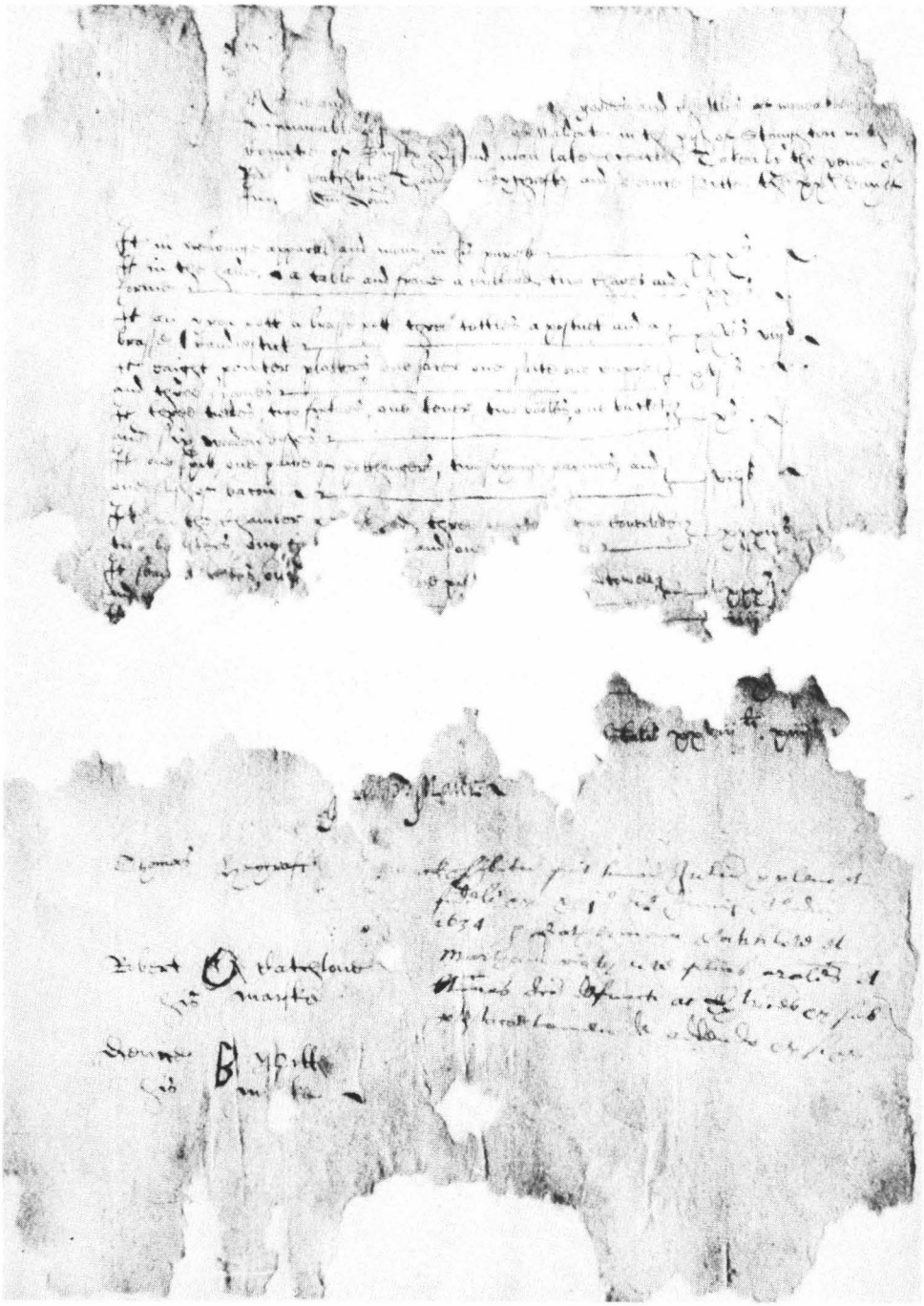


Plate VI. Walderton Cottage; The Probate Inventory of John Catchlove, 1634 (see Appendix 3). Reproduced with the kind permission of the County Archivist.

Forest Side, Stoughton, military pensioner, and Elizabeth, his wife, to James Stening, of Portsea, Hants., gent.
Messuage and garden in Walderton
Consideration: £110
Recites: as before.

No. 5 21 May 1885
Assignment of 10,000 year lease by Elizabeth, wife of Michael Burke, now of New Brighton, Emsworth, Hants., military pensioner, and Michael Burke to Walter Mills, of Walderton, blacksmith
Messuage and garden in Walderton
Consideration: £100
Recites: as before

APPENDIX 3

A Probate Inventory for John Catchlove of Stoughton, husbandman, 1634 (WSRO EP.1/29/189/12; plate 4).

A true and [perfect Inventory of the] goodes and chattles moveable and unmoveable of [John Catchlove] of Walderton in the p [ar] ish of Stoughton in the Countie of Sussex husbandman late deceased. Taken by the paine of Robert Catchlove, Thomas Heycrafte, and Denice Pitte. the xxth day of June anno domini [1634].

It.	in wearinge apparell and money in his purese	xxxs
It.	in the halle, a table and frame a cubbord two chayres and a forme	xxs
It.	an yron pott a brasse pott three kettles a posnet and a brasse candlestick	xxvs. viijd.
It.	eaight pewter platters one sacer one salte one cuppe and three spoones	xvjs.
It.	three tubbes two firkines one kewer two boolles one bucket and six wooden dishes	xs.
It.	one spitt one paire of potthangers two frying pannes and one flish of bacon	viijs.
It.	in the Chamber a flock bed three blanketts two coverledes two bolsters one fe [ ]land one [ ]	xxxiijs.
It.	seaven sheetes one [ ] one pil [ ] towell and a [ ]	xxxs.
It.	[ ]	iiijs.
[	]	

Summa Totalis xxviijli xiijs

APPENDIX 4

Dendrochronology by M. Bridge, Portsmouth Polytechnic

Some of the larger samples of end-grain timbers from the structure were taken to Portsmouth for dendrochronological analysis. However, on cleaning and preparing the surfaces of these timbers, it was found that none of them contained many growth rings. The timbers (all oak) were from various parts of the structure:

Tie beam of medieval Frame A . . . . . 62 rings
Tie beam of medieval Frame B . . . . . 77 rings
Joists from floor above east end room: 4C . . . . . 52 rings
6C . . . . . 57 rings
5D . . . . . 53 rings
8C . . . . . 50 rings

The oak is fast-grown having an average ring-width around 2 mm, typical of much of the south of England. It does however show a great deal of variation in ring-width from year to year; it is said to be 'sensitive'. Unfortunately none of the sequences showed any cross matching with any of the other samples, and they remain undated. In general, at present, it is only possible to date more slowly grown timbers exhibiting much larger numbers of annual growth rings.

SITE 2

The house site comprised a flat area measuring 40 m from north to south by 16 m transversely surrounded by traces of a bank and ditch and lay on the west side of a hollow-way, now School Lane (Figs. 2 and 24).

A house is shown on this site on the Stoughton Tithe Map of 1840 and this was then owned by Phipps Hornby and occupied by William Eames. According to the Population Census of 1841 Eames, an agricultural labourer then aged 70, lived in the house with his wife, Susanna. Neither Eames or his wife are listed in the 1851 Census and it is assumed that they were the William Eames buried on 2 January 1849 and the Susanna Eames buried on 4 December 1849 recorded in the Stoughton Register of Deaths. The house is not shown on the first edition of the Ordnance Survey twenty-five inch map published in 1874 and it is assumed, therefore, that it was taken down between 1850 and 1874.

A one metre wide east to west trench revealed a section of a recut ditch (Fig. 25 A–B), traces of what appeared to be collapsed or dismantled brick and flint walls and several pits and

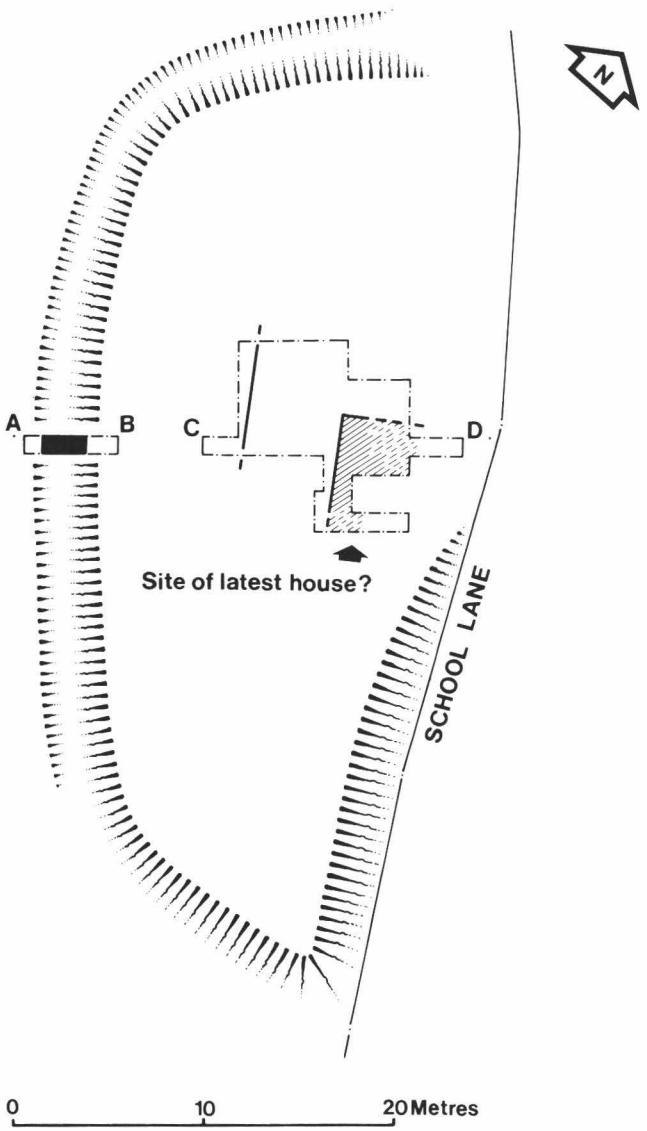


Fig. 24. Walderton, Site 2: Location of trenches.

postholes. The trench was extended to the north and south in an attempt to determine the precise plan of any buildings but this proved impossible despite the fact that the pottery in the topsoil indicated occupation from the medieval period through to the mid-ninteenth century (Fig. 27).

Cut into the underlying chalk were a series of postholes and pits none of which could be dated (Fig. 26) and these appeared to form no obvious plan or plans. What appeared initially to be traces of a flint wall at the western end of the main area of excavation turned into a spread of

flint and some mortar with a few pieces of brick and tile. Further east a spread of flint, chalk lumps and brick may represent material associated with the west wall of the building demolished in the nineteenth century, i.e. the one shown on the Tithe Map. The nature of the remains would appear to indicate that the house or houses represented in the area excavated were not built with foundations which penetrated into the underlying chalk, and were therefore presumably of light, probably timber-framed, construction with later additions in brick, flint, and chalk. A few pieces of slate and roofing tile were found but insufficient to suggest that either of these materials were used for roofing the main structure(s). It appeared that the latest house had been taken down and most of the building materials used in its construction removed from the site.

The section through the surrounding earthwork (Fig. 25 A–B) indicated that the site had initially been surrounded by a small ditch, *c.* 0.9 m wide and 0.3 m deep, cut into the underlying chalk and filled with loam (Layer 1) which had later been sealed by up to 0.4 m of loam (Layer 2) through which a much larger ditch, 1.6 m wide and 0.7 m deep, had been cut. No dating evidence was obtained from these ditches which were sealed by modern ploughsoil.

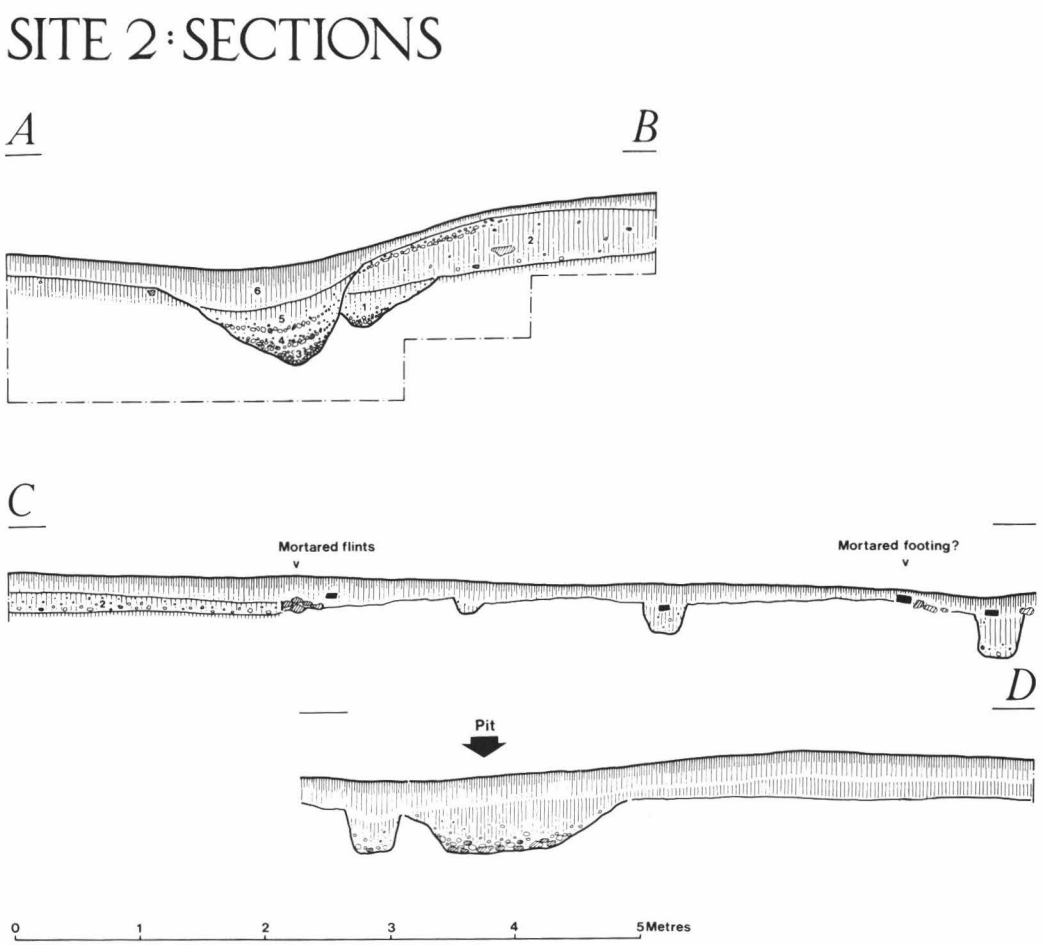


Fig. 25. Walderton, Site 2: Sections.

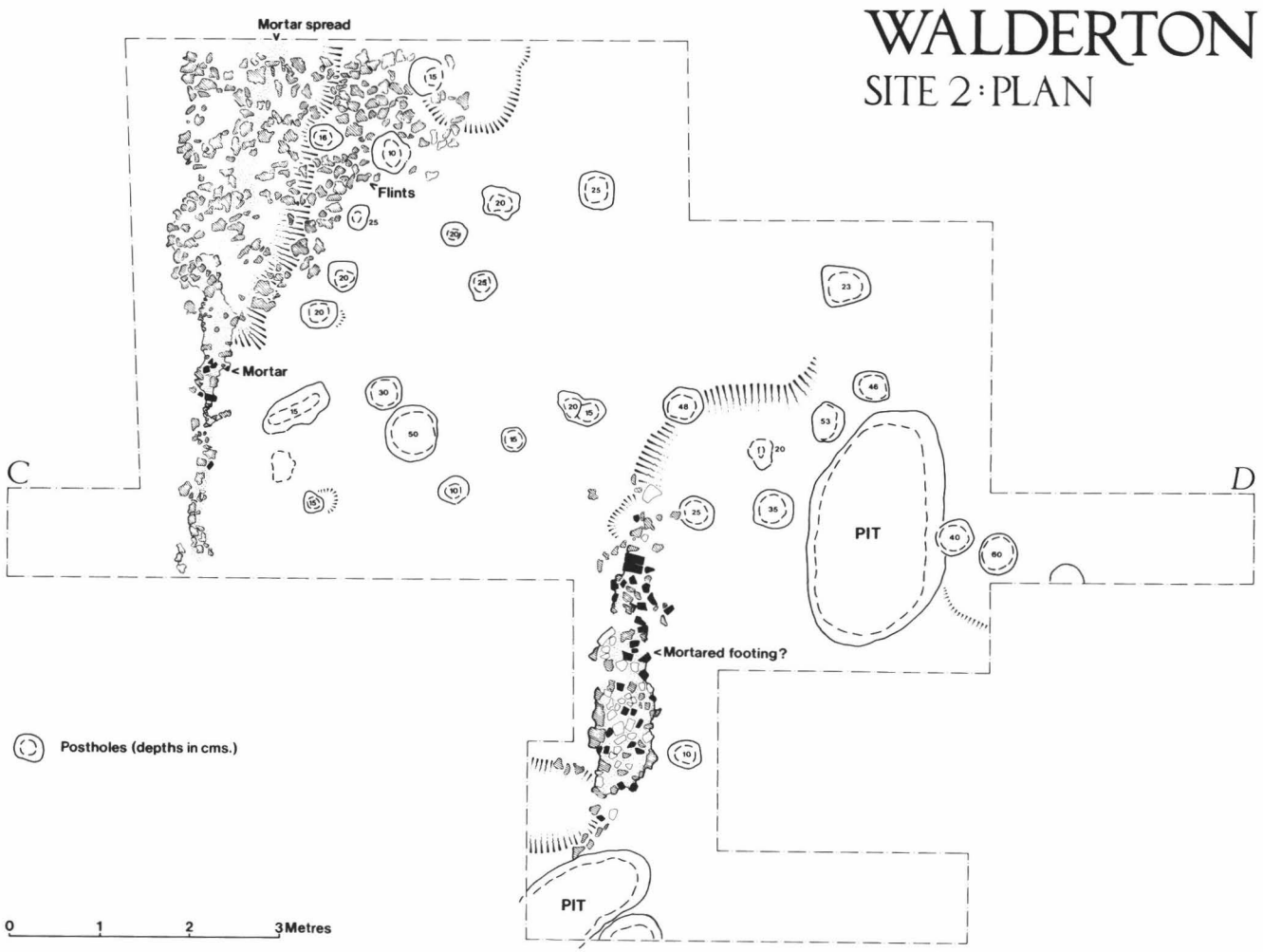


Fig. 26. Walderton, Site 2: Plan. Brick fragments are shown solid black; flints are hatched; and chalk lumps are shown open.

THE POTTERY

A substantial amount of unstratified pottery was retrieved from ploughsoil over the area excavated and much of this is considered to be contemporary with the occupation of the house site. It includes a whole range of material which might be expected to accumulate as rubbish thrown out as garden refuse from a site occupied at least from the late thirteenth or fourteenth down to the middle of the nineteenth centuries A.D., and represented are an early group of sandy ware fabrics, some glazed, others painted (Nos. 1–21); a group of late sixteenth and seventeenth century material, probably derived from the Graffham and/or Chichester kilns[23]; sherds from seventeenth and eighteenth century slipware dishes; early and late stonewares; and a range of later porcelains and china.

Examples from the early group are described and illustrated (Fig. 27). All are of a light buff sandy ware fabric and probably date from the late thirteenth through to the middle of the sixteenth century, the later material being typified by the four examples of Painted Ware (Nos. 11, 12, 16 and 17).

1. Rim and neck sherd of a jug, about 11 cm in diameter, with splashes of external green glaze.
2. Rim of a bowl *c.* 40 cm in diameter.
3. Rim of a bowl, *c.* 20 cm in diameter, with traces of green glaze.
4. Rim of a bowl, *c.* 20 cm in diameter, reduced black externally.
5. Rim of a bowl *c.* 40 cm in diameter.
6. Rim of a bowl.
7. Rim of a bowl.
8. Rim of a bowl *c.* 20 cm in diameter.
9. Rim of a bowl.
10. Rim of a bowl with splashes of green glaze.
11. Rim sherd of a Painted Ware bowl, *c.* 30 cm in diameter, with white slip on inside of rim.
12. Rim sherd of a Painted Ware bowl, *c.* 14 cm in diameter, with a mottled green external glaze and white slip on the rim.
13. Rim sherd of a bowl, *c.* 34 cm in diameter, with applied strap decoration.
14. Base sherd of a bowl, *c.* 18 cm in diameter, with thumb impressed decoration and some external green glaze.
15. Bung hole from a pitcher with external green glaze.
16. Painted Ware body sherd with white slip decoration.
17. Painted Ware body sherd with white slip decoration.

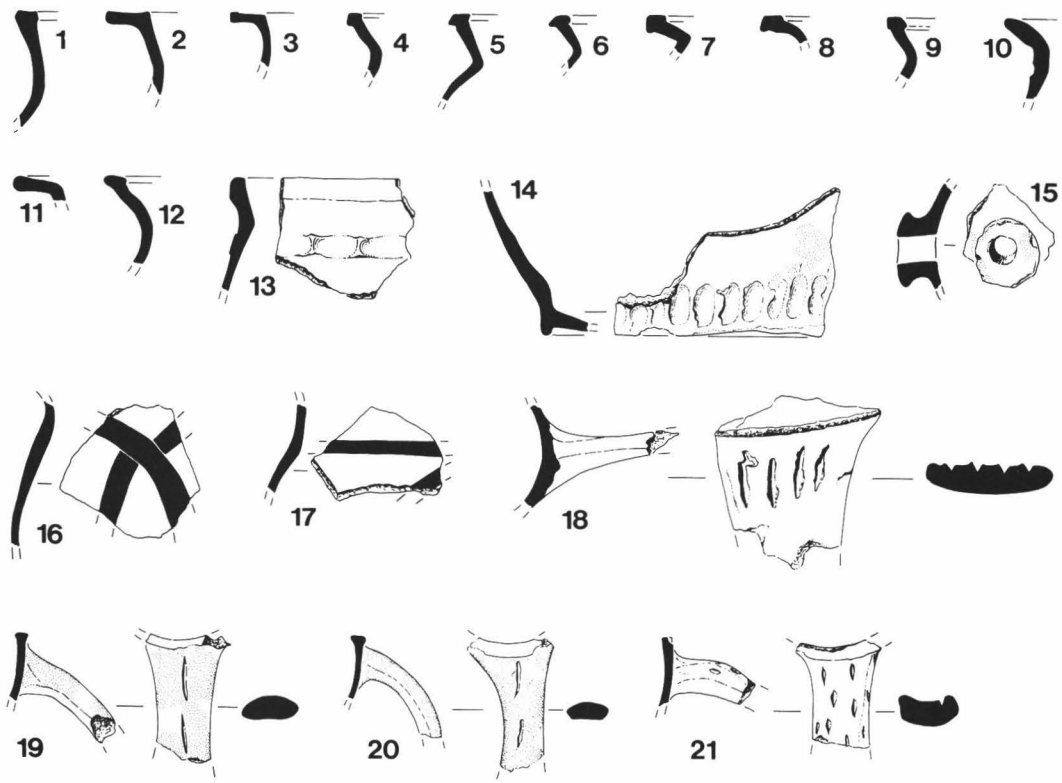


Fig. 27. Walderton, Site 2: Medieval pottery. Scale 1/4.

18. Slashed handle of a large dish or bowl.
19. Rim sherd and slashed handle of a bowl or skillet with external green glaze.
20. Rim sherd and slashed handle of a bowl or skillet with external green glaze.
21. Rim sherd and slashed handle of a bowl or skillet.

ACKNOWLEDGEMENTS

The dismantling and excavations were undertaken by staff from the Weald and Downland Open-air Museum and volunteers under the direction of the authors, who wish to express their thanks to the owners, Miss Ruth Mills, Mr. R. G. Hurst, and Mr. Martin Uniacke, for allowing the investigations to proceed; to all those who assisted with the project; and to the specialists who have contributed to this report — Martin Bridge (dendrochronology), Alec Down (pottery), Allison McCann (document transcriptions) and Dr. Alan Woolley (stone axe identification).

The project received support from the Sussex Archaeological Society (Margary Research Fund) and West Sussex County Council (Coast and Countryside Committee).

The site records are retained by the Weald and Downland Open Air Museum and the finds have been presented to Chichester District Museum by the owners.

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References

[1] *Victoria County History (Sussex)* 4 1953 p. 123.

[2] *West Sussex Record Office* Add. Ms. 2066.

[3] Aldsworth, F. G. and Down, A. 1981 *The Pottery from Walderton Cottage, Stoughton, West Sussex* (Typescript catalogue in Chichester District Museum) Nos. 1–18.

[4] *Aldsworth and Down 1981* op. cit. Nos. 19–60.

[5] *Aldsworth and Down 1981* op. cit. Nos. 61–98.

[6] Down, A. 1981 *Chichester Excavations* 5 pp.196–216.

[7] Aldsworth, F. G. and Down, A. 1976 Medieval potteries at East Lavington *Collections* 114 p.333 (full report forthcoming); Streeten, A. D. F. 1981 Potters, Kilns and Markets in Medieval Sussex: A Preliminary Study *Collections* 118 pp. 105–118.

[8] *Aldsworth and Down 1981* Nos. 99–122.

[9] *Down 1981.*

[10] *Aldsworth and Down 1976; Streeten 1981.*

[11] *Down 1981; Aldsworth and Down 1976; Streeten 1981.*

[12] *Down 1981.*

[13] We are indebted to James Ayres for this suggestion.

[14] *Aldsworth and Down 1981.*

[15] Down, A. 1978 *Chichester Excavations* 3 p. 363.

[16] *Aldsworth and Down 1976; Streeten 1981.*

[17] *Down 1981.*

[18] Holling, F. W. 1971 A Preliminary note of the pottery industry of the Hampshire-Surrey borders *Surrey Archaeological Collections 68 pp. 57–88 Fig. 2 No. B1a.*

[19] *Down 1981.*

[20] We are indebted to Mrs. Sheila Morgan for identifying this piece.

[21] We are indebted to Mrs. Anne Bone, of Chichester District Museum, for identifying this item.

[22] Seaby, H. A. (ed) 1961 *British Copper Coins* p. 194.

[23] *Aldsworth and Down 1976; Down 1981; Streeten 1981.*

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SOME WINDMILL SITES IN FRISTON AND EASTBOURNE, SUSSEX

by Lawrence Stevens

During the past twenty years, Richard Gilbert, Patricia Stevens and the writer have been associated with the examination of a number of mill sites in and around Eastbourne, and this paper records nine such sites (Fig. 1).

In 1961, three mill sites at Friston were investigated, two of which were located on the Exceat Road and include an early post-medieval mill (site 1) and its eighteenth century replacement (site 2). The third, a typical Sussex postmill, replaced the second mill in the nineteenth century on land opposite Friston church. It collapsed in 1926 and the site was excavated in advance of redevelopment (site 3).

Later, in 1966, work began on the mills of Pashley Down, Eastbourne, where there was the site of a seventeenth century postmill (site 4) and an associated bolting house, later converted to a horizontal mill (site 5), this latter being one of three local examples of the five known horizontal cornmills in England.

When Patricia Stevens excavated an Anglo-Saxon cemetery on Ocklynge Hill, Eastbourne, in 1970, two cruciform trenches of medieval postmill steads (sites 6 and 7) were uncovered, and later an associated medieval habitation area (site 8) was excavated at 85 Willingdon Road, Eastbourne. Also on the Anglo-Saxon cemetery site was what is believed to be the site of yet another horizontal windmill (site 9). This latter was the third horizontal windmill of its type to be built locally by Thomas Mortimer, whose second attempt stood on the coast (site 10), near the pier. Mortimer was a much respected local worthy of some substance whose inventiveness, as we shall see, is demonstrated in his mills.

The mill sites are discussed in the order in which they were examined, and cross-references are frequently made between the sites.

GENERAL INTRODUCTION

As this report deals with the sites of nine windmills, representing a wide development of mill technology, the writer felt that a few notes on the subject of their development would be of assistance to readers.

The earliest mills in England were watermills and developed from the Roman horizontal waterwheels we see today. Windmills, as we shall see, begin with sails that turn in a vertical plane, only later do horizontal mills emerge. Windmills were probably introduced into this country in the late twelfth century and were of the postmill type. It is so called because the box housing all the machinery, and into which the sweeps are set, is able to rotate on a vertical post, a pole projecting from the rear of the mill body being used to turn the whole structure into the wind should the direction of the latter change.

This vertical post, or centre post as it is called, is normally supported by a trestle (Fig. 2.1), consisting of two main beams, called crosstrees, which are laid one above the other. They are

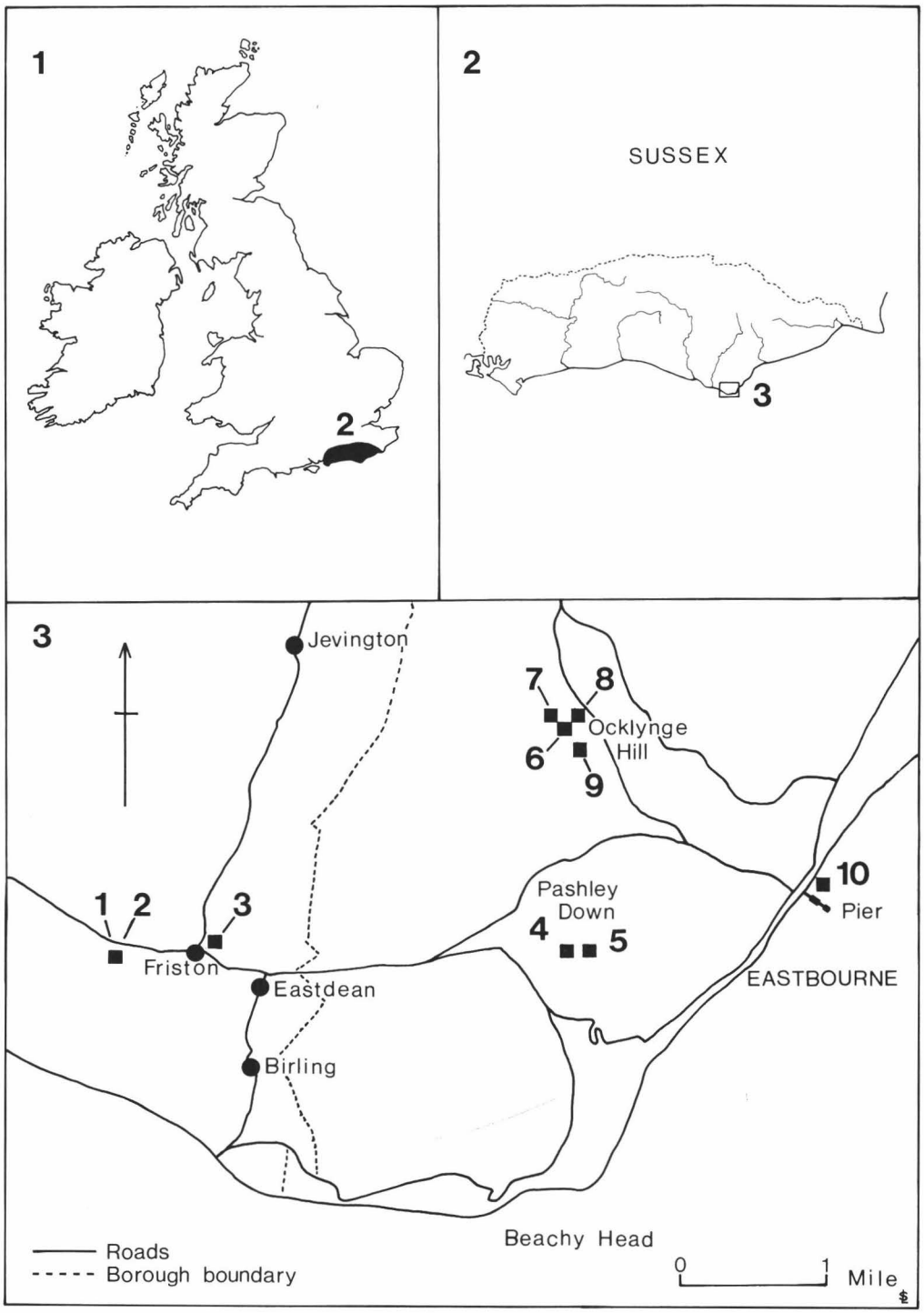

Fig. 1. Location Plan. The mill sites are shown as squares numbered 1–10.

not morticed where they cross, in consequence of which, unless they are buried in the ground, at least one of the beams has to be supported by piers at its ends. Normally, each end of the beam is supported by a pier, the two pairs of which are necessarily of different heights. The centre post is secured above the intersection of the crosstrees by four tenons, at its corners, which fit into the right-angles of the cross, thus preventing lateral movement.

The centre post does not, however, rest on the crosstrees but is supported by four quarter bars, each of which is fixed to the ends of the crosstrees at their lower ends and morticed into the centre post at their upper ends. In this way the weight of the body of the mill is distributed to the ends of the crosstrees.

During the development of this type of mill, this substructure, or trestle, as it is called, is sometimes buried to give it rigidity; in other cases the trestle has been built in a hole in the ground, as were some of the examples described in this report.

Far less common in England was the horizontal mill, so called because the vanes turned, not in a vertical plane (as in the postmill) but in a horizontal plane. There are many different types of horizontal mill but the main problem of them all is to prevent the full force of the wind exerting the same pressure on the returning blades as on the 'active' blades. This is achieved in some inventions by angling the blades so that they present a greater surface to the wind on the active side than on the return side. A common example of this type is the wing rotor invented by Commander Sigurd Savonias and fitted on the top of ventilated meat vans. A similar type used to be fitted to chimneys to increase draught.

Another ingenious invention was the use of articulated blades which dropped down when presenting their full surface to the wind and sprang into a horizontal position on their return, thus presenting only their edges to the wind. Most of these fairly simple systems were confined to use in pumping water, as they produced insufficient power for much else. Another type was the turbine shutter (Fig. 2.2), which was like the paddle wheel of a ship turned on its side, the mills sometimes being of enormous height. Such a mill at Battersea was 140 ft high. The blades were shrouded in a tower with vertical venetian-blind type shutters, which could be opened or shut according to the direction of the wind, so that the returning blades were protected from its effect.

Horizontal mills are recorded in the Middle East for the past thousand years, but in Europe there appears never to have been a general enthusiasm for them, although various efforts to bring them into competition with the vertical corn mill were made, notably in the eighteenth century.

FRISTON WINDMILLS Sites 1, 2 and 3

Early Mills

Although the Selwyn family (Wolseley 1936) occupied the Friston property in the sixteenth century, the first mention of their name linked with a mill at Friston and indeed the earliest mention of any mill at Friston is in the will of Thomas Selwyn, dated 1613. Unfortunately, the location of the mill is not given.

At the death of Thomas, the estate seems to have passed to Edward, who died in 1618 and was succeeded by Francis. In 1664 Francis died, leaving the property to his son, Sir Edward Selwyn, who died in 1704. Edward's son, William Thomas, who succeeded to the property, survived only two months, thus it was inherited by Judith Medlecott, daughter of Francis Selwyn, who immediately sold it to Thomas Medley of Buxted Place (Hawkesbury 1903).

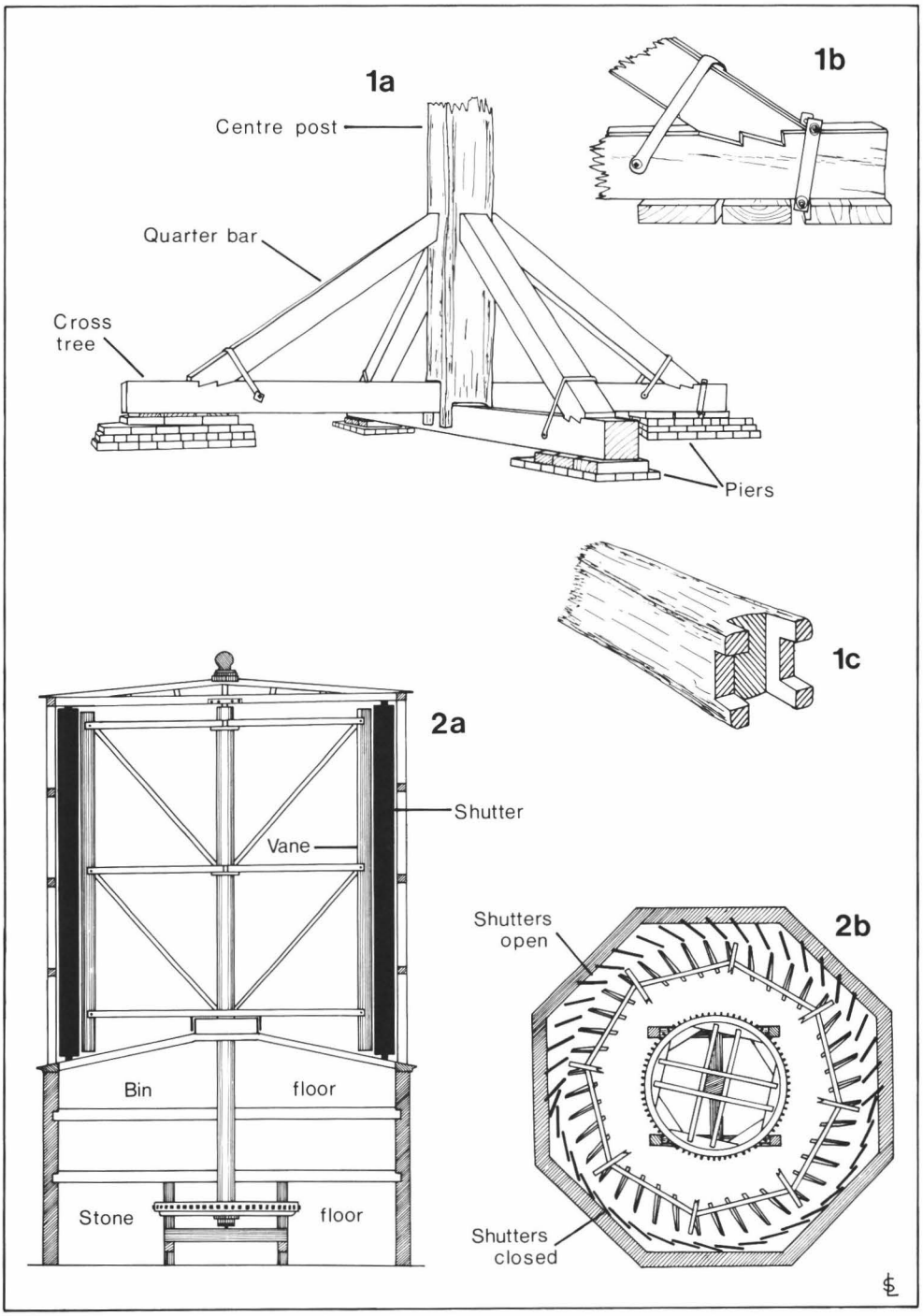

Fig. 2. 1a. Typical postmill trestle showing cross-trees, quarter-bars and centre post. 1b. Detail of double abutment and tenon joint. 1c. Detail of mortice and horns of centre post. 2a. Section and 2b Plan of Horizontal Turbine mill based on drawings published in Ree's Cyclopaedia.

Thomas died in 1728, the property passing to his second eldest son, Thomas, who, married in 1713, had seven children — five sons, who never married, and two daughters, one of whom did marry. Thomas, the eldest son, inherited Friston Place in 1732, on the death of his father, but his ownership was short, for he himself died only three years later, in 1735, when it passed to his brother, Samuel. Samuel died in 1741, leaving the property to Edward, on whose death, in 1751, it passed to his brother George.

The earliest surviving land tax return for Friston, that for 1752, records George Medley's ownership of the property at Friston. In 1754, Allfrey pays the tax on this and also on the 'mill foald'. In 1755, it appears to be held by Mr. More and is annually recorded as such until 1760. The return for 1761 is missing, but in 1762 there is no mention of mill foald, nor is there any subsequent mention of it or the mill in the returns. At first sight one is tempted to dismiss the entry as referring to a plot of land, but, in the very year the entry ceases the mill was burnt down, as the following account from the Sussex Weekly Advertiser, February 16, 1761, reports:-

> 'On Saturday morning last (Feb. 14), between four and five o'clock, Friston mill in this county, belonging to George Medley, Esq., was burnt down. Three soldiers are taken up on suspicion of setting fire to the said mill.'

The loss of the mill must have been a considerable blow, and the London Gazette, February 21–24, 1761, carried the following announcements:-

> 'Whitehall, February 24, 1761: Whereas it has been humbly represented to the King, that, on Friday night, or Saturday morning early, the 13 and 14 inst., a windmill commonly called, and known, by the name of Friston Mill, near Friston Place, and near Seaford, in the County of Sussex, belonging to George Medley Esq., of Buxted Place in the said County, was set on fire by persons unknown, and was burnt down to the ground; His Majesty, for the better discovering and bringing to justice the person or persons concerned therein, is pleased to promise his most gracious pardon to anyone of them (except the person that actually did set fire to the said windmill) who shall discover his, or her or their accomplice or accomplices therein, so as he, she or they may be apprehended and convicted thereof.
>
> Signed HOLDERNESSE.'

The second announcement continued:-

> 'And as a further encouragement, I the said George Medley do promise a Reward of fifty pounds to any person making such discovery as aforesaid, to be paid on the conviction of any of the offenders.
>
> Signed
> George Medley.'

Unfortunately, we know nothing more of the episode but we learn enough to conclude that the mill was destroyed and, although no evidence recording the building of a replacement mill exists, we must assume that this was the case, for a mill at Friston is mentioned in both 1776 and 1777 in references which relate most probably to smuggled goods. In December 1776, the Sussex Weekly Advertiser told its readers:-

> 'Early on Tuesday last some Revenue Officers assisted by a party of dragoons, seized near Friston Mill, in this County, upwards of 17 cwt of tea, nine casks of Geneva . . .'

Little more than a year later in July 1777, the same paper drew its readers' attention to the

Lewes excise officers, who, assisted by a party of dragoons, 'seized near Friston Mill, about 18 cwt of tea and four horses.'

In February, 1796, disaster struck what was probably George Medley's new mill, for the Sussex Weekly Advertiser of February 13 records:-

> '. . . a most terrible tempest of thunder, lightening and rain . . . a mill at Friston had her stones broke, and a pair of stilliards that hung up nearby was melted by lightening.'

Later, in June, 1796, George Medley died, and there being no issue, the property passed to Julia Annabella Evelyn, the married and only daughter of George's only married sister, Annabella. A year later, in 1797, Julia Annabella died, leaving the property to her husband, Sir Augustus William Shuckburgh-Evelyn.

A few years later, during his ownership, in 1801, we have the first reference to a tenant of the mill in the defence schedules, John Ashby being shown as holding a windmill called Friston Mill. On the death of Sir Augustus, in 1804, the Friston property descended to his only daughter, Julia Evelyn Medley Shuckburgh-Evelyn, who, in 1810, married the Hon. Charles Cecil Cope Jenkinson, and, dying four years later, left him the Friston property.

In the year 1816, John Ashby entered into an agreement with the 'Honourable Cecil Jenkinson' to continue renting the mill and other land and property at a yearly rent of £31.10s.0d. and the Ashby family continued to be associated with the mill at Friston until the closing years of the nineteenth century. Curiously, in spite of what appears as evidence to the contrary, the land tax returns show the Friston property as being owned by Mrs. Medley, from 1792–1829. It is also of further interest that there is no evidence to suggest that the tenant of the mill was at any time also tenant of Friston Place.

In 1825, George, son of John Ashby, entered into a 21-year lease (Ashby 31) for the mill, cott, and warehouse, the period running from September 29, 1825, although the lease was dated January 10, 1826. Six months later, disaster struck again, the Sussex Advertiser, of March 27, 1826, recording the event:-

> 'Yesterday sennight, the windmill at Friston, near Eastbourne, was blown down by a gale of wind which prevailed, and fortunately without inflicting any personal injury on the grinder or his mate, who had just time to escape before the main post gave way and reduced the mill (which was old) to a heap of ruins.'

Mill locations

Simmons (1974), in his historical notes, draws attention to the importance of the bracketed words '(which was old)' in the Sussex Weekly Advertiser report and points out that, according to the eighteenth century maps, there was never more than one mill standing at Friston, and, if the collapsed mill was really old in 1826, it might have been brought to Friston from elsewhere, for, had it been a new replacement after the fire of 1791, the main post was not likely to have given way. No evidence of any kind has come to light to suggest a second mill at Friston at any time.

The demise of the second mill on the Exceat road brings us to a discussion of the location of the early mills. The first mill is shown on maps in 1724, 1749 and 1753 at a point on the south side of the Exceat road some five furlongs west of Friston church. Simmons (1974), considered that the second mill was probably that recorded on maps of 1783, 1795, 1813, 1817 and 1823–4.

Taking the 1749 map by Emanuel Bowen (which would feature the first mill) and the 1783 map by Yeakell and Gardener (presumably featuring the second mill) the distance of the mills from the pond are four furlongs and a little short of four and a half furlongs respectively. This

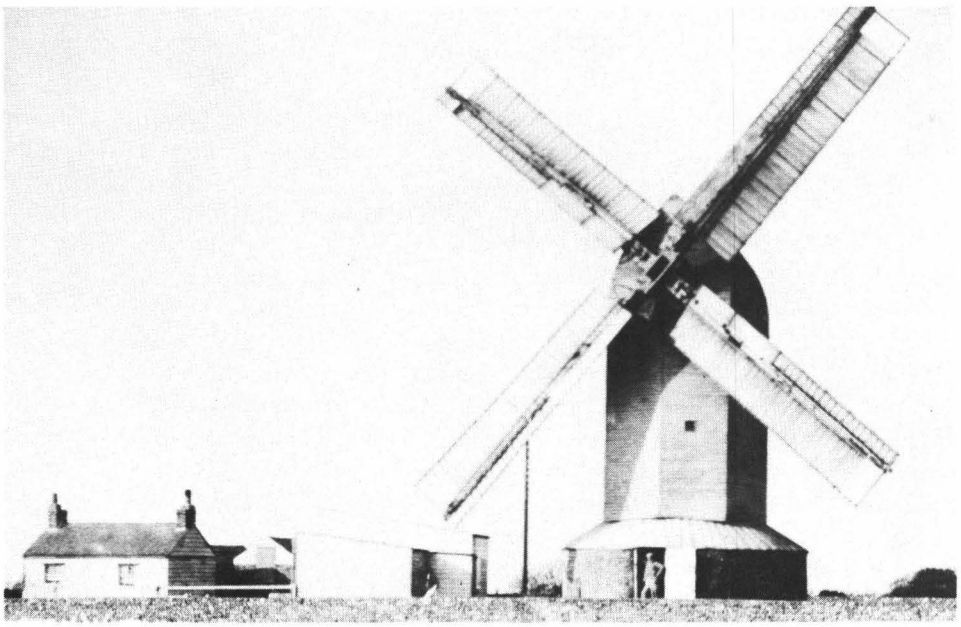

Plate I. View of the mill and associated buildings from SE wall of the enclosure, probably before the 1914 war. From L–R: miller's cottage, gabled store, garage shed and store shed, and the mill itself.

would be 200 yards to the east of the lane to Gayles Farm, and opposite a point where several tracks converge. Field walking of the area has failed to locate a mill site.

After the loss of the second mill, the Hon. Cecil Cope Jenkinson allowed a third mill to be set up on a new site, the same year, 1826. This third mill (Plate I), was built to the north of the church and stood in a flint-walled enclosure. The enclosure was shaped like a thick letter L reversed, the upright part (and main enclosure) measuring 58.5 m long x 31.4 m wide and the horizontal foot extending 15.5 m to the west x 15 m wide, thus forming an entrance from the Jevington road to the main enclosure.

The south eastern wall began near the entrance of the present Windmill Lane and continued roughly parallel to the lane. In 1962, nothing remained of it nor of the north eastern wall (across the green) nor of the northern wall of the entrance drive.

Various buildings have stood in the mill enclosure at different times, but the tithe map (1848) shows three — the cottage (on the south), the earth closet privy (on the north side of the way into the enclosure) and the mill itself.

The Rev. A. A. Evans, one-time vicar of Eastdean and Friston, described the site of the mill as 'Standard Hill', (Evans 1926) a name that has led to confusion with Standard Hill at Ninfield. This name may have been derived from 'Standard Island' which is the name of the site given on the 1874 O.S. 25 in map.

The last mill

It would seem that George Ashby built the new mill at his own expense, for among the Ashby papers there is a slip (Ashby 45) with details of expenditure relating to its construction:-

'1826

New mill cast bildin and Milret	£700
2 new stones new sails and bildin wall	£100.'

Clearly the new mill was built in 1826, perhaps with some re-used materials, but with new stones and sails. The last item — 'bildin wall' — may refer to the erection of the roundhouse wall, which would not be a job for the millwright.

The suggestion of re-used materials is raised because, in 1834, a further £55 was expended on a 'new iron round beam etc,' which we interpret as being a new windshaft. Again, the same year and only eight years after its building, 'mill nuts bell and painting' incur expenditure of a further £60. Worse was to come, for in 1842, eight years on and only sixteen years after the erection of the mill, a new post had to be fitted, for the sum of £100.

With so many major renewals it must be that the materials were unsuitable, either very poor new parts or badly worn secondhand. It is not likely that any materials from the collapsed mill would have been suitable, bearing in mind that the contemporary report of its collapse described it as 'old', and reduced to a 'heap of ruins'.

George Ashby's first surviving Sun fire insurance policy, for 1868–9, suggests little change and includes cover for 'a round wind corn mill with a storeroom or roundhouse under two pairs of mill stones only and no oats shelled nor kiln therein . . .'. Also covered were, 'fittings including wire machines, dressing mills and boulting cloths.' Both mill and cottage were insured for £825.

In 1825, the Hon. Cecil Cope Jenkinson became the 3rd Earl of Liverpool; he died in 1851, but his name continues in the Land Tax returns until 1857 when 'Lees Esq.' is recorded as the owner. Several members of the Lees family resided in Oldham, Lancashire, while others occupied the Friston property, holding both Friston Farm and Peakdean Farm. In 1869, the Duke of Devonshire became the owner of Friston Farm, but Peakdean Farm continued to be held by David Lees for a little longer, and it appears that the mill became part of the Lees Peakdean Farm holding at this time.

George Ashby continued as lessee of the mill until his death (February 12, 1872, aged 50), and a valuation of the leasehold mill (Ashby 6) by Samuel Medhurst, of Lewes, was made the following June, presumably to settle Ashby's estate (he was, at the time of his death, residing at South Street, Eastbourne). The mill and its contents, valued by Medhurst at £325, were inherited by George Thomas Ashby, George's unmarried son.

About this time, Mr. Lees informed him that, when they sold the farm, they would sell him the piece of land upon which the mill stood (Ashby 31). Lees kept his word, for the 1875 Land Tax returns show that the ownership of Peakdean Farm changed from David Lees to the Duke of Devonshire and, at the same time, David Lees, via Joseph and John Lees, sold the mill plot to George Thomas for the sum of £80 (Ashby 71).

George Thomas Ashby held the mill little more than a year, for he died on April 3, 1876, leaving his property to his brother, William Peter Ashby. That same year the new owner took out a new Sun insurance policy insuring the mill, its contents and the cottage for £825 — the same amount his father had insured the mill holding for in 1868–9.

Nothing of consequence of William Peter's association with the mill has come down to us and our next milestone is his death on October 22 or 23, 1894, at which time he was living in Eastdean. The estate and holdings on being sold, indicated an ownership of non-growth. The mill, now freehold, failed to reach its reserve when auctioned at the Gildredge Hotel, Eastbourne, on July 13, 1896, by A. Burtenshaw, with the deceased's other properties (Ashby

79). The bidding began at £100, and, after four bids, the lot was withdrawn at £170. The mill was finally sold at an auction on March 22nd, 1897, to J. A. Maitland for £390.

During the closing years of the nineteenth century, the mill had been supplying flour to Ashby's bakery at Eastdean and wheat was being purchased from local farms. Little is known of the trading area of the mill, but the area must have been expanding on account of the diminishing number of mills around it. In 1896 flour was being sent by rail as far afield as Shoreham (Ashby 81).

Maitland had purchased Friston Place from the Duke of Devonshire in 1897 and in buying the mill, he restored it to the estate to which it had originally belonged. It is said that Maitland regarded the mill more as an ornament than a business, indeed, after he bought the mill, the grinding of flour ceased and instead pig-meal and animal food was ground. No longer considered a business proposition, the mill was committed to a slow death. When Morris, the last miller, died in 1922, the mill itself was near the end of its days.

Appeals were made to several bodies, by Arthur Beckett, editor of the 'Sussex County Magazine', to have the mill preserved, (Beckett 1926). However, in spite of all this, the dilapidated state of the weatherboard, the penetration of the rain and the weight of the stones brought about its end at lunchtime on Sunday, January 10, 1926, when the mill collapsed. Frequently, the mill is described as having been blown down, but local people who remembered the occasion agree that it was not a windy day, and the Meteorological Office confirm this, giving the wind strength that day as force 2 at 9 in the morning, falling to force 1 in the evening, the direction being southerly. Had a southerly gale been responsible for its collapse, one would have expected it to fall in the opposite direction, i.e. to the north, but, in fact, it fell to the south-west — towards the mill cottage, in which Mr. Morris's widow was preparing lunch.

The mill lay in a heap for a time, and parts of it were carried away. The stones and some of the wood were taken to Friston Place, and the rest was cleared away.

Millers

Over several centuries there must have been many millers and bakers in the villages of Friston and Eastdean. The following list of millers has been compiled from the Parish Registers (PR), the Lieutenancy Records (LR) and the Census Returns (CR). There is no certainty that those named as millers worked Friston windmill, they may have worked in adjoining parishes, but this is less likely to have been the case latterly as adjoining parishes lost their mills.

JOHN JOHNSON, June 29, 1638, Miller, buried, Eastdean (PR).
WILLIAM FLETCHER, July 28, 1772, Miller, Eastdean (Sussex Marriage Licences, SRS, Vol. 25).
WILLIAM COLWELL, 1813, Miller, Eastdean (LR).
JOHN COLWELL, 1813, Miller, Eastdean (LR).
RICHARD APPS, 1813, Miller, Eastdean (LR).
JOHN ASHBY, 1813, Miller, Eastdean (LR).
JAMUS TOBITT, 1825, Miller's servant (aged 26), Eastdean (LR).
GEORGE ASHBY, 1825, Miller (aged 30), Eastdean (LR).
WILLIAM STEVENS, 1835, Miller (from Battle), Eastdean (PR).
NATHAN SEYMOUR, 1851, Miller (aged 31), (born at Jevington) Friston (CR).
GEORGE ASHBY, 1851, (son of George Ashby), Miller employing 1 labourer, Eastdean (CR).
HENRY PAGE, 1861, Miller (Born at Waldington), Eastdean (CR).
GEORGE T. ASHBY, 1861, Master Miller (unmarried 39), Eastdean (CR).

WILLIAM COLWELE, 1861, Loader to a Miller, (married 22) (visitor) Eastdean (CR).
GEORGE T. ASHBY, 1871, Miller (aged 49), Eastdean (CR).
JAMES COOLEY, 1871, Miller (aged 53) (born at Alfriston, lived (at Friston mill cottage), Friston (CR).
WILLIAM BREACH, (1876), Miller 'loadbers', Eastdean (Ashby 47).
WILLIAM GEORGE MORRIS, 1887, Miller, Eastdean (PR).

Of the sixteen millers and employees from Friston and Eastdean listed above, only two are from Friston, and of the sixteen at least four come from other parishes. Of these, two deserve further mention, Nathan Seymour and William George Morris. Seymour is probably related to Joseph Seymour, the first miller at Polegte windmill, which he set up in 1817.

Simmons (1974) tells us that George Morris served his apprenticeship at Telham mill, Battle and subsequently worked at Cranbrook, Kent, and Whatlington before coming to Friston some time in the 1880s. Morris worked for G. T. Ashby in both the bakery at Eastdean and in Friston windmill, which latter he continued to work for Mr. Maitland. As the mill business was allowed to run down, Morris worked as sexton and later took to working on the roads. He died in the Leaf Homoeopathic Hospital, Marine Road, Eastbourne, in March 1922, aged 68 years, and at his funeral his coffin was born round the mill before being interred near the south door of Friston church.

The mill structure

This last mill was a typical Sussex white weatherboarded postmill with four spring-shuttered sweeps and a roundhouse. The latter was constructed of coursed field flints and was supported by four brick buttresses. At its foot were small brick, arched openings, presumably providing for ventilation. Entrances on the north-west and south-east gave access to the roundhouse protecting the trestle, whose quarter-bars and crosstrees reached out nearly to the roundhouse walls, and lay a little off the floor of the building.

The body of the mill was turned by a wooden tail-pole, whose operator, in order to put the sweeps into the wind, walked along a slight circular embankment around the mill house.

A cast iron windshaft took the drive from the sweeps, via the wooden brake wheel, to the stone floor, where two pairs of stones were accommodated, one of Derbyshire peak stone (used for animal feed) and one of French burrs (for flour meal); there was also a flour dresser. Simmons also recalls that one of the castings, probably one of those under the crown tree, bore the legend, 'S. MEDHURST & SON, 1862', an inscription still to be found on the bridge tree of the underdriven stones at Polegate windmill. According to Simmons (1974), the name, 'C. MORRIS' was cut into the centre post, but one would expect 'G' (for George) rather than 'C'.

The excavated site

Richard Gilbert recognized that the site of the mill might be developed at any time, and reconnoitred the area during the winter of 1961. Excavation began in July 1962, on a site covered by dense overgrowth and a thick flint scatter.

During the excavation, the circular foundation wall (Fig. 3) of the roundhouse was exposed, together with four brick-capped piers that must have supported the ends of the crosstrees of the trestle of the mill. The roundhouse wall 8.55 m in diameter (internally) and 0.508 m thick, was constructed of field flints bedded in mortar. There were two opposing entrances, one facing south-east and the other (with a disused millstone as a threshold) north-west. The piers, measuring 1.22 x 0.61 m, were built 1.4 m deep into the ground with flint and

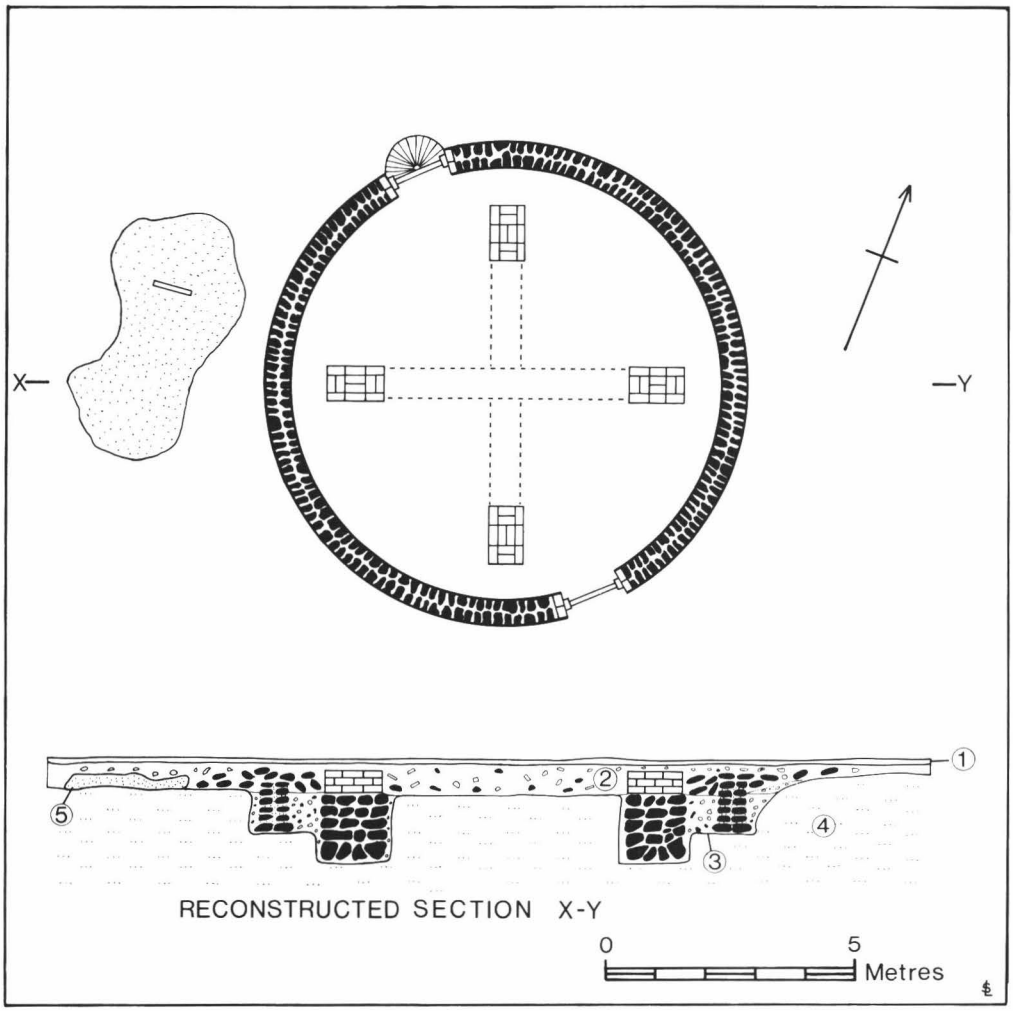

Fig. 3. Plan and section of Friston windmill (site 3). The plan shows the flint roundhouse wall enclosing four brick piers that would have supported the cross-trees (dotted). Section layers: 1. Turf and topsoil, 2. Demolition layer, 3. Construction trench, 4. Clay with flints, 5. Mortar spread.

were capped, at ground level, by three courses of bricks, the top of which lay 0.305 m below ground level.

Outside the roundhouse wall were several masses of mortar, one, to the west, having a slot, 0.71 m by 0.089 m, in it of unknown use. The mill was built on reddish clay with flints, which appear to cap the whole of Friston Hill, including the church site and the pond.

THE FINDS

All the finds recorded were derived from Layer 2, and consisted of a small quantity of earthenware fragments (*c.* 1800); vitrified brick pieces and numerous fragments of thick bottle glass.

Woodwork

1. Remains of timber 2.44 x 0.091 x 0.091 m, was found some distance from the mill and identified, largely because of its size, as a crown tree.

Stone

Fragments of millstone, of three types, included (A) Derbyshire Peak stone, (B) Niedermendig, and (C) French burr.

2.(A) Derbyshire Peak stone

Three fragments of Derbyshire Peak stone were recovered from the mill site, one from the rockery in the cottage garden, and nine fragments were recorded in the southern retaining wall of the basement area of the cottage. Further, a millstone, removed from the mill ruins after its collapse, serves as a sundial in the grounds of Friston Place.

3.(B) Niedermendig

Two fragments of Niedermendig millstone, quarried in the Rhine basin, were recovered from the loose rubble foundations of the roundhouse wall of the mill.

4.(C) French burr

The steps leading into the basement from the north were entirely constructed of very large fragments of French burr millstone. These stones were quarried in the Paris basin and were used for grinding meal flour.

Metalwork

5. A selection of shutter bars, coach bolts, nuts and nails was found on the mill site and are now in Polegate windmill museum. There is also extant a pair of governors from the tentering mechanism, on display at Michelham Priory watermill, nr. Hailsham, Sussex. This is the same pair mentioned as being in private hands in Horsham (Hughes 1962) and is on permament loan from Mr. Charles Vine, of East Dean.

The small amount of finds does suggest that the clearance of the site, after the mill's collapse, was thorough. The building materials are such as one would expect for such a structure, and the handful of metalwork is much the same in quantity as that found at Pashley Down, Eastbourne (sites 4 and 5).

It is difficult to come to any conclusion as to the date and use of the millstone fragments. Almost all the fragments recorded were certainly discarded and re-used before the demise of the mill, the exception being those fragments of Derbyshire Peak stone found on the mill site itself. In the case of the Niedermendig fragments, their provenance would suggest a source from another mill, but we can be sure that the roundhouse wall, under which they were found, is contemporary with the mill. We are inclined to the opinion that the majority of the millstone fragments came from either or both of the earlier mills.

MILLER'S COTTAGE

The miller's cottage stood to the south-west of the mill and to the south of the drive leading from the Jevington road to the mill. Particulars given at the time of the sale of the property in July, 1896 (Ashby 79), describe the building as 'a flint built weather boarded and slate healed Millers Cottage containing kitchen, scullery and two bedrooms, with garden and privy'.

In 1961, the cottage being unoccupied, opportunity was taken to examine the building (Fig. 4). Aligned north to south, it consisted of two floors — a basement and a ground floor. It had the character of a simple Sussex cottage of field flint, with red brick dressings and a weatherboarded upper storey. The roof was covered with slates of irregular widths and extended further down on the east side, to cover the ground-floor entrance passage and stairway.

A peculiar feature of the cottage was that the lower floor was sunk a little less than 2 m below ground level. Along the southern and eastern facades there was an L-shaped cement-floored area, on to which opened the scullery or kitchen. Steps made of discarded millstones led, from the north, down into a narrow, cement-floored, L-shaped area, with a flint and mortar retaining wall running along the eastern and southern sides of the cottage, giving access to the lower floor by way of the scullery. In front of the eastern (and only fenestrated) elevation, the ground had been sloped away, no doubt to let more light in. At the time of the recording, the windows were of the casement type, but had previously been of the sashed variety (Plate II).

Several residents spoke of the tendency of the lower floor to flooding, the unwelcome frequency of which led to the installation of a pump against the cottage wall, outside the kitchen window, to pump out surplus water. We are convinced that the basement area was extended round the south-western side of the house at some later date in an effort to remedy dampness, the set-back boundary wall containing pieces of millstone. Apart from other facts, an examination of the present retaining wall on the side of the green shows that the later portion of the area was created by breaking through the original wall, with which the later one is not continuous, but the bay so formed was no doubt really an encroachment on common land.

The only reason advanced for the sunk basement floors is that a two-storied house, at ground level, might keep wind from the mill sweeps. In any case, labour necessary to excavate the tons of earth involved was ill-rewarded, for, as we have said, the whole area is covered with several feet of reddish clay with flints, affording very poor drainage. There has been published a statement (Hughes 1962) that the practice of half-burying millers' cottages was general, but, so far as we can ascertain, Friston is unique. Nor have we found anything to corroborate the story, in Thurston Hopkins' 'Sussex Watermills and Windmills', that the lower floor rooms were concerned in smuggling episodes.

A door, set back at ground level on the eastern facade, gave access to the ground floor, with the two rooms described in 1896 as bedrooms. Each had a window and a fireplace, flanked by cupboards. The splayed entrances to these rooms opened out on to a wooden stairway, giving access to the basement rooms, at the foot of which was a water tap, in a box, in the western wall. A passage in the basement ran north to west joining the kitchen and the scullery. This latter had a brick paviour floor and was devoid of anything except for a brick fireplace that was clearly an addition. The kitchen boasted a cast-iron range in the fireplace on the south wall and a shallow porcelain sink, supported on iron brackets, below the window. The kitchen door opened on to the area. During the occupation of the Morris family, the cottage was lit by oil lamps, but electricity was installed afterwards.

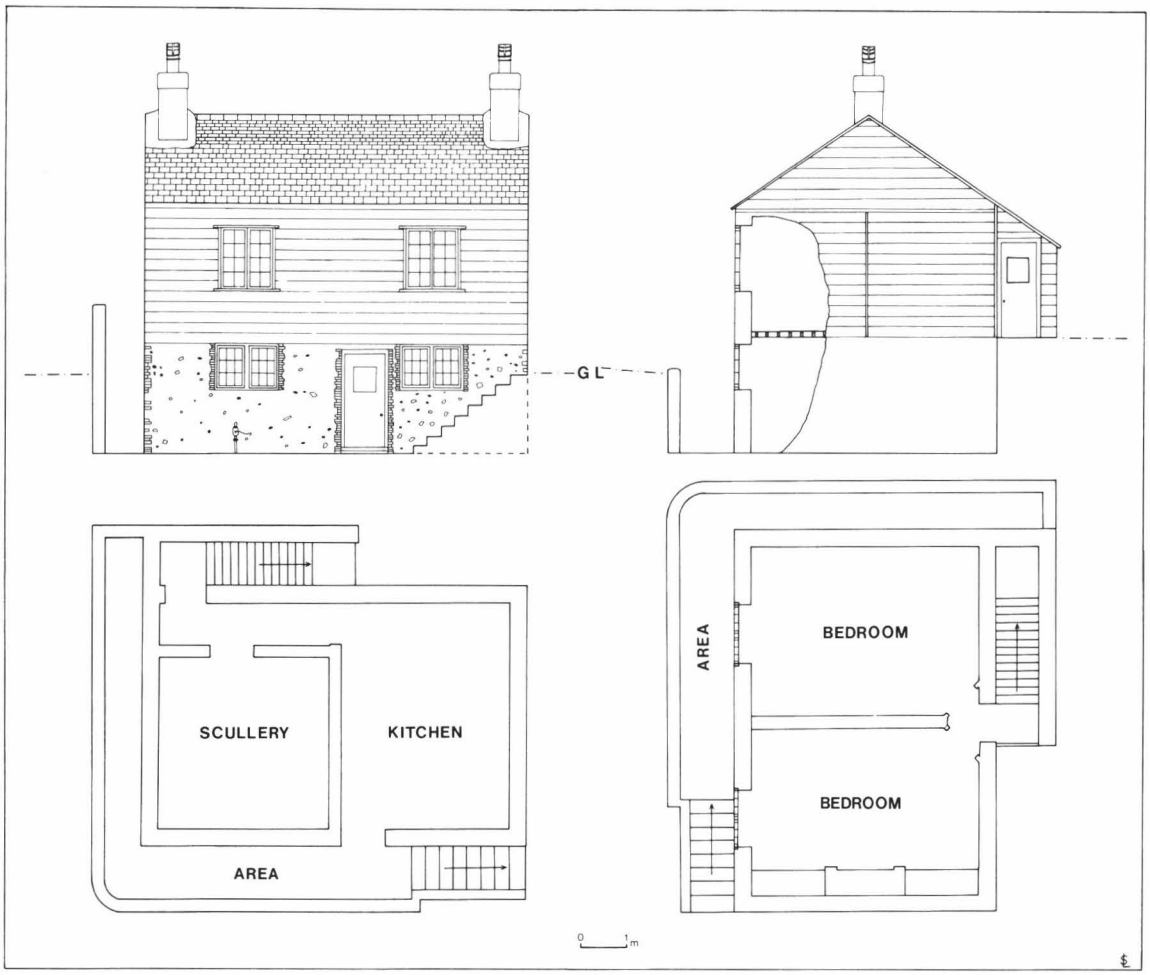

Fig. 4. Plan and elevations of miller's cottage, Friston.

Fate of the remains

Mr. Gilbert's hunch, that the site might be developed, was proved correct in 1972, when the cottage was demolished for re-development. Of the mill, nothing remains in situ and the foundations of the cottage are under the garden of 'Kellands', Windmill Lane, Friston.

PASHLEY DOWN

Location

The area involved is situated on Pashley Down (TV 591982) on an eastern spur of the chalk downland to the west of urban Eastbourne. There was a discontinuous arc of flint wall marking the western limit of a depression and to the west of this there was a second depression. It was known that a horizontal mill had stood in the neighbourhood and that there had been a postmill nearby.

Investigation of the site had arisen as a result of current interest in the Mortimer family of Eastbourne (in particular the eighteenth century artist John Hamilton Mortimer) who had been

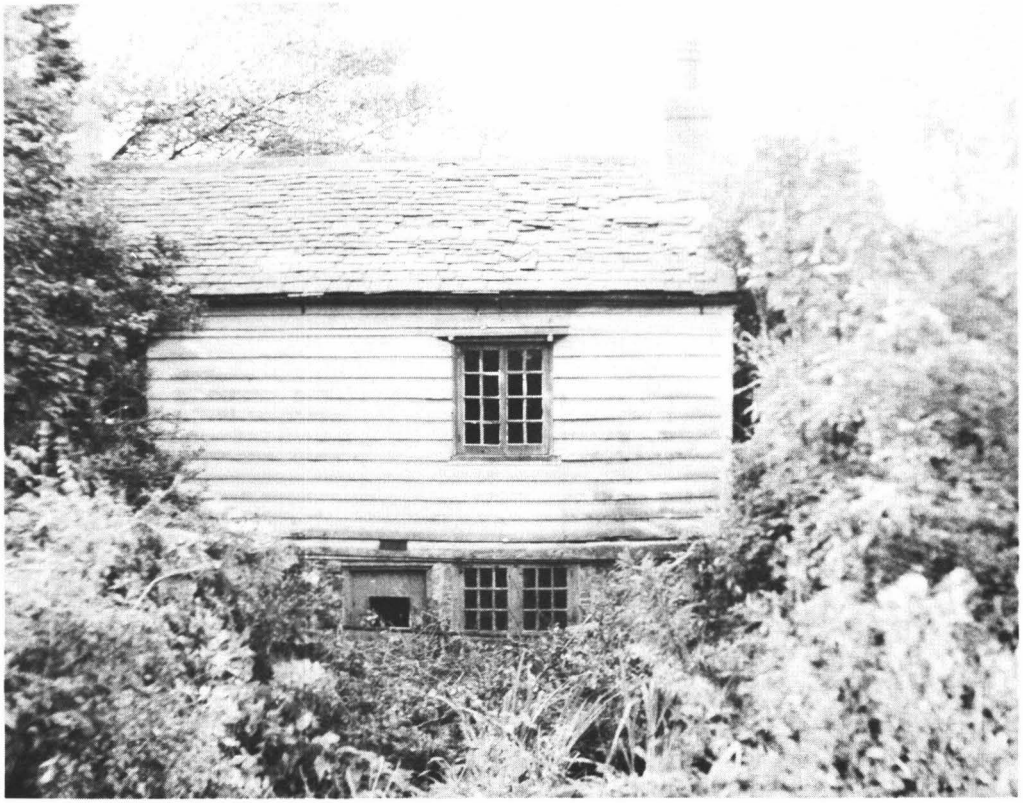

Plate II. South-east elevation of the miller's cottage, photographed in the summer of 1962, showing the basement entrance.

associated with mills on Pashley Down. The double purpose of the excavation was, therefore, to establish the respective sites of the mills with the hope that sufficient remained to enhance our knowledge of horizontal mills and of the Mortimer family.

Work commenced in July 1966 and, after excavating both sites, was completed in November 1968. The project was a private venture, without outside financial help, and the team consisted of Richard Gilbert and Lawrence and Patricia Stevens supported largely by boys from Eastbourne College and Eastbourne Grammar School.

Documentary evidence of Sites 4 and 5

The earliest known relevant document relating to Pashley Down is a grant (CplM p.33) by Sir Matthew Brown to Robert Burton of two pieces of land on Pashley Down containing one acre at a reserving rent of 8d., dated July 10, 1516. However, our first actual reference to a mill is — 'A windmill on Pashley Down 8d. Robert Burton', in a lease of 1527 (Bnb. 57).

On December 1 1724, various parcels of land were sold by Sir Thomas Wilson and Dame Elizabeth, his wife, to Sir Spencer Compton, including 'a windmill in the occupation of John Mortimer' (CplM p.75).

Six years later, on October 20, 1730 (CplM p.170), Sir Spencer Compton leased to Thomas Mortimer, son of John, 'the corn windmill with the new house near the said mill erected and set

up for a boltinghouse as they are now standing and being on the hill in Eastbourne aforesaid, together with the grinding millstones, wheels, sweeps, sails and implements and all other necessaries . . .'. The term of the lease was for 13 years at an annual rent of £12. The two buildings appear on a plan of Compton lands at Eastbourne, drawn in 1739 by Cant (Plate III). An open trestle postmill is shown to the north of a small building which has a 'gothic' facade and a windvane.

However, this arrangement of the new boltinghouse serving the postmill seems to have been less than satisfactory, for only eight of the 13 years had run when, in 1738, a new lease was agreed (Cplm p.170) between Henry Marchant and the Earl of Wilmington for the 'Windmill and Bolting Mill'. This last agreement, for '21 years — rent £10', seems also to have failed in spite of the reduced annual rent, for in 1752, after only 14 years, Thomas Mortimer and his son

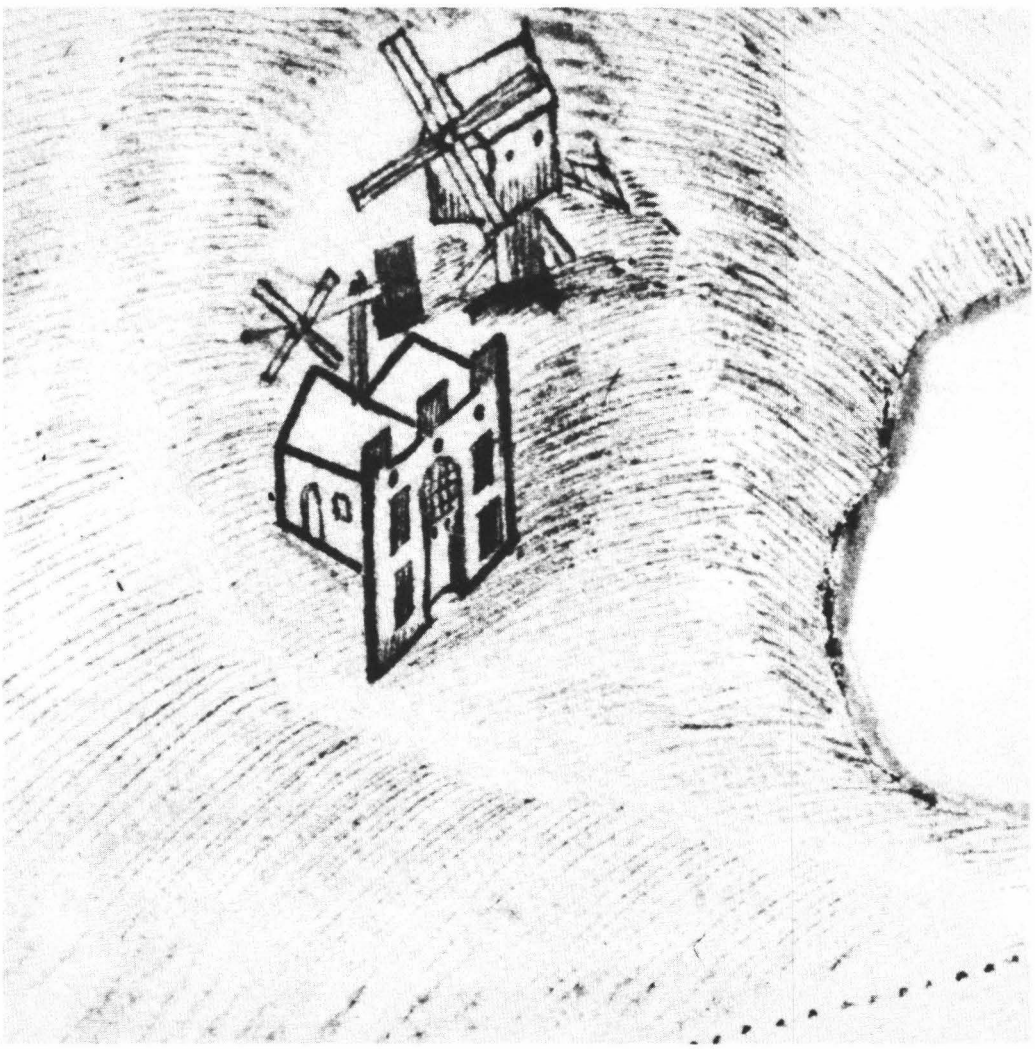

Plate III. Thumbnail sketch of the Postmill and Boltinghouse, enlarged from an Estate Plan of 1739, by Cant. Reproduced by kind permission of the Trustees of the Chatsworth Settlement, Eastbourne.

(Charles Smith Mortimer) took out another lease (CplM p.170) with the Earl of Northampton for 'all that cornmill with the new house erected for a Bolting House, but now turned into a grinding mill as standing on the Hill in Eastbourne.'

Referring to the Land Tax returns for Eastbourne, we find that from 1751 to 1758, Thomas Mortimer pays on a 'mill' but that in 1759 the entry becomes 'mills', presumably as a consequence of the building of the Round House mill on the seashore. The entry 'mills', continues until 1766, when, for a single year, 1767, it reverts to 'mill', after which there is no

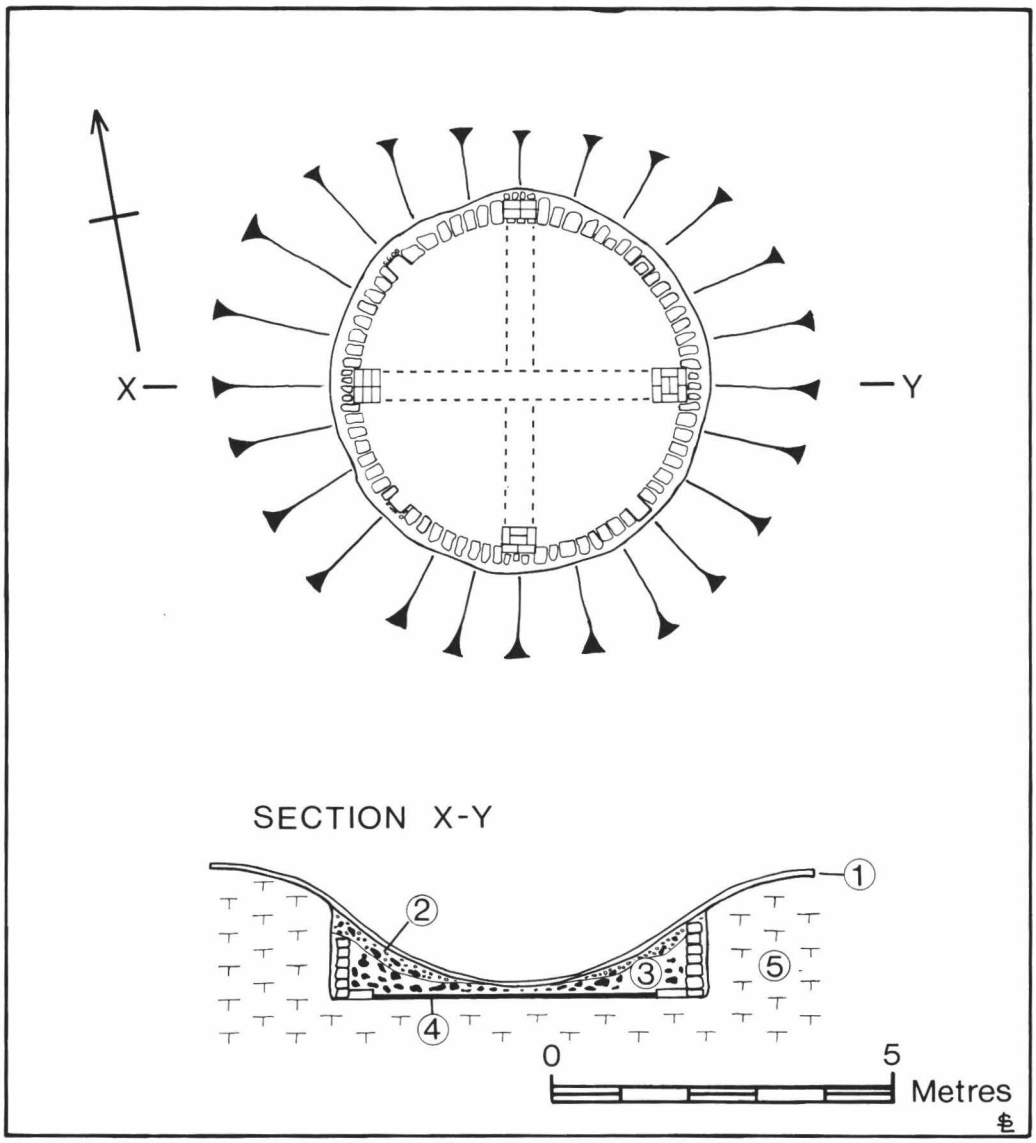

Fig. 5. Plan and section of Pashley Down postmill (site 4). The plan shows the revetment wall of chalk and the position of the brick piers that once supported the cross-trees, whose original position is dotted. The section layers: 1. Turf and topsoil, 2. Earth and small chalk fragments, 3. Primary tumble of chalk blocks and field flint (black), 4. Dark soil with numerous finds above, 5. Natural chalk.

further reference to any mill owned by Thomas Mortimer. These entries suggest that Mortimer did not hold any mill in Eastbourne after 1767. At this time the mill must have been in an advanced state of decay, for Budgen (Bnb.117) records relevant correspondence between the Duchess of Beaufort and Mortimer, in which, in 1766, it was claimed that the mill was in such poor repair that it 'must be repaired or pulled down or it will come down of itself'. Mortimer

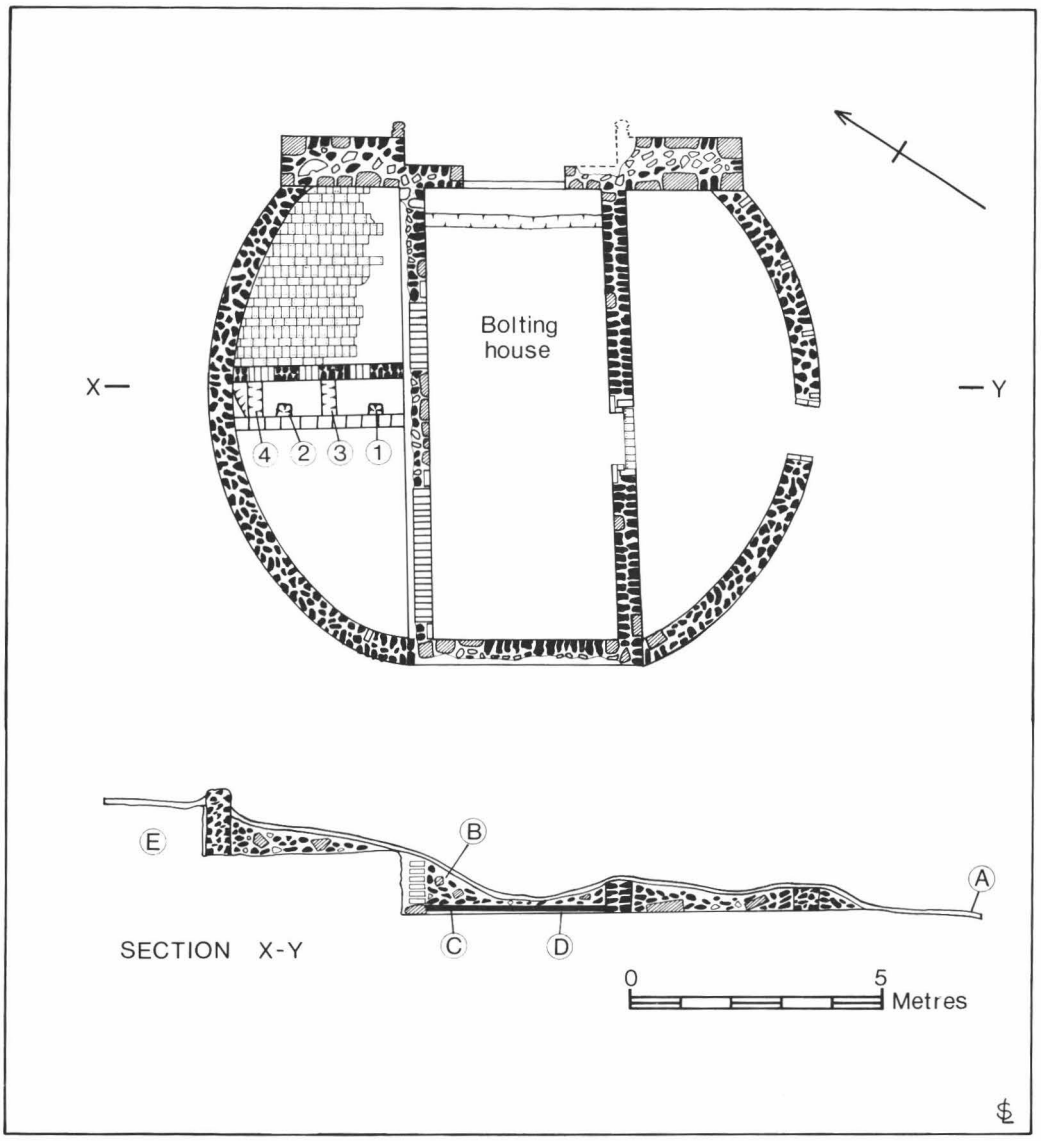

Fig. 6. Plan and section of the Boltinghouse and Horizontal mill, Pashley Down (site 5). The plan: The rectangular boltinghouse and facade are constructed of brick, flint (black) and sandstone (shaded), with evidence of a lean-to with a roof-tiled floor to the north. The conversion to a horizontal mill is represented by the addition of the arcs, built of field flint. The section: shows how the building was terraced into the hillside. Layer A. Turf and topsoil, B. Demolition layer, C. Loam with pottery, bone fragments and glass, D. Rammed flint and mortar floor, no finds, E. Natural chalk.

stubbornly refused to surrender the lease of the mill so that it could be pulled down and no doubt pressed his right to have it repaired.

No pictorial representation of the horizontal mill exists, but a drawing by S. H. Grimm, dated 1780, in the British Museum, shows the postmill (with one sweep visible) and what is probably the remains of the horizontal mill, reduced to a low building. Poppleton (*c.* 1810) shows a similar scene, which others have copied; but one very important watercolour, by Lady Sophia Burrell, painted in 1785 (Burrell), shows Pashley Down from the grounds of what is now Compton Place. The postmill is shown as having a very low roundhouse with a flat top, which suggests that it was roofless at the time. The remains of the horizontal mill look like a low, shed-like building, similar to the other representations of it.

The last reference to the horizontal mill is to be found on maps of 1816 and 1817 by William Figg on which the site is marked 'Horizontal mill in ruins' the only time, in fact, that the word 'horizontal' is used with reference to Pashley Down.

Description of Postmill site 4 (TV 59239815)

Prior to excavation, the postmill site was clearly defined as a circular depression 10.92 m in diameter, with sloping sides dropping to 2.13 m in the centre, situated 12 m to the north-west of the horizontal mill (site 5). During excavation, the whole area of the depression was examined by the quadrant method (Fig. 5).

The site proved to be a partly-filled circular pit which had been revetted by a coarsed chalk rubble wall bedded in a puddled chalk mortar. The only flint in the wall appeared to be repairs, which had been executed with pebble mortar (stuff).

Height of the remaining wall varied from 0.20–1.15 m and at no point did the wall reach turf level. In the wall there had been built two sets of recesses in opposing pairs. The larger series showed the remains of pinafore piers, built with bricks measuring 222 x 115 x 58 mm. They were situated at the main points of the compass and varied in plan between 445 x 445 mm and 470 x 445 mm. The northern pier was two courses high but incomplete; the rest, also incomplete, only reached one course high.

The secondary recesses were much smaller, without piers, and were located centrally between the larger recesses. The height of the recesses was about 0.50 m and the width varied from 0.19–0.25 m. A piece of greensand had been used to block the NE recess, but the others were not blocked up.

Stratigraphy

The layers 1–3 were all successive deposits of tumble. Layer 4 appeared to represent deposition during the mill's use and seemed to be contemporary with the brick plinths.

THE FINDS

The finds are from Layer 4 unless otherwise stated.

The pottery — O. H. J. Pearcey

The pottery from the postmill was largely derived from layers 2 and 4 and ranges in date from a possible sixteenth century sherd (87) to post-1800 picnic debris. Because of the similarity of the pottery from the postmill site and the horizontal mill site, only groups peculiar to the former site are described below. Shared groups are listed below but are described in the pottery section of the horizontal mill site report where a discussion of the pottery of the two sites will also be found.

1. Body sherd; red fabric with unglazed exterior and orange glaze with some dark-brown speckling on interior. Probably eighteenth century (Layer 2).
2. Body sherd; red fabric, with green-glazed exterior and brown-glazed interior. Exterior decorated with three parallel, wheel-turned lines. Probably eighteenth century (Layer 2).

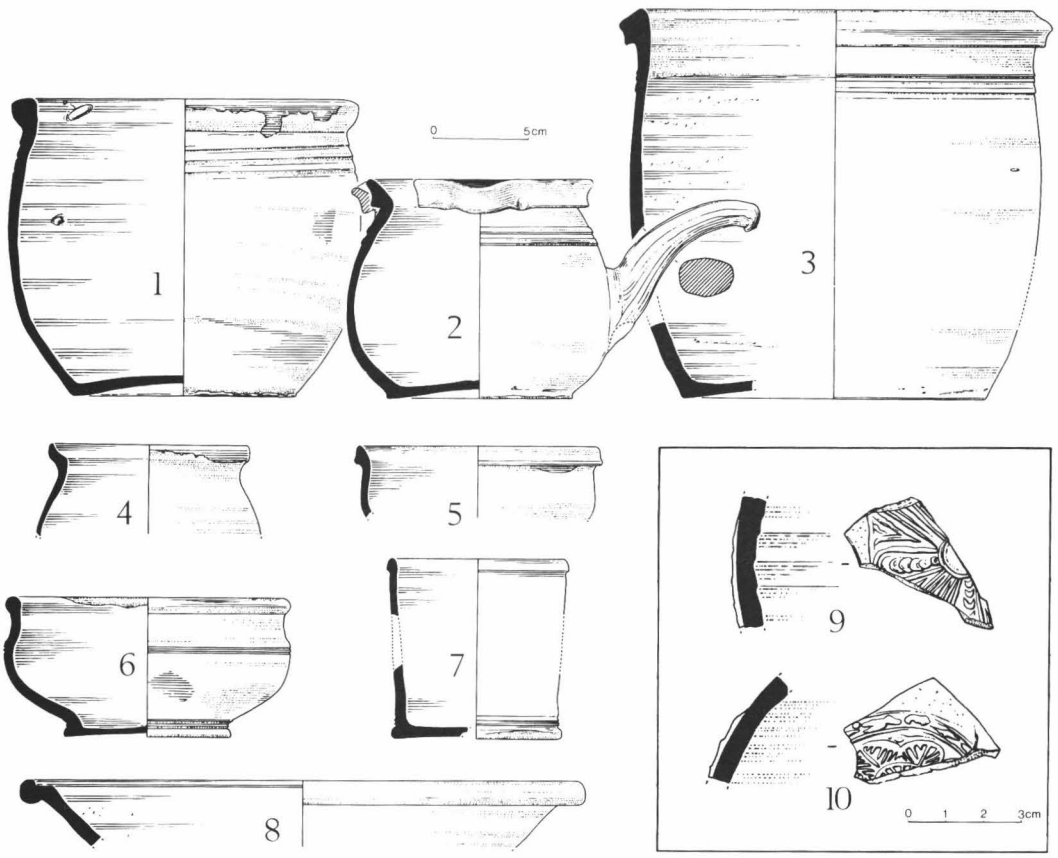

Fig. 7. Pottery from Pashley Down postmill (site 4) and horizontal mill (site 5). Site 4: Nos. 2 (106); 6 (104); 7 (102); 9 (4–7). Nos. 1 (103); 4 (107); 5 (105); 8 (111); 10 (3). Shared Group: No. 3 (109).

Stoneware

4–7 (Fig. 7.9) Body sherds; grey fabric with pinkish, salt-glazed interior, and light brown, iron-washed, salt-glazed 'tiger skin' exterior. One sherd bears an applied medallion in the same fabric with a rosette pattern. The vessels from which sherds 3 (site 5) and 4–7 are derived, are jugs of the 'Bellarmine' type. Similar designs have been found in Sussex (Hurst 1963, Bedwin 1976).

467 Body sherd; grey fabric with grey, salt-glazed interior and exterior coloured with cobalt and manganese and decorated with an impressed flower pattern. Made in the seventeenth or early eighteenth century, probably in Westerwald; but similar vessels were also made at Fulham during the last quarter of the seventeenth century.

8–26 Body sherds; grey fabric with unglazed interior and dark brown, iron-washed, salt-glazed, 'tiger skin' exterior. Derived from a large bottle manufactured in the seventeenth or early eighteenth century.

32 Base; off-white fabric with unglazed interior and brown speckled exterior, salt-glazed on side and underneath base. Date and manufacture similar to 8. It appears to have been re-used as a mortar for grinding red colour (tiver).

33 Base; unglazed grey fabric, with white slip; similar to 8.

34–67 Shared group (see site 5 report).

68 Neck sherd; off-white fabric with dark brown, iron-washed, salt-glazed exterior, and orange-brown interior. Decorated with horizontal reeding.

69 Neck sherd; similar to 68 but in a grey fabric, with a pale brown interior.
Fragments 68 and 69 are probably derived from globular drinking mugs, known to have been made in Bristol, Fulham (Christophers 1974, Canvin 1974) and Lambeth in the late seventeenth and early eighteenth century.

70 Base sherd; fine off-white fabric, thinly potted, with brown, iron-washed, salt-glazed exterior, decorated with four lined grooves, and a buff, salt-glazed interior. Probably the base of a small tankard of supposed eighteenth century Nottingham manufacture.

71–7 & 468 Handle, base and body sherds of at least three tankards. Grey fabric, salt-glazed inside and out. Top part with brown iron-wash on exterior. Base decorated with one wide and two narrow turned rings. These tankards are characteristic eighteenth century vessels, manufactured in Staffordshire, Bristol and Fulham (Christophers 1974) and Lambeth. Excavated examples are known from a number of sites in Sussex (Bedwin 1976).

78–83 & 469–515 Various sherds, including two beer bottle necks, five bottle side sherds with transfer printed letters, and the base of a jam jar, marked '. . . LEY, LONDON & . . .' Some salt-, some Bristol-glazed ware. All nineteenth or early twentieth century (Layer 2). (78–83 fragments include some from site 5).

Tin-glazed earthenware

85 Sherd of straw coloured fabric, white inside and out; exterior decorated with under-glaze painting in cobalt. Possibly eighteenth century.

518–25 Sherds from at least two vessels of straw-coloured fabric, tin-glazed white. Possibly eighteenth century.

Coarse earthenware

87 Sherd of off-white earthenware, green lead-glazed interior, and black underlying speckling. The hard fabric and speckling suggest that this might be a sixteenth century Sussex copy of Surrey-Hampshire border fabrics (88–101 below).

88–90 Three sherds, off-white fabric with lead-glazed exterior coloured green with copper salts, and unglazed interior.

91–3 Rim and part of the base of a platter, off-white fabric, lead-glazed clear yellow interior and unglazed exterior.

96–9 Rim and base of a platter in a buff fabric with dark brown speckles, interior lead-glazed with tortoiseshell pattern underglaze brown painting, exterior unglazed.

100 Base of a vessel in white with footring, lead-glazed inside and out, with underglaze tortoiseshell pattern similar to 96.

101 Sherd of earthenware in buff fabric, lead-glazed yellow interior and unglazed exterior.
Sherds 88–101 were probably manufactured in the Surrey-Hampshire border area. Similar forms, fabrics and glazes have been reported from a number of sites (Holling 1969 and 1971).

102 (Fig. 7.7) Neck, base and body sherds (including a few small fragments from site 5) of a vessel, possibly a mug, made of red earthenware. The interior and exterior are both lead-glazed, coloured black with iron.
Similar vessels were made in the Midlands, Kent (Ashdown 1968) and Essex (Clark 1970), up to the early eighteenth century.

104 (Fig. 7.6) Bowl in red earthenware, unglazed exterior, the interior thickly lead-glazed brown with underlying darker brown mottling.

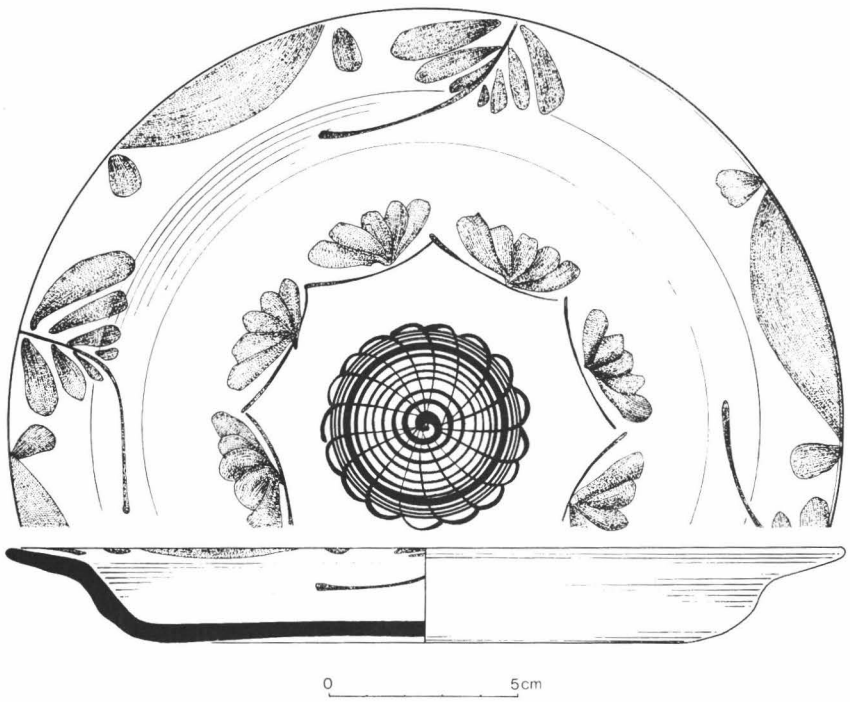

Fig. 8. Lambeth tin-glazed earthenware plate. No. 84 from Feature 1, horizontal mill (site 5).

106 (Fig. 7.2) Pipkin in red earthenware, the exterior unglazed, the interior lead-glazed orange-brown with underlying sparse darker brown speckling. The rim is shaped to support a lid. Similar to one found in an eighteenth century context at Ardingly (Bedwin 1976).
109 (Fig. 7.3) (see site 5 report).
110 Shared group (see site 5 report).
112–46 Shared group (see site 5 report).
147–74 Shared group (see site 5 report).
175–8 Four strap handles, all in red fabric. Three are lead-glazed brown, the fourth unglazed.
179–466 Shared group (see site 5 report).

The following finds are from layer 4 unless otherwise stated.

Building Materials
1–14 Several fragments of roofing tile and vitrified brick were found in the tumble of Layer 3.

Stone
15 Piece of rectangular section whetstone (stone unidentified).

Millstone
16–29 Fragments of French burr millstone weighing 1.34 kg, including a piece, 35 mm thick with part of the edge of the stone intact and another 75 mm thick with the remains of two round-bottomed grooves.
30–1 Two fragments of Niedermendig from layer 2.

Mortar
32–3 Two samples of lime mortar with puddled chalk, from the wall of the millstead, one containing a fragment of an animal's rib bone.

Glass
34 Several hundred fragments of bottle glass, eighteenth-nineteenth century, were recovered from the upper layers, together with the bases of two wine glasses, one with a pontil mark, of nineteenth century date.

Iron
The ironwork is disappointing as little of it can be directly related to the machinery of a mill.
35–61 Small finds consisted of: 2 harness buckles, a broken horseshoe, 3 iron dogs, 9 washers, 2 spindles, several chain links and some tools, including 2 hammer heads and fragments of what are probably scissors, a triangular section file, 2 knife blades and a scythe blade.

Nails
62–3 Layer 3; 564 size 16–125 mm.
Layer 4; Floor, 752 size 16–104 mm.
64 Iron spindle and collar of a grinder similar to a coffee grinder.
65 (Fig. 9.8) 31 iron points and 33 fragments of same — tines/cottars.
66 Chain with long link, ring and spigot, usually used for securing a waggon wheel but also used in addition to the brake on the brake wheel in a windmill as is the case at Polegate and Argos Hill mills, Sussex.
67 Iron chain links, similar to those used on sack-hoists.
68 (Fig. 9.2) Part of an iron plate such as is used for packing and positioning bearings.

Coins
69 George III halfpenny 1779 from Layer 2.

Tiver or Raddle
70 Probably used in conjunction with a paintstaff for levelling the working surface of millstones. The tiver, a paint-like substance was applied to the straight-edge of the paintstaff and then it was rubbed over the surface of the millstone, thus painting the high spots on the stone which would be removed when the stone was dressed. Tiver deposits from pottery fragments 112–146 were submitted to Dr. G. Bird for analysis. The sample consisted of a bright red/orange powder weighing 0.5 g. It appeared to be mostly calcium carbonate with traces of ferric iron and lead.

Clay Tobacco Pipes — D. R. Atkinson
Numerous stem fragments from the seventeenth to nineteenth century were found together with a number of bowl fragments. Those without identification marks included: one heel and one spur bowl, 1660–70; a spur piece, 1670–90; two bowls, 1670–80; a London type, seventeenth century spur piece, and an eighteenth to nineteenth century bowl.

Marked Bowls and Stem
71 Piece of moulded pipe with I/H, late seventeenth century, John Holcom, Lewes, who died in 1699.
72 Piece, *c.* 1690, with H/W with upright W. This is a moulded type produced in both London and Kent, but there is no record of its having been produced in Sussex.
73 London-type bowl, *c.* 1690, with upright initials T/H. Examples have been recorded from a furnace site at

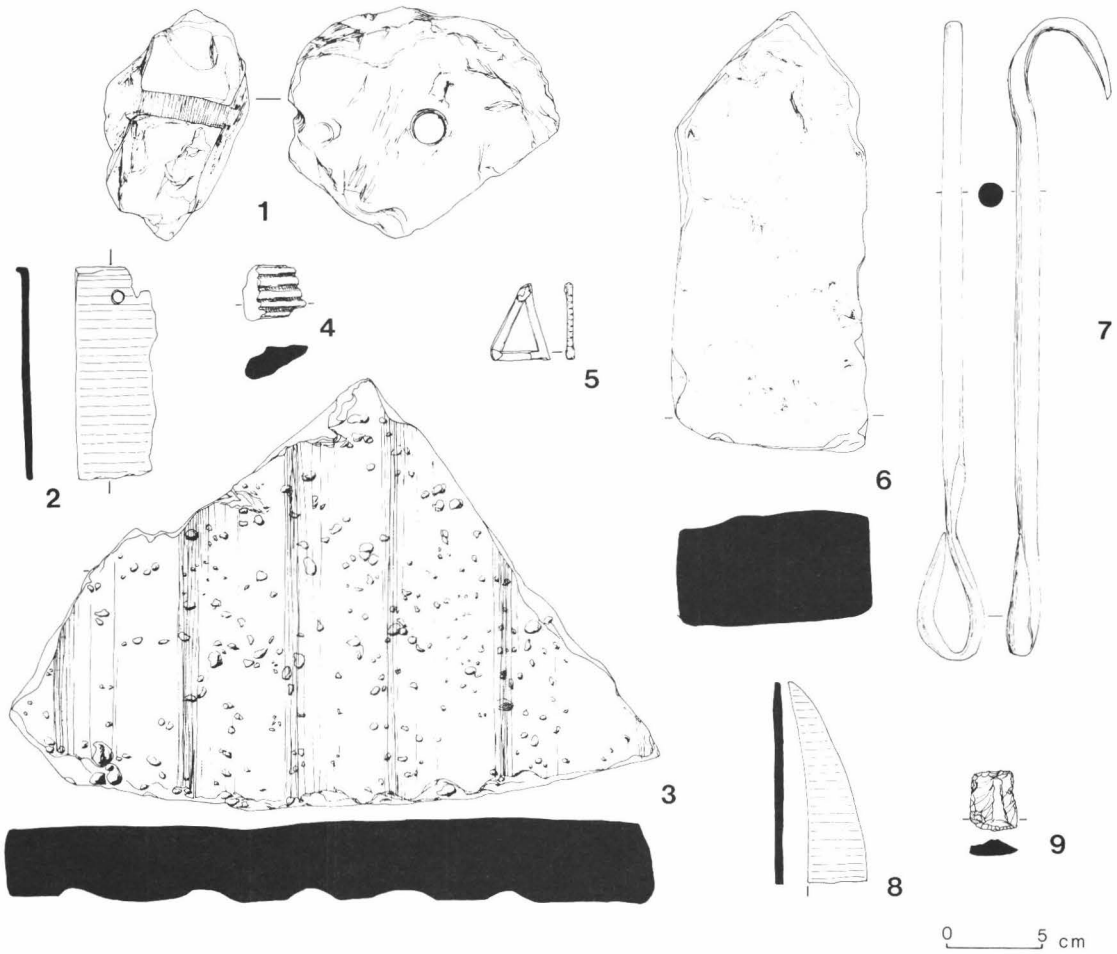

Fig. 9. Small finds from Pashley Down postmill (site 4) and horizontal mill (site 5). Site 4: No. 2 Iron (68), Site 5: Nos. 1 Stone (47); 3 millstone (43); 4 Stone (48); 5 Glass (61); 6 Brick (58); 7 Iron (71); 9 Flint (83). Shared Group: No. 8 Iron (65 and 74).

Ardingly and from Old Heathfield. As almost all the London makers who used this style of marking had small sideways initials, this seems to represent a country maker of mid-Sussex origin.

74 Stem fragment, stamped IOHN/STEP/HENS, who worked at Newport IoW., 1709–51. Examples are numerous around the Portsmouth-Southampton area and have been found in Canada but this is as yet the only recorded example from Sussex.

75 Two pieces with T/H — Thomas Harman, Lewes, *c.* 1720–40.

76 Piece with T/H — Thomas Harman, Lewes, *c.* 1720–50. He probably made pipes between *c.* 1720 and 1760, thus the earlier examples above belong to his early period, when he produced pipes with thick stems and rather upright thick bowls. This later example belongs to the period when he produced pipes with thinner stems, narrower and more projecting bases and smaller initials.

77 Piece with I/H on square spur, late eighteenth century. John Harman II. Considered to have been made by an unrecorded John Harman, of Lewes, as they have been found in Lewes in a context suggesting the 1780s, having thin stems and large bowls, and are not to be confused with those of the John Harman of the 1730s in Lewes.

Bone artifacts — Mrs. B. Westley

78 Fragment of double-sided bone comb.

79 (Fig. 10.1) Fragment of horse metacarpal. The bone is decayed, but there are clearly remnants of one perforation and one scoop with more than a hint of a second on the same face, worked in the opposite direction.

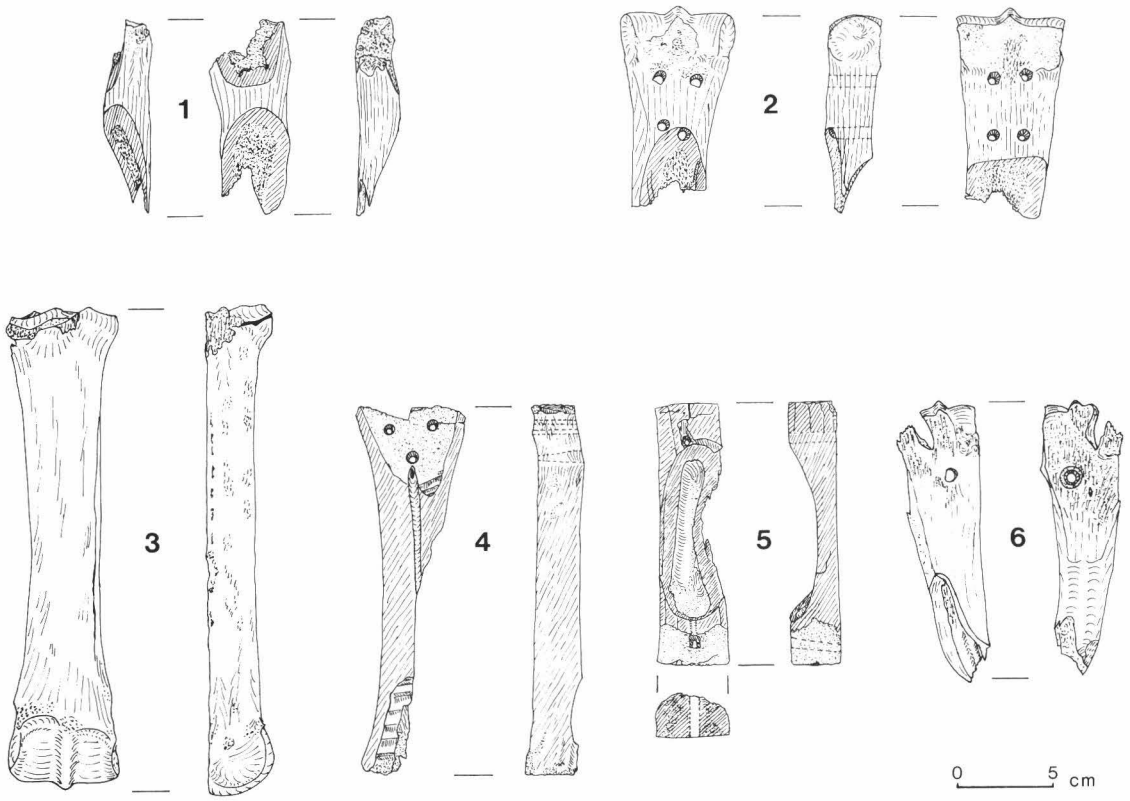

Fig. 10. Bone artifacts from Pashley Down postmill (site 4) and horizontal mill (site 5). Site 4: Nos. 1–3 Fragments of Horse metacarpals with perforations and scoops. Site 5: Nos. 4–6 Fragments of Ox metacarpals or tarsals with perforations and scoops.

80 (Fig. 10.2) Distal fragment of horse metacarpal. There are two pairs of distal perforations, one pair of round and one pair of squarish holes. The distal end has been flattened on both surfaces and at the broken end there are the remains of a scoop on each face.

81 (Fig. 10.3) Horse metacarpal (could be the same animal as above), complete except that it is flattened posteriorly.

A discussion of these artifacts, together with others, appears in the finds list of the boltinghouse and horizontal mill (ibid).

Conclusions

The feature is clearly a millstead in which the trestle of a postmill rested on the piers, either on vertical timbers or more probably directly on the piers. Whichever was the case, one of the crosstrees would have been above the other as there was not normally a halving joint at the point of intersection (Fig. 2.1).

The larger recesses (which, it would seem, originally continued to the top of the wall) would have greatly improved the stability of the trestle by restricting the lateral movement of the crosstrees and quarter bars, which latter would also have been prevented from spreading, being jammed against the face of the recesses. These recesses would also facilitate the easy removal and replacement of the crosstrees without having to demolish part of the wall.

The smaller recesses may have been for secondary supports which would have assisted in supporting the main post, in addition to the usual quarter bars, and, as one of the recesses for

these supports is blocked, it would seem that they were part of an earlier mill and that the subsequent trestle had been built without using the secondary supports.

Rex Wailes (1967) points out, that 'posts frequently had four additional mortises in between the tops of the quarter bars, which were used for temporary struts to hold the post vertical while the quarter bars were being fitted', but he also quotes several mills where there were six quarter bars on three crosstrees. As the recesses do not seem to be of a temporary nature, it is suggested that in this instance additional bars were a permanent fixture.

In her watercolour, already referred to, Lady Sophia Burrell depicts the postmill as having a very low roundhouse, so low that most of the trestle would have been below ground level. This must be the mill which has been excavated, a view, however, which Mr. Gilbert does not share. He thinks Lady Burrell's mill stood to the north-west, possibly on the feature marked on the ordnance survey map as a tumulus.

It is clear that, whilst most of the trestle was below ground, it was never buried, and, though as yet we do not know of any other example of this type of circular millstead, we suggest that this stead and the cruciform types found on Ocklynge Hill (features 6 and 7) represent a transitional type between postmills with buried substructure and those with the substructure above ground.

Boltinghouse and horizontal windmill

Description of site 5 (TV 59259814)

Excavation revealed the foundations of a rectangular building (Fig. 6) 9.15 x 3.66 m, orientated NE–SW on a terrace cut along the length of the building. Its NW wall revetted a low chalk cliff, while the SE wall was level with the ground, which sloped away to the SE. The SW wall also revetted another low cliff, while the NE side exhibited the remains of an ornate facade, which continued for a short distance each side of the building. There was a small entrance in the SE wall, which had brick dressing, and a line of seven roof tiles across the threshold. These walls were constructed of coursed field flints with a few boulders, and brick was used in various ways, including a herringbone pattern, as dressings in the corners and as flush pillar-like supports. A few undressed sandstone lumps were randomly built into the structure.

The line of the facade was set back twice, the second being the entrance, measuring 2 m wide. The facade has been constructed of flint and Eastbourne greensand and filled with chalk rubble and mill debris, including pieces of millstone and a large piece of grindstone. The flintwork was of coursed field flints with pointing, and the greensand work was dressed and decorative.

Situated in the high NW corner, behind the extended facade, was a floor of roofing tiles mortared to the levelled chalk. This floor was defined on its SW by the remains of a 152 mm high flint and brick wall. Running parallel to this wall and 940 mm further to the SW was a second wall, 558 mm high, constructed of mortared chalk blocks revetting the chalk cliff of the terrace upon which the floor was laid.

In the space between the walls there were four features. Features 1 and 2 were both rectangular pits abutting the outer wall and measuring 254 x 228 x 228 mm deep and 279 x 254 x 254 mm deep respectively and could be interpreted as postholes. Between these features there was a depression, feature 3, 686 x 279 x 102 mm deep, and on the NW side of feature 1, there was a similar depression, (feature 4), 635 x 483 x 254 mm deep. Both of them ran at right-angles to the chalk wall and may have been beam slots.

The plan of the second phase of the boltinghouse building was plain to see as the builders had simply built two arc-shaped walls from the opposite ends of the facade to the ends of the SW wall. The NW arc on the high side of the site was, like the SE wall, built on the natural chalk, and, where the NW wall crossed the tiled floor, the tiles had been carefully removed and made good when the work was finished. There was an entrance in the SE wall in line with that of the boltinghouse within.

Field flint was the main building material, with brick being used to dress the entrance and form the corners of the wall. Numerous dressed sandstone pieces had been re-used in the walls.

Stratification

All finds are from Layer C unless otherwise stated.

THE FINDS

The Pottery — O. H. J. Pearcey

Apart from the single sherd (87) of possible sixteenth century date, the earliest pottery capable of secure dating found at Pashley Down is the three stoneware medallions (3, 4 and 467), which are of mid-seventeenth century origin, probably derived from vessels used originally to import wine or spirits (or mercury) from the continent. Certain other sherds (9–26, 88–101 and 111) are also likely to be of seventeenth century date. The bulk of the coarse earthenware, together with the tin-glazed material and much of the salt-glazed stoneware, was made in the eighteenth century. The rest of the stoneware, the china and possibly some of the coarse earthenware was manufactured after 1800, but there is no reason why any of this material should be later in date than about 1850, and the post-1800 pottery and glass is all of a type which might derive from a picnic meal. There are virtually no high quality (china, porcelain) eighteenth century wares. It is particularly striking that virtually none of the mass-produced nineteenth century earthenwares and chinas, especially transfer-printed wares have been found at Pashley Down, although these are found almost everywhere on sites dating from the beginning of the nineteenth century.

Overall, the dates of the material found correlate well with the documented history of the site. The postmill is known to have been in existence in the early sixteenth century; evidence from the finds would suggest that there was no residential occupation of the site before that time. The boltinghouse was built in 1730 and converted to a horizontal mill in 1752; both the postmill and the horizontal mill were out of use, (and may have been demolished) by the first quarter of the nineteenth century, and the lack of any substantial pottery deposit of a later date than this suggests that the site ceased to be used for residential purposes then. If the late stoneware and china is attributed to casual use of the site, residential occupation came to an end before 1800. The pottery found is all domestic waste material from a household whose standard of living seems never to have been high and which therefore turned mainly to the local Sussex potteries to meet its needs rather than to those elsewhere in England.

Stoneware

3. (Fig. 7.10) Body sherd; off-white fabric with clear salt-glazed interior and dark brown iron-washed salt-glazed exterior. Applied medallion in a grey fabric with a pattern of stylised foliage.

4–7 Shared group (see site 4 report).

27–31 Body sherds; off-white fabric with unglazed interior and buff salt-glazed exterior with splashes of brown iron-wash. Similar to 8.

34–67 Body sherds; from at least 15 vessels. Exterior iron-washed and salt-glazed, some salt-glaze inside. Probably eighteenth century (also found on site 4).

78–83 See site 4 report.

Tin-glazed earthenware

84 (Fig. 8) Lambeth tin-glazed earthenware plate. Diameter 225 mm. Bloice (1971) plate type 28B. Decorated in blue Maiolica style. Although the Maiolica styles were produced by Lambeth throughout the eighteenth century, motifs which are often present on designs towards the end of the century are absent. The dull, slaty blue and light weight of the earthenware suggest a late eighteenth century date (Garner 1972) but, crazing, a feature of that period on Lambeth wares is absent, suggesting a date of about 1730, a date at which this design was most common (feature 1).

516 London tin-glazed earthenware base sherd of cauldron type container with straw coloured fabric. Bloice (1971) type 85, early eighteenth century.

517 London tin-glazed earthenware rim sherd of a bowl. Bloice (1971) type 31. Wide, vertical blue bands, straw coloured fabric, early eighteenth century.

Creamware and China

526 Base of a creamware vessel, possibly a tankard, with a rouletted dot pattern. Late eighteenth or early nineteenth century.

527–50 China sherds from about six vessels, including a matching cup and saucer. The cup has a transfer-printed crown and the inscription 'CAVENDISH HOTEL'. All nineteenth century (layer A).

Slipware

86 Sherd of earthenware, buff fabric, decorated on interior in brown iron-rich slip, combed, overglazed with lead. Common eighteenth or early nineteenth century manufacture.

Coarse Earthenware

94–5 Platter rim similar to 91. Off-white fabric, traces of pale red slip on rim, glazed internally with a yellow lead-glaze, splashed in green copper colour.

102 See site 4 report.

103 (Fig. 7.1) A domestic vessel, handle missing. Red fabric except in the centre of the thickened rim, where it is grey. There is one massive inclusion (a pebble 10 mm x about 3 mm in diameter) in the fabric. The exterior has scattered patches of clear lead-glaze, the interior and rim are entirely lead-glazed, orange-green in colour, with sparse dark-brown speckling (feature 2).
Vessels generally similar in form have been found at a number of sites (Mynard 1969, Amis 1968, Celoria 1974), in a late seventeenth or early eighteenth century context. A date in the first half of the eighteenth century seems reasonable for this vessel.

105 Fig. 7.5) Rim of a bowl, similar to 104. Interior lead-glazed brown, with darker brown underlying speckling; exterior unglazed.

107 (Fig. 7.4) Rim of a pipkin similar to 106. Pale red fabric, burnt grey on the exterior, lead glazed green/brown inside, with black underlying speckling.

108 Rim of a pipkin, in a red fabric with grey core. Brown lead-glaze inside and out. Top of rim severely abraded, possibly by the use of a lid.

109 (Fig. 7.3) Jar in red fabric. Unglazed exterior burnt grey in places, uneven lead-glazed brown interior. Distinct turning lines visible on interior surface (also found on site 4).

110 Rim and base similar to 109 in red fabric. Exterior unglazed, interior lead-glazed orange-brown, with slight dark-brown underglaze speckling (also found on site 4).

111 (Fig. 7.8) Rim of a platter in red earthenware. Exterior unglazed, interior lead-glazed orange, with underlying dark brown streaking. Similar to two found in a mid-seventeenth century context at Hangleton (Hurst 1963).

112–46 Red earthenware rim sherds of at least 21 vessels, with a variety of brown lead glaze, most having dark-brown underglaze speckling (also found on Site 4).

147–74 Bases — fabric and glazes as above (also found on site 4).

179–466 Body sherds — fabric and glazes as above (also found on site 4).

The vast majority of the vessels and sherds in 103–466 are characteristic of the type attributed to the Sussex potteries, although similar fabrics and glazes were also used in Kent and Surrey. Historical evidence identifies at least 12 sites in Sussex producing vessels as well as bricks, tiles, etc. in the eighteenth and nineteenth centuries (Brears 1971). Published material from excavated sites is scarce.

Fabric Analysis

Analysis of the lead-glazed earthenware fabrics by C. M. Green on all the illustrated vessels and 110. Specific origins could not be identified, but the group, with the exception of 103, would be very much at home in the Sussex Weald.

Stone

Niedermendig stone

1–37 Thirty-seven small fragments, weighing 0.43 kg, from the floor.

38 Fragment weighing 0.425 kg, 485 mm thick at the curved outer edge (layer B).

In all, 40 fragments of Niedermendig stone were recovered, weighing in total 1.050 kg.

French burr

39 Fragment of French burr, with plaster still intact, weighing 0.590 kg (layer B).

40 Fragment of French burr with smooth working surface and traces of a black, paint-like substance, possibly a tiver substitute (layer B).

41 An eye piece 85 mm thick eye (eye *c.* 200 mm diameter), weighing 1.9 kg (layer B).

42 A small fragment enclosed in a large piece of plaster.

43 (Fig. 9.3) Triangular portion of stone with 5 grooves, 43 mm thick at outer edge, the curve of which suggests a 1.22 m diameter stone. Inner thickness 58 mm.

In all, 71 fragments were collected, weighing 19.602 kg, of which 37, weighing 0.410 kg, were found in the floor, layer C.

Derbyshire peak stone

44 Fragment with mortar attached (probably re-used waste perhaps from the postmill) (layer B).

In all, 16 fragments, weighing 1.130 kg, were recovered.

Sandstone

45 A fragment of sandstone, 67 mm thick, with a flat surface and tooled edges. Possibly from a millstone or grindstone. Found in tumble of boltinghouse wall. Again probable re-use of postmill waste is suggested (layer B).

Stone artifacts

46 A fragment of sandstone grindstone, approximately 240 mm diameter, from facade.

47 (Fig. 9.1 Chalk lump of roughly triangular shape, pierced by two holes, one incomplete and the other measuring 15 mm in diameter. Possibly a loom weight.

48 (Fig. 9.4) Small fragment of chalk, in which grooves have been cut. Traces of mortar in grooves. Purpose unknown.

Building Materials — E. W. Holden

Stone

Broken piece of worked stone visually resembling sandstone, known locally as 'Eastbourne greensand', including ashlar, rebated pieces, drip or hood mouldings and coping stones. Many of the stones were incorporated in the walls of the boltinghouse when they were consolidated in 1968, by Eastbourne County Borough Council (layer B).

Roofing slate

49–56 Small fragments of roofing slate, 3 grey-black, 3 grey and 2 lilac in colour. All are similar in colour, texture and appearance to slate from the south coasts of Devon and Cornwall, which was traded along the Channel during the medieval period for roofing. It is well known in Sussex medieval contexts, especially near the coast (Holden 1965) (layer B).

Brick

Bricks found were mostly broken, over-fired and partially vitrified on some outer surfaces.

57 One whole brick measured 220 x 108 x 550 mm (layer B).

58 (Fig. 9.6) Another, 230 x 97 x 60 mm, was a squint quoin brick with 135 degree angle, and thus suitable for an octagonal structure or any 135 degree wall or splayed jamb. Not necessarily used as such, as the bricks may have been reused ones (layer B).

Roofing tiles

Many fragments of well-fired red and brown tiles, with peg holes, were found, the tiles often bearing the remains of lime mortar (layer B).

59 Tile, 245 x 145 x 12 mm, with two peg holes.

60 Fragment, 151 mm wide and 13 mm thick (layer B).

The amount of mortar visible suggests that some tiles were bedded in mortar and a thin slurry of mortar put over the upper surface. In an exposed situation on a roof, this treatment would help to prevent rattling and water penetration.

Mortar

Many fragments and lumps of walling mortar were found, made from lime mixed with sand and small beach pebbles (layer B).

Plaster

Similar to the mortar but without the beach pebbles (layer B).

Glass

Many tiny pieces of broken glass from windows were recovered, all pieces having weathered during burial in the soil and now iridescent. Thickness generally between 1 and 1.5 mm. Several pieces of glass bore illegible writing, and many more had other striations, which were possibly natural but gave the appearance of having formed some kind of tally (perhaps to count the number of sacks filled for customers). Also found were several pieces of lead came, for jointing small glass panes.

61 (Fig. 9.5) Small triangular piece of glass with lead came around it.

Bottle glass

Several hundred fragments of bottle glass, eighteenth-nineteenth century, were recovered, mostly from the upper layers.

Iron

Several hundred iron nails, including 428 from the floor, layer C, ranging in size from 14–135 mm.

The iron artifacts formed an unremarkable collection of items, of which only a few can be associated with the mill. These included:

62–6 An ox-cue, horseshoe, a harness buckle, a hammer head and 13 fragments of a cast-iron, cauldron-like pot with feet. Finds more closely associated with mill machinery were few, and, because they are all items of ironmongery common to other uses, it is not possible to be certain that they were used in the mill.

67 Spindle with pin slot.

68 Washers.

69 Iron dog 96 mm long.

70 Links of chain.

71 (Fig. 9.7) Iron hook and eye.

72 Nails.

73 Bolts

74 (Fig. 9.8) Iron points — tines/cottars.

Lead

75 Lead sheet.

Tiver or Raddle

76 Analysis of deposit from pottery fragments 105 — Dr. G. Bird

The sample consisted of a bright red/orange powder weighing 1.5 kg. The sample was predominantly red lead dilead II lead IV oxide PB_3O_4. Also present was calcium carbonate, and very small traces of iron III, which may have been present as oxide or some other compound. (see also similar note, site 4, finds no. 70).

Clay tobacco pipes — D. R. Atkinson

76 30 pipe stem fragments, seventeenth to nineteenth century.

77–8 Two pieces of bowl, probably eighteenth to nineteenth century,

79 Spur with I/S, post 1850. These occur in the area around Rye and Romney Marsh and cover the period *c.* 1820–60. The maker is so far unknown.

Bone artifacts — Mrs. B. Westley

80 (Fig. 10.4) 1 fragment of ox metacarpal or tarsal. The distal end has been flattened on both sides and is pierced by three holes. Striations on the flattened surfaces suggest the use of a saw (layer B).

81 (Fig. 10.5) 1 fragment of ox metacarpal or tarsal. The bone has been shaped, probably with a saw, having a flattened face on one side. The ends have been shaped in a multiangular configuration and are pierced with a single hole. Occupying almost the total distance between the holes is a scoop 99.4 mm long and worn through the bone on one side (layer B).

82 (Fig. 10.6) 1 fragment of ox metacarpal, flattened and pierced by a nail distally. No scoop present. The end is broken (layer B).

(See separate discussion of these artifacts.)

Flint artifact

83 (Fig. 9.9) Gun flint, honey coloured and unpatinated. No bulb present.

Discussion of Bone Artifacts from Sites 4 and 5

The bone artifacts appear to belong to a group discussed by Curwen (1944–5) and considered by him to have been used as chocks or brakes, as the 'scoop' scar shape seemed to reflect the wear that a moving part might inflict. More recently, Richard Gilbert (1972) suggested that they might be grease boxes fixed to handles and applied to moving machinery. However, Mrs. Westley considered that Curwen's suggestion of their use as chocks or brakes was the more likely, as the 'scoop' scar shape seems to reflect the wear that a moving part might inflict; but the difficulty here is that there is no sign of erosion or striae that such movement would cause.

Further research into the possible use of these bones has led to the discovery of others from sites in many parts of the country, such as Friston, and an old windmill site near Banbury, Oxon. (Curwen 1944–5), London, York, Colchester, Braintree and Mortlake (Reader 1910). Of nine so-called skates found in Northampton (Williams 1979), one of those illustrated appears to follow closely the wear on bone (Fig. 9.3) from Pashley Down. Again, one of the illustrations from York (Radley 1971) shows an ox metacarpal flattened on one side only, with no other modification, which is also similar to that from Pashley Down. In his report on Trondheim, Norway, Clifford Long (1975) states that, of the several skate-like bones discovered, 'it was clear from the wear pattern that many of the objects were not skates'.

It would appear that bones having scoops worn in their shafts would have been put to some similar common use which at present remains an enigma.

Boltinghouse and horizontal mill

Interpretation

The archaeological evidence of the boltinghouse is compatible with the thumbnail sketch on the Compton Estate Plan of 1739 (Plate III). There is clearly a mock Gothic facade, with a wide entrance, as depicted. We can also see the side entrance discovered and even the presence of the window is more than suggested by the vast number of window glass fragments found on the floor in that area. On what would be the NW side of the building the cartographer has depicted something that looks like a flat roof in the area where there was the tiled floor and what may have been postholes and beam slots. Being on the same side of the building as the postmill, this area may have been used for the meal to stand on before it was put through the machine, the advantage being that the height above the floor of the boltinghouse would give sufficient elevation for the gravity feed of the machine.

Facade

At first, the eighteenth century mock Gothic facade seems incongruous in this isolated position, surrounded as it is by uninhabited pasture land; but, as the site overlooks the grounds of what was Bourne Place (later Compton Place), it is not unreasonable to suggest that the lord of the manor would want to render this industrial building more pleasing to the eye by making it look like a folly.

Power vane

There is no archaeological evidence to corroborate the existence of the power vane shown

in the sketch, nor is there any other parallel we know of. It must be assumed that this was the bolter's source of power. The vane would have kept the blades into the wind, and the drive would presumably have been via a crown wheel, which would have driven a vertical rod extending down into the machinery below. In the absence of any other example of a boltinghouse it is impossible to create a clearer picture. Bolting is the sieving of meal to separate the flour from the husks. Tradition has it that this process was carried out by mealmen or bakers using bolting machines or in domestic bolters in large houses and was not done by millers until the late eighteenth century. Rex Wailes (1967) describes such a machine produced by Messrs. Blackmore, of Wandsworth, in 1783 thus:-

'A wooden casing about 23 feet long in which was placed a rotatable inclined wooden reel about 23 inches in diameter. This was covered with a loosely fitting, removable, seamless, woollen bolting cloth, leather bound and laced up at each end with cords running through the leather like a pyjama cord; the reel was open at the lower end and closed at the upper end by a coarse mesh conical net. Six inclined wooden bars fixed to the casing were spaced round the reel, leaving it about half an inch of clearance. Meal was fed into the reel via an overhead hopper at the upper end and through the net which caught any large foreign matter such as straw and even mice! As the reel revolved the meal caused the cloth to sag and strike against the fixed bars, the flour was knocked out through the cloth whilst the bran and middlings tailed out at the lower end'.

It seems that the bolter was not included in mills until the late eighteenth century, for it is then that the effect of Andrew Meikle's invention of shuttered sweeps (in 1772), seems to have encouraged their installation in the caps of mills. The new type of sweep, being much heavier than the previously used canvas or common sweeps, tended to pull the mill off balance, so that the bolter is thought to have been installed to help counterbalance the extra weight, and, indeed, Wailes suggests that in some cases the cap was extended tailwards to accommodate the bolter.

However, in the case of the Pashley Down boltinghouse, we have a situation where a miller is bolting meal, not in his mill, but in a specially constructed building (some 9 x 3.5 m), in which he could have accommodated several bolters. It would seem that he was trying to attract new business in an attempt to make the mill enterprise on Pashley Down more viable. The documentary evidence seems to show that its viability was less than satisfactory, even after the building of the boltinghouse, for Mortimer gave up his lease prematurely. This decline may be due to the land around the mill increasingly changing to pasture, for it is interesting to note that several mills existed at this time on the other side of the town and thrived sufficiently well to continue in work for another century or so (Stevens 1981).

Here we may also consider the fate of the horizontal mill. Marchant gave up his lease for the postmill before it had run its term, and then Mortimer entered into another lease when he built his horizontal mill. Again, this could be interpreted as another attempt to make the enterprise more viable, for the new mill would most certainly have been capable of a greater grinding capacity than the postmill.

Yet, for all this, the mill once again did not work for the whole term of the lease in spite of the fact that Mortimer's mill at Ocklynge Hill was viable long after his death.

The re-use of dressed Eastbourne greensand in the building suggests that the boltinghouse was partly demolished at the time of the erection of the horizontal mill. Unfortunately, few metal machinery parts were found, and it must be assumed that much was taken away from the site; nor were there any pieces of wooden machinery, most of which would have served equally well in a vertical mill.

OCKLYNGE HILL

Location

Ocklynge Hill (TV 595008) rises as an outcrop of middle chalk 2.4 km north of Eastbourne railway station and is crossed by Willingdon Road, the A22.

In medieval times the area was probably open scrubland, but, by the time of the tithe map for Willingdon (1842), the area had become open farmland. During the early twentieth century, housing development of the area began, and in 1912 two large houses, numbers 99 and 101 Willingdon Road, were erected on the crest of Ocklynge Hill on the west side of the A22. These buildings were demolished in 1970, and the opportunity to excavate their site, known to have been an Anglo-Saxon cemetery, was undertaken.

Documentary evidence

The old manor of Radmeld-Beverington once lay across the east of the hill, and it has been postulated that there was a mill on Ocklynge Hill belonging to that manor. But the suffix, 'mill', in Rodmill must not be taken as evidence of the existence of a mill, the name having been derived from Radmeld (E.P.N.S. 1930). There seems to be no evidence to support the existence of a Radmeld-Beverington mill at all except speculations by Simmons and others on an unsubstantiated and unsigned article appearing in the Eastbourne Herald Magazine, May 5, 1934.

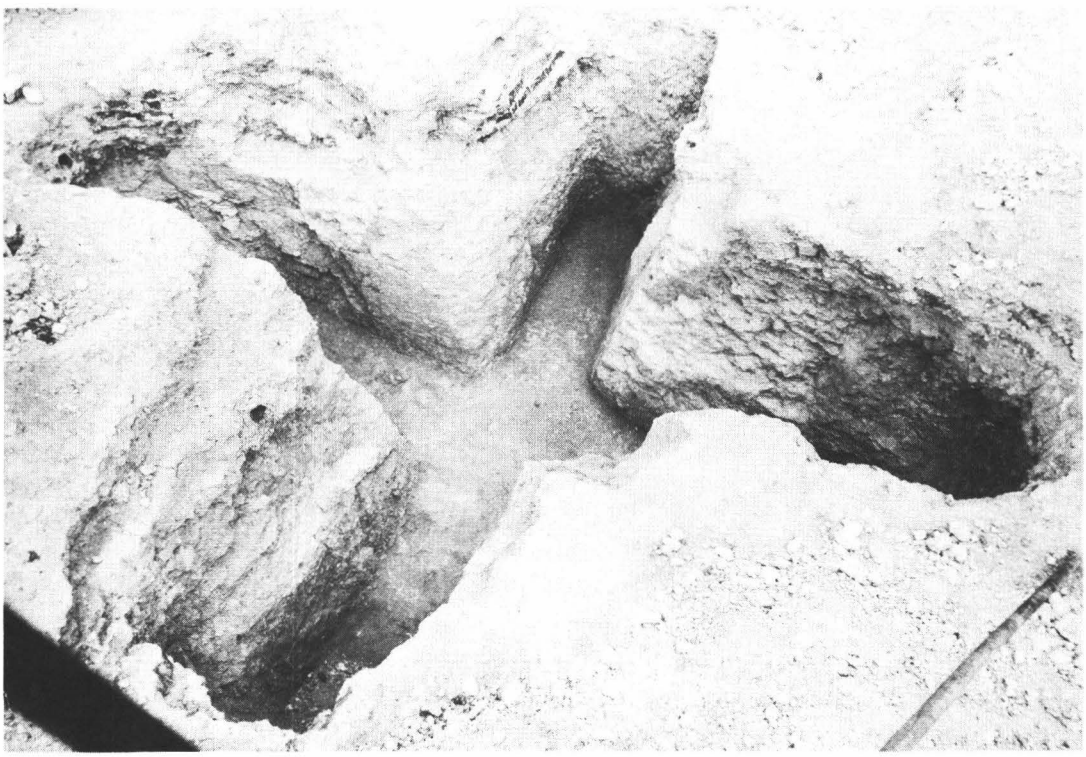

Plate IV. View of the excavated cruciform trench of Millstead (site 6) Ocklynge Hill.

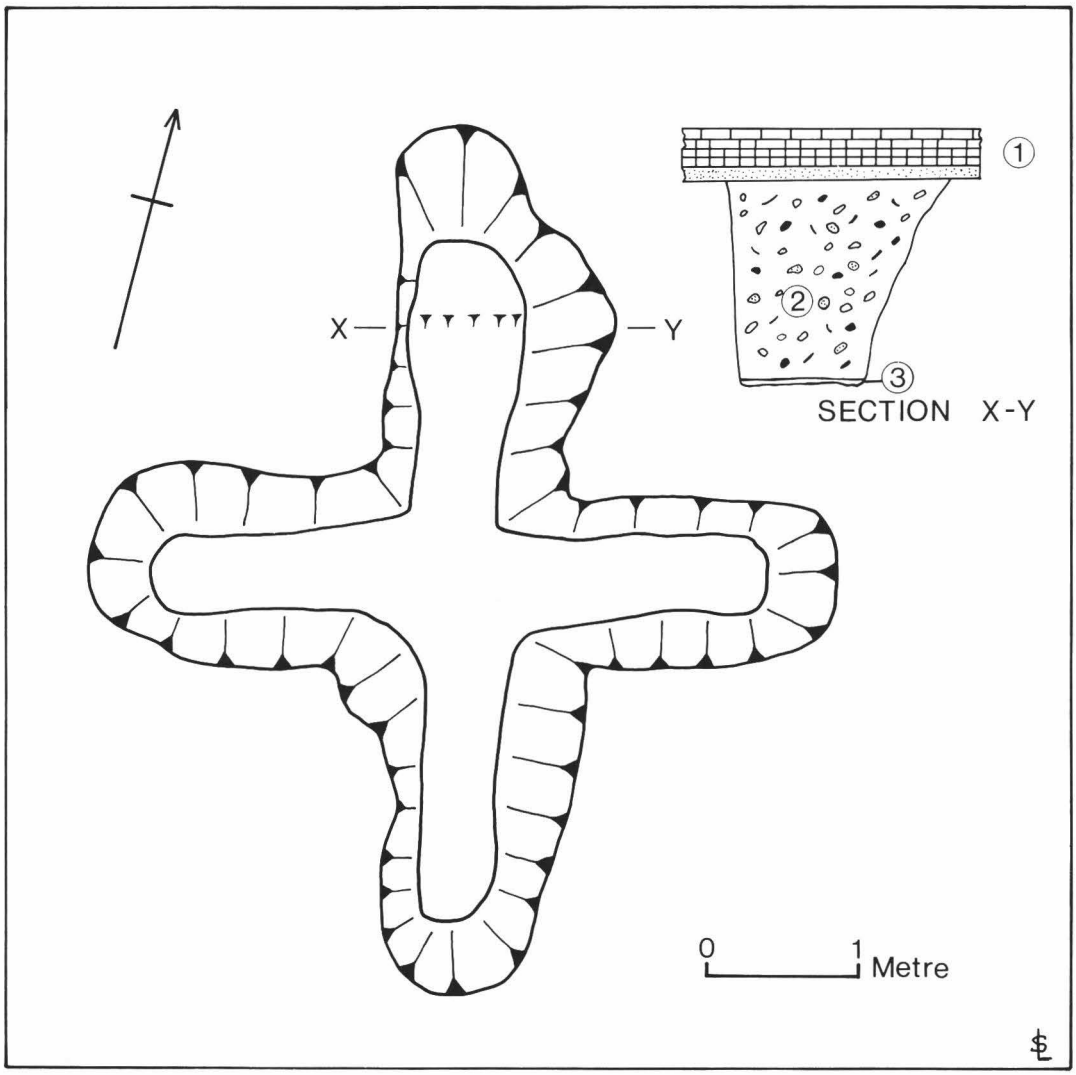

Fig. 11. Plan and section of millstead (site 6) Ocklynge Hill. The plan of the cruciform millstead trench shows the raised platform at the end of the north-western arm. The section X–Y shows layers 1. Brick and concrete foundations, 2. Fill of soil with fragments of pottery and millstone, 3. Dark earth.

Description of Millstead Site 6 (TQ 59500069)

Site 6 was situated on the crest of Willingdon Hill, 218 ft (66 m) above sea level, partly under the front of what had been 99 Willingdon Road and partly under a drainage inspection shaft. Excavation revealed a cruciform trench (Plate IV), cut into the natural chalk to a depth of 1.98 m and 0.76 m wide at the bottom, the sides gently widening out towards the top. The two cross-trenches were each 5.35 m at the bottom, but the N-S trench had a stepped extension 0.91 m long and 0.6 m high (Fig. 11). The original depth was probably greater before the levelling of the site prior to housebuilding. The trench was filled with an unstratified mixture of chalk rubble and earth, in which there were fragments of pottery, millstone, bone and metalwork.

THE FINDS

All finds are from layer 2 unless otherwise stated.

Pottery

The pottery report from sites 6 and 7 appears under site 7.

Millstone

French burr

245 fragments with a total weight of 3.12 kg including 170 minute fragments with a total weight of 0.58 kg. No other millstone types were recorded.

Mollusca — T. P. O'Connor

The floor of the millstead (layer 3), was sieved, using a wire sieve with a 1 mm square mesh, and the following were recovered and submitted for identification and the listing of snail species present:

Caecilioides acicula (Muller)	3
Helicella itala (L)	2
Helicella caperata (Montagu)	1
Vitrea contracta (Westerlund)	3
Total	9

While it would be unwise to draw any far-reaching conclusions from a mere nine snails, the presence of *Vitrea contracta* is of note. This is a species of damp, shady habitats and is unlikely to have been at all common in the very dry, open environment normally favoured by the *Helicella* species. Very tentatively, then, one might suggest an environment of patchy shade, perhaps bushy scrubland.

Marine mollusca included 2 limpets, 3 oysters, 1 winkle and 1 fragment of cockle sp.

Flint — fragment of calcined flint.

Miscellaneous — fragment of pitched hessian.

Description of Millstead Site 7 (TQ 59460070)

Site 7 was situated to the north of site 6 in the back garden of what had been 101 Willingdon Road and at approximately the same altitude as that site.

Like site 6, site 7 took the form of a cruciform trench, (Fig. 16), but, while only 1.37 m deep, the arms were 2.82 m long; the width at the bottom was again 0.76 m. Again, the fill consisted of an unstratified mixture of chalk rubble and earth, in which there was a smaller quantity of similar finds recorded from site 6.

THE FINDS

All finds are from Layer 4 unless otherwise stated.

Pottery report — J. C. Dove

Discussion of Pottery from sites 6, 7 and 8.

Approximately 8 kg of pottery sherds were excavated from sites 6 and 7 and 4 kg from site 8. There was no stratification of pottery on either site.

Two basic groups of fabric were identified:

1. Coarse, gritty flint/sand tempered fabric, typical of 12/13th century wares.
2. Medium or fine sand tempered fabrics, typical of the later 13th and earlier 14th centuries.

In order to determine the proportion of coarse to medium/fine wares, only the rims were considered. A large number of sherds may constitute one particular vessel so giving an inaccurate estimate. It is relatively easy to determine whether two or more rim sherds belong to the same vessel, which is not the case with body or base sherds.

All three sites produced approximately four times more coarse ware than medium/fine ware.

Two basic types of vessel were recognised:

1. Jugs. Nearly all were medium/fine wares.
2. Coarse-ware Cooking-pot type vessels. The larger diameter vessels probably were cooking pots, while the smaller diameter vessels may have been storage jars or bowls.

If these jugs and pots were contemporary, it would appear that the choice of fabric was determined by the type of vessel.

Rims with finger decoration and the sharply everted rims of the late eleventh-twelfth centuries were absent, suggesting a thirteenth century or later date.

Coarse-ware jugs with slashed strap handles, such as (Fig. 12.1) and (Fig. 15.46), first appear about 1220 at Eynsford Castle (Rigold 1971). Towards 1300, fine, sandy ware with stabbed and grooved handles, such as (Fig. 12.10 and 12) and (Fig. 15.48), tend to replace strap handles. Jugs with pinched bases (Fig. 12.13 and 14), are common during the second half of the thirteenth century onwards. Cooking-pot type vessels with simple everted rims (Fig. 13.18) and

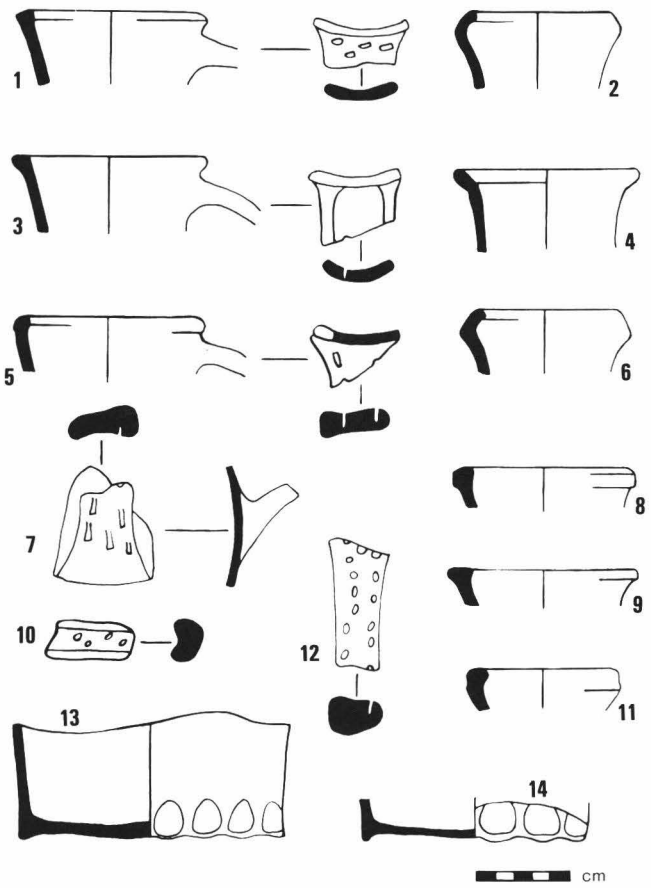

Fig. 12. Pottery from millsteads (sites 6 and 7) Ocklynge Hill. Jug Fragments 1–14.

(Fig. 15.54) are not out of place during the first half of the thirteenth century either at Eynsford or Dover Castles (Cook 1969). Cooking pots or bowls with flat-topped rims (Fig. 13.15, 16 and 17) are very common during the second half of the thirteenth century, together with horizontal and vertical thumbed strips (Fig. 13.16) and (Fig. 15.49).

No attempt was made to determine the proportion of glazed sherds. Only a few jug sherds showed occasional signs of a thin, patchy or clear glaze (Fig. 15.50–53). A few sherds had an incised pattern (Fig. 15.51 and 52).

No sherds were recognised as typical of the fourteenth century or later.

Examination of the pottery did not suggest two separate periods of occupation, both sites appeared to be contemporary and possibly part of one larger site. Taken as a group, the pottery would appear to indicate a period of occupation from about 1220–1300, or a little later. Such a date range would agree well with pottery excavated at Bramble Bottom, Eastbourne (Musson 1955) and Pevensey Village (Dulley 1967), suggesting a decline in the early fourteenth century.

Where possible, the descriptions used are those outlined in the Car Dyke Research Group booklet (Healey 1976).

Jugs (Fig. 12)

1. Rim with slashed strap handle. Coarse, gritty ware with buff core and light red surface.
2. In-turned rim. Medium sandy ware with grey core and light red surface. Patchy olive-green glaze on lower portion of outer surface.
3. Rim with grooved strap handle. Fine sandy ware, light red throughout.
4. Rim with internal bevel. Fine sandy ware with grey core, and dull, light red surface. Patchy clear glaze running towards the rim on the outer surface.
5. Rim with stabbed strap handle. Fine sandy ware with grey core and light red surface.
6. In-turned rim. Fine sandy ware with grey core and light red surface. Splash of olive-green glaze on outer surface.
7. Body sherd with lower end of slashed strap handle. Coarse gritty ware with grey core and light red surface.
8. Vertical squared rim. Fine sandy ware with buff core and light red surface.
9. Flat rim. Sandy ware, light red throughout.

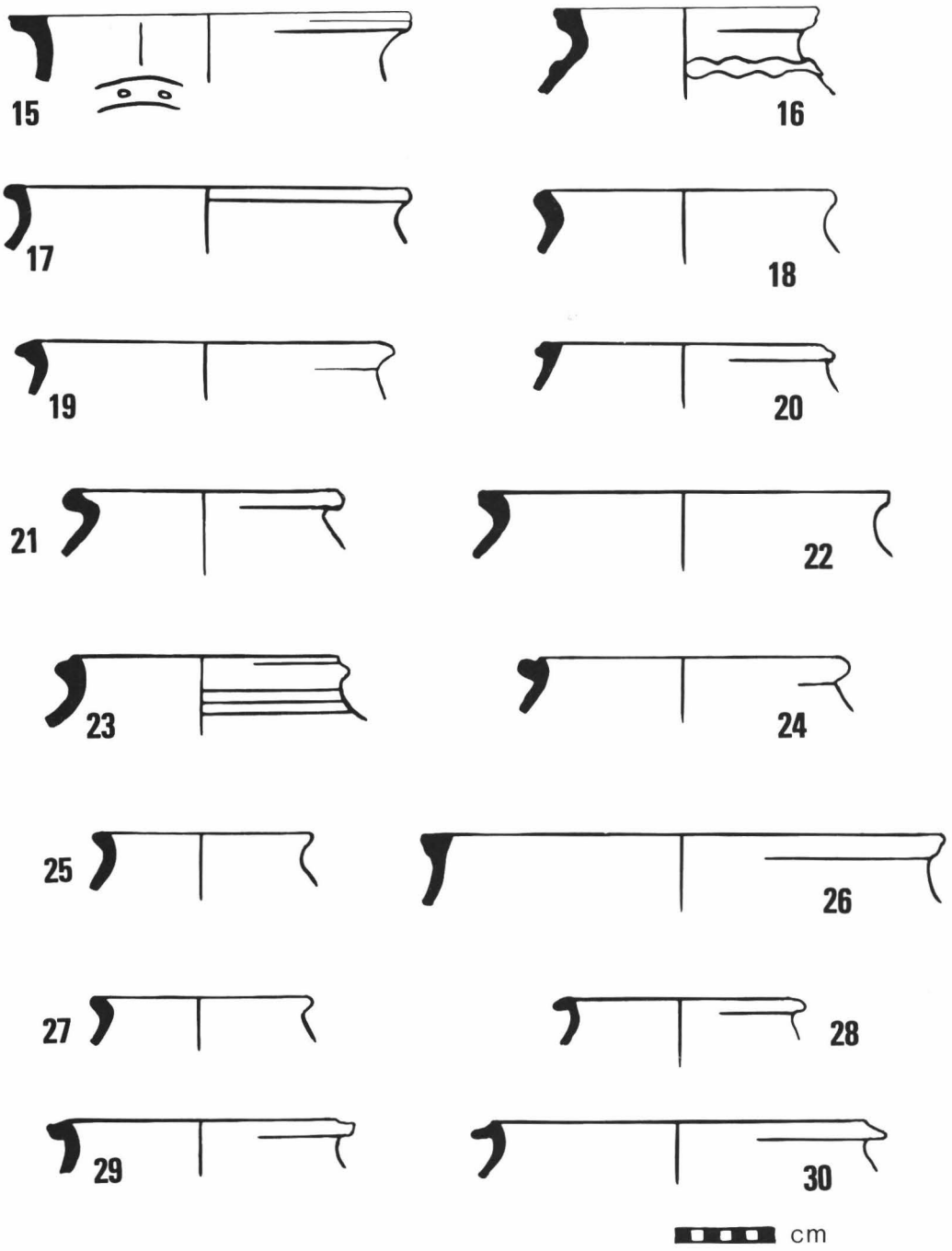

Fig. 13. Pottery from millsteads (sites 6 and 7) Ocklynge Hill. Cooking-pot type vessel fragments 15–30.

10. Grooved and stabbed rod handle. Fine sandy ware with grey core and patchy olive-green glaze along groove.
11. In-turned rim. Sandy ware, light red throughout.
12. Grooved and stabbed rod handle. Fine sandy ware with grey core and light red surface splashed with olive-green glaze.
13. Complete base with carefully spaced thumbings. Fine sandy ware with a few grits visible on outer surface. Grey core and light red surface becoming a dull dark red on one side. A few small splashes of olive-green glaze on the outer surface. Base sagging slightly, so preventing the vessel from resting firmly on a flat surface.
14. Thumbed base sherd. Fine sandy ware with grey core and dull red surface.

Other thumbed base sherds not illustrated. Sandy wares with buff cores, light red surfaces and patchy green glaze. Three sherds are grey throughout, with black carbonised material adhering to under surface. Possibly from a smoke-blackened pot.

Cooking-pot type vessels (Fig. 13)

Unless otherwise stated, the vessels are coarse gritty wares with grey cores and light red surfaces.

15. Broad flat stabbed rim. Patchy blackened outer surface under rim.
16. Similar rim to above with horizontal thumbed strip.
17. Flat rim.
18. Simple everted rim.
19. Slightly out-turned flat rim.
20. Flat rim with groove on outer edge.
21. Everted hollowed rim.
22. Everted rim with vertical flat outer edge. Buff core with dull red/brown surface.
23. Slightly out-turned grooved rim. Horizontal lines on neck. Light red surface with black and brown patches.
24. Grooved top rim. Blackened inner surface.
25. Everted rim with flat top. Blackened rim top.
26. Broad flat rim. Fine sandy ware with grey core. Light red surface with black patches.

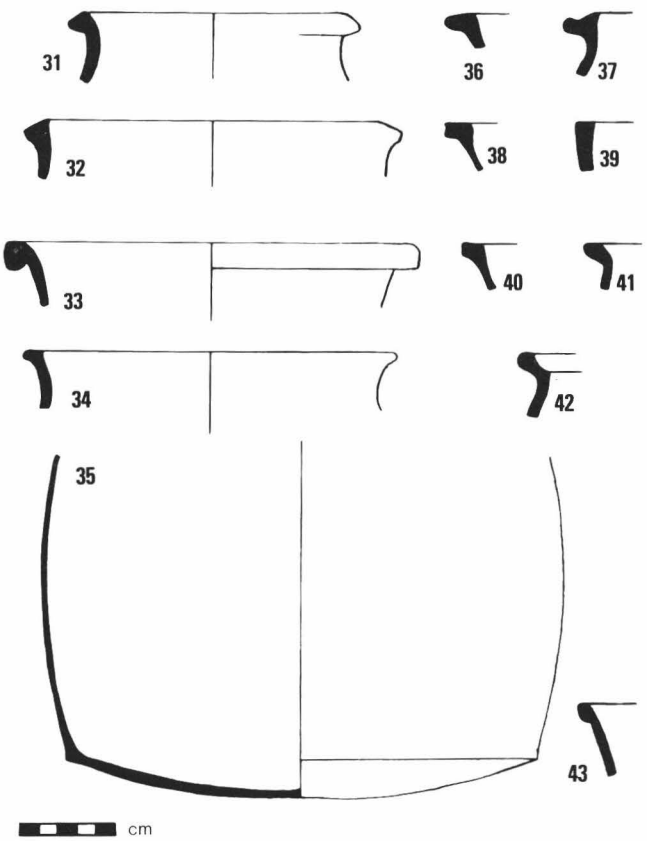

Fig. 14. Pottery from habitation (site 8) Ocklynge Hill. Cooking-pot type vessel fragments 31–43.

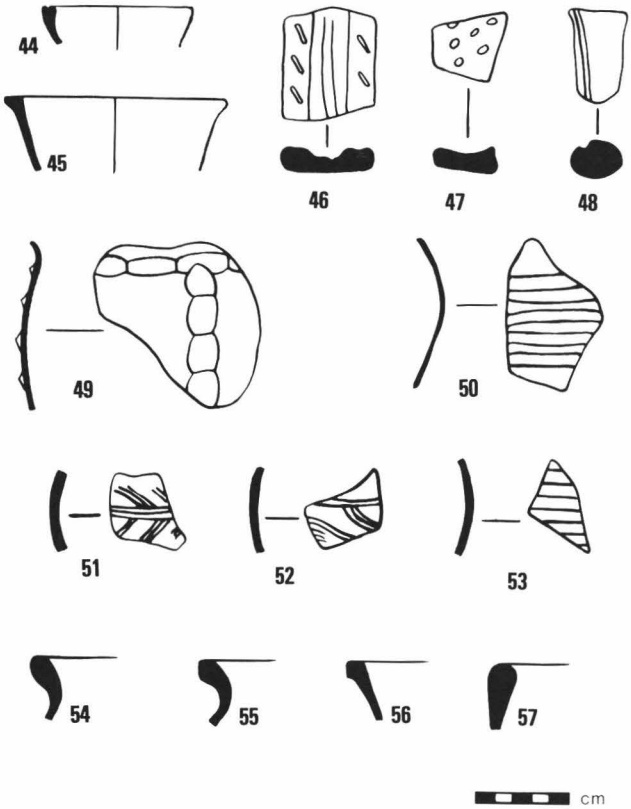

Fig. 15. Pottery from millsteads (sites 6 and 7) and habitation (site 8) Ocklynge Hill. Pottery fragments 44–57.

27. Everted rim. Completely reduced surfaces.
28. Slightly out-turned flat rim.
29. Out-turned rim with ridge on outer top edge.
30. Out-turned grooved rim.
It was not possible to determine the vessel diameters using the smaller sherds. (Fig. 15).
54. Everted rim. Grey core with buff outer surface.
55. Everted rim with upright outer edge. Grey core with black patches over buff surfaces.
56. Upright, squared rim. Black core and outer surface.
57. Upright rim, thickened towards the top.

Decorated sherds (Fig. 15)

49. Body sherd, probably from a cooking pot. Horizontal and vertical thumbed strips. Coarse sandy ware with buff core and light red surface.
50. Shoulder sherd from a jug. Coarse sandy ware with buff core. Light red outer surface with horizontal incised lines and patchy, thin olive-green glaze.
51–2. Body sherds from a jug. Grey core and light red outer surface with patchy, thin clear glaze covering incised decoration.
53. Shoulder sherd from a jug. Dark grey core with red surface. Dull green glaze covering horizontal rilling.

Millstone

French burr

54. 62 fragments, total weight 0.480 kg.

Niedermendig

55. Fragment with striated surface but no grooves weighing 0.950 kg. In all, 7 fragments were recovered with a total weight of 1.45 kg. Some of the fragments had lime mortar adhering to them.

Stone
56. Small piece of greyish conglomerate submitted to D. T. Moore of the Department of Mineralogy, British Museum (Natural History), who described it as — 'a quartz grit with calcite cement. There are many larger broken pebbles included in the rock, that are completely composed of chert. The specimen is not unlike some rocks from the Yorkshire Dogger.' It is conceivable that this stone could have been used as an abrasive, perhaps for millstones.
Whetstone
57. Irregular tapering stone, 714 mm long. Described as a 'fine-grained muscovite-bearing sandstone' by D. T. Moore.
Bone
58. Several fragments of human bone, probably residual from the Saxon cemetery.
Mollusca
59. Marine mollusca included one oyster and 3 winkles.
Flint
60. Two fragments of calcined flint.
Miscellaneous
61. Fragment of pitched hessian.

Discussion Sites 6 and 7

There is no doubt that these cruciform trenches were millsteads in which the wooden trestle of a postmill had stood. Similar structures have been excavated in several places including Weyhill, Hampshire (Williams-Freeman 1915); Butcombe, North Somerset (Rahtz 1958); Lamport, Northamptonshire (Posnasky 1956); and Mucking, Essex (Jones 1975). It has long been contended that such millsteads would have been backfilled to add to the rigidity of the structure. In a description of Aughton Mill, near Liverpool (Bennet & Elton 1899), the remains of a cruciform trench some feet below the surface are described. The arms of the trench were like a Maltese cross, radiating from a deeper hole in the centre. 'Oaken' timber fragments were found in the feature. In all probability the centre post fitted into the central depression and was supported by four quarter-bars, but it would seem that cross-trees could not have been used. Such an arrangement would necessitate the backfilling of the cruciform trench to ensure stability. However, this method must have two serious disadvantages, namely, that the trestle was liable to unseen and rapid decay in the ground, and that the quarterbars, supporting several tons of weight, could not easily be prevented from spreading, a situation not helped by the rotting ends of the crosstrees.

As we have seen from the evidence of the postmill on Pashley Down, it was possible to have a trestle below ground level but not buried. In the case of this sunken 'open' trestle, these problems would have been reduced, for, with air circulating around the timbers, the threat of deterioration was greatly reduced and could be detected, and the crosstrees could be wedged into the cruciform trench, thus reducing the danger of lateral movement, providing the trench was cut into firm rock.

However, in the case of both millsteads on Ocklynge Hill, there was no evidence to support their having been backfilled, which would argue against the trestles having been buried.

No remains of wood or wood-staining were recorded, suggesting that the trestle was removed, possibly prior to the total translation of the mill to a new site, or merely as demolition material for re-use. Such removal of the trestle would, had it been buried, show in the stratigraphy, for there would have been some of the original fill left in the trenches, for it would not have been necessary scrupulously to empty the stead in order to remove the trestle. It has already been noted that there was no such residual layer in either of the features.

The stepped end, to the north arm of the millstead at site 6, would suggest some form of access. At Weyhill Barrow Mill, Hampshire, there is a similar millstead, where the arms each terminated 'in three or four irregular steps of varying height.' If these steps were for access, the stead was clearly not intended for backfilling, and the existence of such steps could have been related either to the building of the structure, for easier access during the work, or for placing

one of the crosstrees. However, in the case of the Weyhill millstead, there seem to be too many steps, either for temporary access, or for a trestle. Whilst the Weyhill report gives the impression that the stead was backfilled over the trestle, the evidence seems to suggest otherwise.

These open trestle cruciform millsteads would have been open trenches, shaded by the mill body and a collecting area for rain and dew that would run down the sides of the mill body into the trenches below. It is therefore not surprising that the mollusc *Vitrea contracta* should have been present in the floor of the millstead on site 6, favouring as it does a damp, shady place.

Whilst not disputing the existence of buried postmill trenches, the writer is of the opinion that the two steads on Ocklynge Hill did not house buried trestles. As has been stated earlier, it is suggested that these steads were a transitional development from the buried substructure to the substructure built as an open trestle on the ground surface. The great disadvantage of any sunken type stead was that the body of the mill was so close to the ground that the sweeps had to be much shorter than those built on the ground. Thus the sunken postmill was less powerful than the later mills built on the ground. The addition of a roundhouse to these later mills seems to have been the last major modification to the postmill structure.

Neither of the millsteads on Ocklynge Hill showed signs of having had a roundhouse, although the foundations of such a building may well have been cleared away prior to the twentieth century housebuilding.

Stratification shows that each millstead was backfilled in one operation, and the pottery does not suggest a sequence for the millsteads, thus indicating the probability that they were both backfilled at the same time and that the two mills could quite possibly have worked side by side.

The pottery date range covered a period from about 1220 to 1300, or a little later; it would therefore seem probable that the mills ceased to exist some time during the first half of the fourteenth century. The presence of French burr and Niedermendig millstone fragments strongly suggest that it was a cornmill, perhaps associated with the nearby habitation site 8, to be discussed next.

Description of Habitation Site 8 (TQ 59550054)

In November 1976, students of Ratton Evening Centre reported that pits had been revealed in section, in the side of an excavation for a swimming pool-pit in the garden of Mill House, 85 Willingdon Road, Eastbourne. The owner, Dr. R. J. Rew, kindly gave permission for a limited excavation to be carried out to the north of the pool-pit, in advance of the building work.

An area of about 5 square metres was uncovered and four pits (features 1–4) were recorded and excavated. The excavation was too small to judge the purpose of the pits (one of which had four phases of use) but the relatively large amount of medieval cooking-pot suggested a nearby domestic habitation site. The close proximity of the millsteads (sites 6 and 7), and the identical nature of the pottery itself, points to the likelihood that the sites were contemporary and perhaps even connected.

THE FINDS — Site 8

Pottery

Cooking-pot type vessels (Fig. 14)

Unless otherwise stated, the vessels are coarse, gritty ware wth grey cores and light red surfaces.

31. Flat out-turned rim.
32. Flat out-turned rim.
33. Collared rim, blackened on outer surface.

34. Flat-topped rim.
35. Lower portion of cooking pot with sagging base. Black patches on outer surfaces.
36. Flat-topped rim, blackened on outer surface.
37. Grooved-top rim.
38. Flat-topped rim, with groove on outer edge.
39. Upright, squared rim.
40. Flat-topped rim, with vertical outer edge.
41. Flat rim, with internal bevel.
42. Everted hollowed rim.
43. Beaded rim.

Jugs (Fig. 15)

44. Upright rim with shallow groove on top edge. Fine sandy ware with grey core and buff surface. Patches of thin green glaze on outer surface.
45. Flat-topped rim. Fine sandy ware, light red throughout.
46. Strap handle with centre groove and slashed sides. Coarse flint/sandy ware. Buff core with light red surface. Tendency for surface to laminate.
47. Stabbed strap handle. Coarse flint/sandy ware. Buff core with light red surface.
48. Rod handle with groove on one side. Fine sandy light red ware with small diameter grey core.

For discussion of pottery, see sites 6 and 7.

Animal bone — T. P. O'Connor

A small number of animal bones and teeth were recovered from the four pits. These bone remains were of sheep and cattle and very fragmentary, possibly food remains.

A fragment of human radius was also recovered.

Description of the Horizontal Mill Site 9 (TQ 59520070)

The site was situated to the east of site 7 on the crest of Ocklynge Hill and was discovered during the excavation of the Saxon cemetery when sites 6 and 7 were also found. All the evidence pointed to it being the site of a horizontal windmill once belonging to Thomas Mortimer.

Documentary evidence

Two references in the Sussex Advertiser provide some valuable information on the history of the horizontal mill on Ocklynge Hill.

The issue of May 6, 1811, describes the end of the mill thus:-

> 'About noon on Friday last the horizontal mill, belonging to Mrs. Mortimer, of Eastbourne, caught fire from the velocity of its motion, owing to the dry state of its machinery, which had not been properly supplied with grease. The flames spread rapidly, and the structure, being wholly of wood, was in a short time reduced to ashes, together with about five loads of wheat and a quantity of meal. The mill was insured to the amount of Five Hundred Pounds, but would require more than double that sum to re-instate it.''

It is evident that, in its latter years at least, the mill was not capable of producing sieved flour as the foregoing suggests, and this is borne out by the Lieutenancy Records of 1801, in which Elizabeth Mortimer, daughter of Thomas Mortimer, is recorded as being the occupier of a windmill called 'Round Mill'; she is willing to supply two sacks of flour every 24 hours, but, having no (bolting) cloth at the mill, would only be able to deliver meal flour.

As to the date of the building, a notice of auction in the Sussex Advertiser of June 3, 1811, refers to 'a piece of land situate upon Ocklynge Hill, in the Parish of Willingdon, being the site of a Horizontal Windmill, lately burnt down. The premises are leasehold for a term of 199 years, 156 of which are unexpired'.

Thus we have a date of around 1767 for the lease; but the notice further states that 'business was carried on for upwards of half a century in the late windmill.' This may be an advertiser's exaggeration, but, on the other hand, there may have been an earlier lease.

No picture of the mill is known to exist, but Thomas Jones while on a visit to his friend and fellow artist, John Hamilton Mortimer, describes what must have been the horizontal mill on

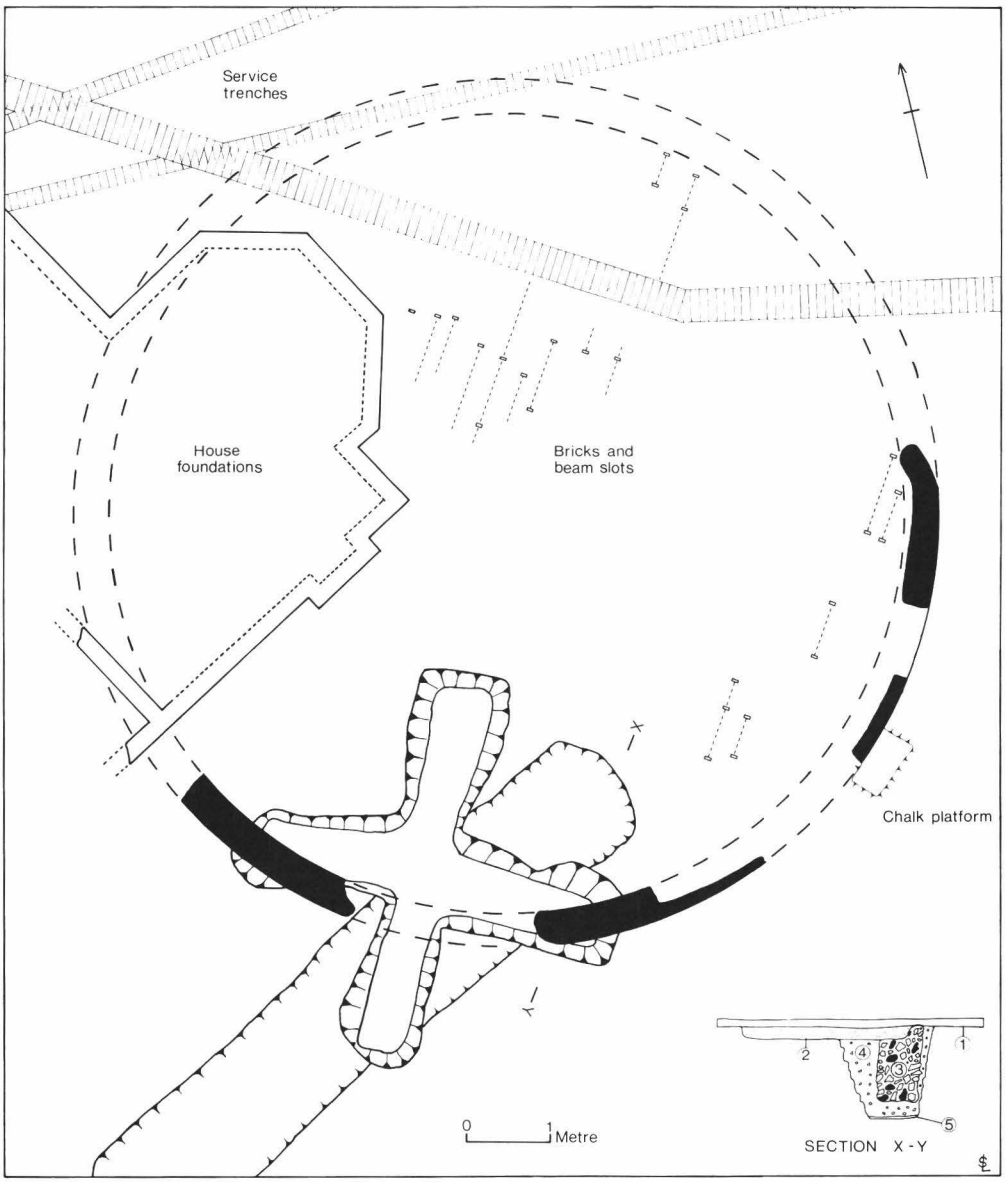

Fig. 16. Plan of cruciform millstead (site 7) and horizontal mill (site 9) Ocklynge Hill. The plan shows the circular wall of the Horizontal mill (black) within which are the remains of beam-slots. The Horizontal mill wall runs in and over the site of the cruciform millstead (site 7). A section: X–Y shows 1. Topsoil and shallow debris layer associated with the Horizontal mill, 2. Modern shallow depression, 3. Horizontal mill wall of chalk and flint, 4. Millstead fill of soil with fragments of pottery and millstone, 5. Layer of silt on the bottom of the cruciform trench.

Ocklynge Hill. On December 21, 1770, Jones wrote in his diary (Walpole Society, 1951), 'Mortimer's father had been in his time a great dealer in flour, and owner of three or four corn mills, but at present, as he was far advanced in years, he kept only one upon his hands, and that chiefly for amusement . . .. This mill was built of a circular form upon rising ground above the

town . . . the vanes of which moved, not in a vertical, but horizontal direction, and the current of wind was regulated by valves, which were opened or shut according to the point it came from . . . it was said to be one of his own invention.'

From this evidence it would seem that the mill was of the turbine shutter type and that it was the last survivor of at least three such mills built by Thomas Mortimer. It is a remarkable coincidence that the writer, having excavated the site of Mortimer's mills on Pashley Down, Eastbourne, should stumble on the remains of his third during this excavation.

Description

Site 9 was a mortared, chalk-block wall of a circular form, about 15.85 m in diameter and one course high. House-building had destroyed much of the wall, but within the S-E quadrant there remained several beam slots, 75 mm deep and 180 mm wide, associated with lines of bricks upon which floor joists would have rested. Associated with these were numerous nails and fragments of charred wood and occasional pieces of greensand. The slots themselves were full of charred wood.

The wall varied in completeness, its width ranging from 0.84 m in the eastern portion (where the width appeared to be original) to a little less than 0.53 m wide in its S-E and N-E quadrants. The N-W arc was almost obliterated by the house levelling but could be discerned (perhaps with the eye of faith) as a linear hump. The wall was built over the north arm of site 7 (Fig. 16). Parts of the floor had been made up with chalk rubble where the land fell away to the east.

THE FINDS

All finds were derived from the shallow stratum above the chalk (layer 1).

Pottery — J. C. Dove

1. Earthenware sherds from domestic containers.
2. Stoneware ginger beer bottle sherds. Late nineteenth century.
3. Fine black earthenware sherd with cable decorations. Similar to Wedgwood black basalt ware. Origin unknown.
4. Fine sandy green/brown glazed sherd, possibly eighteenth century.

Stone

5. Two large lumps of sandstone reddened by heat.

Millstone

French burr

Fifty-one fragments were recovered, weighing a total of 29.92 kg, of which three fragments showed worked surfaces.

6. Fragment weighing 0.73 kg, 61 mm thick with remnants of two rounded bottomed grooves.
7. Fragment weighing 2.22 kg, 88 mm thick, vestiges of two crude shallow grooves.
8. Fragment weighing 10.50 kg, 125 mm thick, part of the eye of a stone with channel cut to receive rynd.

Glass

9. Numerous fragments of eighteenth century bottle glass.

Iron

10. 39 cottars of various sizes.

Lead

11. 22 pieces of melted lead.

Clay tobacco pipes — D. R. Atkinson

12. Piece with T/H, Thomas Harman of Lewes, *c.* 1720.
13. Fragment with decorative fluting, nineteenth century. There were also numerous clay pipe fragments from the seventeenth to the nineteenth centuries.

Flint

14. 17 fragments of calcined flint.

Discussion

The circular form of the foundations and the associated millstone fragments and cottars point to the site being that of a windmill. The presence of melted lead and glass, calcined flint and charred wood confirm that the building was burnt down. While there is no archaeological evidence to confirm that the mill was of the horizontal type, the documentary evidence supports our conviction that this was the site of Mortimer's horizontal mill.

THOMAS MORTIMER AND THE ROUND HOUSE SITE 10

At the conclusion of the general introduction at the beginning of this paper, mention was made of the revival in the eighteenth century of interest in the design of horizontal mills. At present, we have records for only five horizontal mills used in England for grinding corn, all built in the second half of the eighteenth century. These are:- Pashley Down mill, Eastbourne, 1752; Round House mill, Eastbourne, 1757; Ocklynge Hill mill, Eastbourne, 1768, or possibly earlier; Battersea mill, 1788; and Margate mill, built at the end of the eighteenth century, certainly before 1798. We can see from this list that the three earliest horizontal cornmills were built in the Eastbourne area, and it is established that all three were the product of Thomas Mortimer.

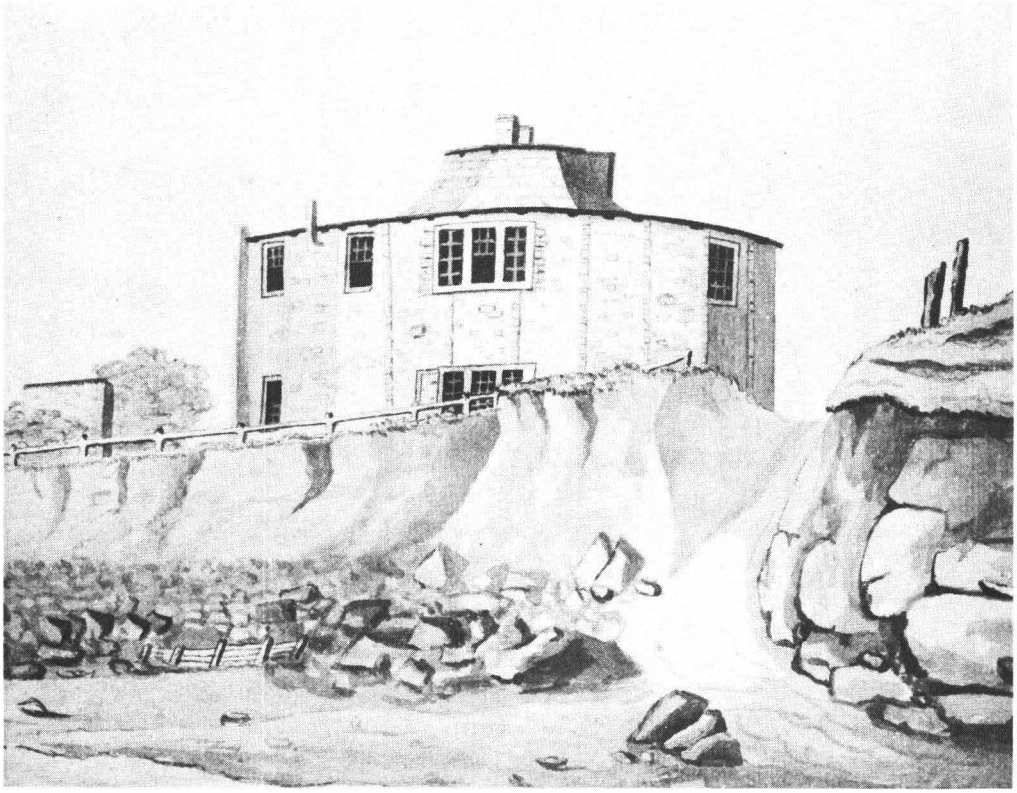

Plate V. A tinted drawing of the Round House, representing it as it was around 1780. Reproduced by kind permission of East Sussex County Library.

In this last section we outline the history of Thomas Mortimer and his second horizontal mill, the remains of which became known as the Round House.

We know little of Mortimer's life. He appears to have been a man of some substance who for some time acted as local customs official and an assessor for the Land Tax returns.

Born of a much-respected Eastbourne family, he was baptised on December 17, 1697, at St. Mary's church, Eastbourne. He married Catherine or Katherine Smith, and they had three sons and two daughters, namely — Elizabeth, bap. 1732; Catherine, bap. 1733; Charles Smith, bap. 1736; Thomas, bap. 1738; John Hamilton, bap. 1740. Both daughters were spinsters to death and both held the mill at Ocklynge and the Round House. Charles Smith followed his father's footsteps, becoming both miller and custom house official. Of Thomas junior, little is known, but his younger brother John Hamilton (1740–1779) became an artist of some note.

Mortimer's interest in windmills was almost certainly derived from his father, John, and his ingenious and inventive mind seems to mark him out as an outstanding innovator in milling technology in the eighteenth century.

The boltinghouse on Pashley Down, which was probably of his own design, seems at present to have been unique, built as it was in the first half of the eighteenth century, when millers were not bolting meal themselves.

Later in the century, when he was about 55, he headed the eighteenth century attempt to build horizontal corn-grinding mills when he incorporated the boltinghouse on Pashley Down into his first attempt at building such a mill. This mill, which he built in about 1752, is described in the documentary evidence in the report for Site 5.

Mortimer's second mill was built five years after that on Pashley Down, in 1757, when he entered into an agreement with Richard Morrell (D.D. 379) of St. Giles in the Fields, Holborn, dealer in horses and coaches, to rent, at 10s. annually for 199 years, a triangular plot of land on the site of a Roman Villa (Stevens & Gilbert, 1973) to the east of what is now Eastbourne pier, 'whereon a windmill was then erecting and building or intended to be erected.' This was the site of Mortimer's second horizontal mill, the base of which later became known as the Round House (TV 61789892).

It would appear from the Land Tax returns that the mill ceased to operate after 1768, when it is last recorded in the tax returns. In 1770, Thomas Jones tells us (Walpole Society 1951) that James Gandon, architect friend of John Hamilton Mortimer, had converted part of the building into a dwelling in the summer of 1769. Jones, after describing what is believed to be the mill on Ocklynge Hill, continues, 'the old gentleman (Mortimer) had built a similar one on the beach, but having been dismantled of the wooden machinery atop, by a violent storm — the stone carcase was by the ingenuity of our friend the summer before, converted into commodious appartments for two families to reside in during the bathing season — one of the rooms of this building was made use of as a study to paint, etc.'. Gandon's plans for the conversions were exhibited at the Society of Artists, in 1773 (Nicolson 1968).

There are many pictorial representations of the Round House; a drawing of it by Dr. John Fisher, preceptor to Prince Edward and later Bishop of Salisbury, is in the Queen's collection at Windsor (Oppé 1950), and another similar view, in watercolours, is in the Eastbourne Public Library and depicts the building as it probably was in the late 1770s (plate V).

After its alteration by Gandon, the building was used by Prince Edward (later Duke of Kent) and his preceptor during a visit by the children of George III in 1780, at which time the property was in the hands of the sisters Catherine and Elizabeth Mortimer. This period of its use is of minor importance to this report and is related in greater detail elsewhere (Chambers 1910).

In an article of undetermined date Jas. B. Morris, writing on the subject of the seafront, recalled the Round House as he saw it in 1836 as 'octagonal in shape, built of upright timbers apparently old wreckage, filled in between with boulders and stone, plastered over. It appeared to have a flat roof, but rising from the centre was a square storey apparently entirely of wood'.

Many of the accounts of the Round House suggest that the house was demolished, but the end of the building is recorded in a letter dated July 25, 1851 (DD 389) from the tenants to the Earl of Burlington, who had purchased it in 1837. The rent had been paid until 1841, at which time the Round House itself was washed away, and at the same time all the 38 perches of land went with it. Mr. Allwork, the tenant, requested to be set free from the lease, and it was duly cancelled. Mortimer's third mill may have replaced the Round House, but an exact date for its erection has not been forthcoming.

Selecting the only efficient type of horizontal mill suitable to generate enough power to drive heavy millstones — the turbine shutter mill — Mortimer had by the end of his life perfected the engine by his undoubted ingenuity, to which Thomas Jones referred. Mortimer saw that the turbine shutter mill promised to be the most powerful horizontal type and to be more economical than the traditional vertical types, which usually drove one or two pairs of stones. Battersea horizontal mill had six pairs, of which three could be driven at one time, and Margate had five pairs, of which four could be driven simultaneously; but the number of stones in Mortimer's mills is unfortunately not known. The disadvantages were the expense of building such a huge structure and its subsequent maintenance, but Mortimer seems to have overcome the problems sufficiently that his last attempt, at Ocklynge Hill, was successful, surviving him, as it did, by 37 years and only meeting an untimely destruction in 1811.

Thomas Mortimer died in 1774, leaving his spinster daughters almost the whole estate (DD 380), including the windmill on Ocklynge Hill and the Round House on the seashore. So ended the life of the man who began what could have been a revolution in the milling industry. Thomas lies buried in the north aisle of St. Mary's parish church, with his wife, Catherine. Outside, against the north wall of the chancel, stands the table tomb of his daughters, Catherine and Elizabeth, but the majority of the Mortimer tombs and memorials are grouped both inside and outside the south-west corner of the church.

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References

Amis, P. 1968 'Some Domestic Vessels of Southern Britain: A Social and Technical Analysis', *Journal of Ceramic History* **2.**

Ashby Collection of Papers relating to the Ashby family deposited at the *E.S.R.O.*

Ashdown, J. 1968. 'Report of Finds at Wrotham and Borough Green, Kent', *Post-Medieval Archaeology* **2**, 186–7.

Barton, K. J. 1969. 'The Contents of an Eighteenth Century Well at Bishops Waltham, Hants.' *Post-Medieval Archaeology* **3**, 166–87.

Beckett, A. 1926. 'Reminiscences of Friston Mill', *Sussex County Herald* Jan. 26th 1926.

Bedwin, O. 1976. 'The Excavation of Ardingly Fulling Mill and Forge 1975–6'. *Post-Medieval Archaeology* **10**, 34–64.

Bennet, R. and Elton, J. 1899. 'History of Corn Milling', London 1898–1904.

Bnb.-Budgen, Rev. Walter Notebooks in Barbican House Library, Lewes.

Bloice, B. J. 1971 'Norfolk House, Lambeth. Excavations at the Delftware Kiln Site, 1968' *Post-Medieval Archaeology* **5**, 99–159.

Brears, P. C. D. 1971 *The English Country Pottery: Its History and Techniques*, David and Charles.

Burrell, Sir William. A copy of Camden's Britannia, annotated with notes and watercolours by Sir William and Sophia Burrell. *Eastbourne Public Library.*

Canvin, G. L. 1974. 'Some Archaeological work in the Borough of Hammersmith', *Occasional Paper* **II** *of the Archaeological Section of the Fulham and Hammersmith Historical Society.*

Celoria, F. 1974. 'Material from a Pit by Lant Street, Southwark', *London Studies* **1.**

Chambers G. F. 1910 'East Bourne Memories', V. T. Sumfield, Eastbourne.

Christophers, V. R., Haselgrove, D. C., and Pearcey, O.H.J. 1974, 'The Fulham Pottery; A Preliminary Account', *Occasional Paper* **1** *of the Archaeological Section of the Fulham and Hammersmith Historical Society.*

Clark, F. R. 1970. 'Report of finds and Loughton, Essex', *Post Medieval Archaeology* **4**, 182.

Cook, A. M., Mynard, D. C. and Rigold, S. E. 1969 'Excavations at Dover Castle, Principally in the Inner Bailey', *Journal of the British Archaeological Association* **XXXII**, 54–104.

CplM Deeds and Documents belonging to his Grace the Duke of Devonshire. (Once at Compton Place, Eastbourne, now at Chatsworth, Derbyshire). Sussex Archaeological Society Library, Lewes.

Curwen, E. C. 1944–5 'An Unusual Bone Implement', *Sussex Archaeological Collections* **84**, 108–13.

DD Drake Collection—Calendar of Miscellaneous Deeds, Sussex Archaeological Society Library, Lewes.

Drewett, P. 1974 'Excavations in Old Town, Croydon, 1969–70', *Surrey Archaeological Society Research Volume* **1.**

Dulley, A. J. F. 1967. 'Excavations at Pevensey, Sussex 1962–6', *Medieval Archaeology* **XI**, 209–32.

EPNS (1930) Mawer, A. and Stenton, F. M. 'The Place-Names of Sussex', *English Place-Name Society*, Vol. **VII.**

E.S.R.O. East Sussex Record Office, Pelham House, Lewes

Evans, A. A. 1926. 'Friston Windmill', *Sussex Notes and Queries* **I**, 24.

Garner and Archer 1972. 'English Delftware', Faber & Faber.

Gilbert, R. 1972 'Ox Bones used as Grease Boxes', *Sussex Archaeological Society Newsletter*, No. 6.

Green, J. N. 1973. 'The Wreck of the Dutch East Indiaman the Vergulde Draeck', *Nautical Archaeology* **2**, Part 2.

Hardy-Smith, A. 1974. 'Post-Medieval Pot Shapes, a Quantative Analysis', *Science and Archaeology* **11.**

Hawkesbury, Lord 1903. 'Catalogues of Portraits at Compton Place and Buxted Park, in Sussex', *Sussex Archaeological Collections* **47**, 97–109.

Healey, R. H. 'Glossary of Medieval Pottery Decoration', *Car Dyke Research Group*, Publication No. 2, 1976.

Holden, E. W. 1965. 'Slate Roofing in Medieval Sussex' *Sussex Archaeological Collections* **103**, 67–74.

Holling, F. W. 1969. 'Seventeenth Century Pottery from Ash, Surrey', *Post-Medieval Archaeology* **3**, 18–30.

—— 1971. 'A Preliminary Note on the Pottery Industry of the Surrey-Hampshire Borders', *The Surrey Archaeological Collections* **68**, 57–88.

Hughes, P. 1962. 'Our Windmill' *East Dean and Friston Parish Magazine* June 1962. The article is signed L. O.—a nom de plume of Lye Oake, the name of the author's house.

Hurst, J. G. 1963. 'A mid-17th century Group from the Parsonage House' in E. W. Holden 'Excavations at the Deserted Medieval Village of Hangleton, Part I', *Sussex Archaeological Collections* **101.**

Jones, M. U. 1975. 'Mucking, the Saxon Cemeteries', *Current Archaeology* **50**, 73–80.

Jones, T. 1951. 'Memories of Thomas Jones', *Walpole Society Vol. 32.*

Long, C. D. 1975. 'Excavations in the Medieval City of Trondheim, Norway', *Medieval Archaeology* **19**, 1–32.

Moorhouse, S. 1970. 'Finds from Basing House, Hampshire, Part One', *Post-Medieval Archaeology* **4**, 31–91.

Mountford, A. R. 1971. *Staffordshire Salt-Glazed Earthenware*, Barry and Jenkins.

Musson, R. 1955. 'A Thirteenth Century Dwelling at Bramble Bottom, Eastbourne', *Sussex Archaeological Collections* **92**, 157–70.

Mynard, D. C. 1969. 'A Group of Post-Medieval Pottery from Dover Castle', *Post-Medieval Archaeology* **3**, 31–46.

Nicolson, B. 1968. *John Hamilton Mortimer A.R.A. 1740–1779,* The Paul Mellon Foundation for British Art.

Oppé 1950. Oppé Catalogue 1950, No. 263, Windsor.

Posnasky, M. 1956. 'The Lamport Post Mill', *Northamptonshire Natural History Society and Field Club* **XXXIII**, No. 239.

Radley, J. 1971. 'Economic Aspects of Anglo-Danish York', *Medieval Archaeology* **XV**, 55–7.

Rahtz, P. A. and M. H. 1958. 'Barrow and Windmill at Butcombe, North Somerset', *Proceedings of the University of Bristol Spelaeological Society* **8**, No. 2.

Reader, F. W. 1909–11. 'Bone Objects', *Proceedings of the Society of Antiquaries of London* 1, XXIII, 51–8.

Rigold, S. E. 1971. 'Eynsford Castle and its Excavation', *Archaeologia Cantiana* **LXXXVI**, 109–72.

Simmons, H. E. S. 1974. *Collection of MSS. (1901–1973) on Windmills and Watermills*, Science Museum Library, London.

Sténvit, R. 1974. 'The Wreck of the Flute Lastdrager', *Nautical Archaeology* **3**, Part 2.

Stevens, L. and Gilbert, R. 1973. *The Eastbourne Roman Villa*, Crain Services, Eastbourne.

—— 1981. 'Mills of the Eastbourne Borough Council Area', *Eastbourne Local History Society Newsletter* 38.

Stevens, P. 1980. 'Ocklynge Hill Anglo-Saxon Cemetery, Eastbourne', *Sussex Archaeological Collections* **118**, 231–44.

Tatton-Brown, T. 1974. 'Excavations at the Custom House Site, City of London, 1973', *Transactions of the London and Middlesex Archaeological Society* **25**, 117–219.

Wailes, R. 1967. 'The English Windmill', Routledge & Kegan Paul Ltd.

—— 1967–8. 'Horizontal Windmills', *Transactions of the Newcomen Society* **XL**, 135.

Williams-Freeman, J. P. 1915. *An Introduction to Field Archaeology as illustrated by Hampshire*, Macmillan & Co.

Williams, J. H. 1979. 'St. Peter's Street, Northampton' in *Excavations at Northampton, 1973–76*, Northampton Development Corporation 315–6.

Wolseley, Viscountess 1936. 'Friston Place', *Sussex County Magazine* **X**, 294–301.

Sussex Archaeological Collections **120** (1982), 139–160

RELIGION, FACTION AND POLITICS IN REFORMATION RYE: 1530–59

by Graham Mayhew, B.A., D.Phil.

In the mid-1530s Rye came to the attention of the authorities because of the controversy surrounding the activities of the traditionalist curate, William Inold. The existence of lists of his local supporters and opponents enables the identification of the religious and factional affiliations of almost all of the leading members of Rye corporation in the ensuing period. This article traces the changing fortunes of the supporters and opponents of reform within Rye in the often turbulent years up to 1559 during which the English Reformation was carried through, providing insights into the local progress of reform.

INTRODUCTION: THE ECONOMIC AND RELIGIOUS BACKGROUND

Situated on a wide estuary known as the Camber, where the River Rother enters the sea, mid-sixteenth century Rye boasted a population of some 2,500 people.[1] As such it was second only to Lewes amongst East Sussex towns, both in size and importance as a market centre. A member of the Cinque Ports Confederation, it returned two members of Parliament and was a chartered borough (unlike Lewes) with various town officers, a Mayor (elected annually by the freemen) and up to twelve Jurats. In theory chosen by the Mayor to assist in the administration of justice and the government of the town, in practice once elected, Jurats were rarely removed from office except by death or voluntarily by illness or old age.[2] Unusually, for a town of its size, Rye possessed only one parish church. It stood, and still stands at the highest point of the hill on which Rye is built, in the middle of the town, and dominating it.

Primarily a fishing port, Rye depended for its economic prosperity on the sea. Approximately half of those returned as householders in the 1565 survey gave their occupation as that of fisherman, a similar proportion to that obtained from the wills of Rye citizens proved in the Lewes Archdeaconry Court for the period 1530–59. Many were part owners of the boats in which they worked. Of the remainder, many were employed in ancillary trades, as carpenters, builders, makers of nets; or in other service occupations such as brewing, baking etc.[3] A few, such as the Fletcher family, could regard themselves primarily as merchants, living off the profits of the carrying trade; and indeed a variety of goods were imported and exported through Rye, chiefly to the Netherlands and France. Amongst the imports were wine, hops, dyes, assorted raisins, nuts, and spices; whilst exports included the products of the wealden iron industry, textiles, horses, other livestock and leather.[4] Years of poor local harvests (e.g. 1554–6) saw substantial imports of grain, chiefly from the West Country.[5]

It was, however, fishing which provided the chief source of employment. This was largely seasonal. In the spring, the Rye boats fished the Channel waters, moving to the North Sea off Scarborough after cod in June–August, and then further south on Yarmouth voyage after the herring shoals in September–November. Between 1551 and 1556, an average of 30 boats went annually to Scarborough, and a somewhat lesser number to Yarmouth. At Yarmouth the catch

was unloaded for the market there, the Cinque Ports appointing four bailiffs annually to look after their interests for the duration of the voyage. The remainder of the annual catch was unloaded at Rye itself, whose market served both the Royal Household and London, reaching the capital in less than 24 hours by road.[6]

In Rye there was permanently resident a royal purveyor of fish, together with an agent of the London Fishmonger's Company. This presence was not entirely welcome however, since it produced a clash of interests between the Court and the Rye fishermen, with the Mayor and Jurats unhappily in the middle. This was particularly the case with a set of articles drawn up by a special commission in 1524 as a result of bitter disagreements the previous year. The articles, ostensibly freely agreed to by the Rye fishermen, had in reality been imposed on them by the Comptroller of the King's Household, Sir Henry Guldeforde, his brother Sir Edward Guldeforde the Lord Warden of the Cinque Ports, and George Guldeforde Esq., who comprised the Commission together with the Mayor, John Edolff. The royal purveyor was to have first choice of the whole catch, which was to be brought promptly to market without any concealment, in order to obtain the best fish for the King's table, and in cases of dispute, the Mayor or Jurats deputed by him for the purpose were to be responsible for fixing a fair price between the purveyor and the fishermen and ensuring that the articles were observed on pain of their own imprisonment by the Lord Warden should they prove negligent in any way. Likewise, the Mayor was to imprison any fisherman or buyer who infringed the royal purveyor's rights.[7] It was a delicate situation for the Mayor, and one likely to prove fruitful of future dispute; and so it proved, providing an opportunity for the settling of old political scores.

In addition to passing seamen of different nationalities (mainly French or Flemings, but including the occasional Scot, and even Venetian), there was a resident foreign and denizen community of some 100 aliens, engaged in service trades such as net-making at times in competition with local fishermen.[8] This alien presence was one element in a town which became noted for its religious controversies throughout the period, though there is little evidence that the views of the (presumably Dutch) Anabaptist, Cornelius Johnson, burned in Rye in 1535 had made any impact outside the confines of his own community.[9]

Two factors which clearly did play a part in Rye's early religious radicalism, however, were firstly its proximity to the traditional Lollard region of the Kentish mid and eastern Weald; and secondly Rye's trading links with the Netherlands and in particular Antwerp, which had been early influenced by continental Protestantism, and which from the 1520s harboured such English Protestant propagandists as William Tyndale.

Kentish Lollardy was centred around the clothing towns and villages of the south-west; particularly Cranbrook and Tenterden, Benenden and Rolvenden, an area with lines of communication and trade passing directly, by river, through Rye. The roots of this indigenous heretical tradition went back at least to the 1420s, and in 1511 under Archbishop Warham a network of Lollard communities had been uncovered there, leading to 41 abjurations and 5 burnings. Chief amongst their beliefs were their opposition to pilgrimages and to the adoration of saints and relics, a denial of the carnal presence in the sacrament, and the desire to be free to read the Bible in English, all of which featured prominently amongst the views of the early Rye Protestants. Significantly, this region also had connections with the continent, Richard Harman a native of Cranbrook going to Antwerp as Tyndale's helper, from where he maintained close contact with sympathisers in his home town, who wrote to him concerning the progress of the new translation of the Bible being undertaken.[10]

Harman was one of those involved in the smuggling of illicit Bibles and tracts into England

in the late 1520s, a trade which operated chiefly through the south coast ports, including almost certainly Rye. Chief amongst the agent of this trade was Master Thomas Garrett, a Fellow of Magdalen College, caught trafficking in imported Protestant books in Oxford in 1528. On his subsequent escape from custody, Rye and Winchelsea were two of the six ports watched by Wolsey's agents as being his most likely destination on his attempted flight abroad. In fact Garrett was recaptured near Bristol, another town on the list, and after interrogation and penance found his way into Wolsey's household, from where he went on to become Chaplain to Bishop Latimer, as such appearing in a 1536 deposition as one of the chief influences on 20 Rye and Winchelsea men accused of heresy.[11] Two further pieces of evidence point to Rye's connection with the book trade. One was the discovery, in June or July 1533, of a number of

TABLE 1
Rye wills proved at Lewes 1530–59

Year	*Total*	*T*	*R*	*P*	*T/R*	*P/T*
1530–40	4	3	1			
1541	2	2				
1542	4	2	1	1		
1543	9	6	2			1
1544	6	6				
1545	6	5			1	
1546	5	1	2	1		1
1547	4	1		2		1
1548	4		2	2		
1549	3		2	1		
1550	7		4	3		
1551	4		4			
1552	3		3			
1553	—					
1554	2		2			
1555	2			2		
1556	3		3			
1557	8	1	6		1	
1558	8	3	4	1		
1559	3		2	1		

Sources: ESRO wills registers W/A 1–4, W/C4.
Notes:

T	Traditional	—	(A)lmighty (G)od, (B)lessed (V)irgin (M)ary and (S)aint(s); and AG, Sts; and Masses.
R	Reformist	—	AG alone; AG (M)aker and (R)edeemer; AG (C)reator, R and M; Jesus Christ only MR and Saviour etc, without masses.
P	Protestant	—	Salvation through Merits of Christ's Passion; Election.
T/R	Mixed	—	AG alone etc. as above R but with Masses.
P/T	Mixed	—	Merits or Election plus Masses or BVM.

The wills are arranged by date of composition.

(unnamed) heretical books in the house of Thomas White of Rye (one of those accused of heresy in 1536) during a search of his premises by the Mayor.[12] The other was the ownership by William Byrchett, Rector of the neighbouring parish of East Guldeforde and formerly a curate at Rye, of copies of both an English Bible and Tyndale's *Obedience of a Christian Man* (1528). William, a married priest at the time of making his will (1553), was a close relative (cousin?) of Thomas Byrchett, the leader of the Rye Protestant faction, whose name heads the 1536 list of accused, and to whose wife William bequeathed his copy of Tyndale.[13]

That Rye was an early centre of Protestant activity in Sussex is borne out further in wills of Rye residents proved in the Lewes Archdeaconry Court (see Table 1). By comparison with other East Sussex towns, Rye (closely followed by its Cinque Ports neighbours Hastings and Winchelsea) had the highest incidence of wills expressing overtly Protestant sentiments in the reigns of both Henry VIII and Edward VI. In Mary's reign Rye provided the lowest proportion both of traditionalist preambles and of bequests for masses, indicating the relative failure of impact of Marian Catholicism. In the following reign the town became a stronghold of Elizabethan Puritanism.[14]

Not surprisingly there was considerable religious controversy in Rye, bringing events in the town in the mid-1530s to the attention of Thomas Cromwell, by whose aid the Protestant faction in 1538 finally secured the removal of their local curate, Sir William Inold, a staunch traditionalist, and gained control of the town corporation for the first time. Inold's activities included preaching openly against the break with Rome, being in possession of Papalist tracts and encouraging others to read them, and ostentatiously celebrating abrogated holy days 'with solemn ringing, singing, procession (and) decking of the church . . . as though they had been the highest days in the year'.[15] However, Inold had the support and protection of most of the leading members of the town corporation. There is a petition (dated 12 August 1537) purporting to come from the Mayor and all the Jurats of Rye together with a list of 75 named others of 'the most substantial commons' of the town, supporting their curate against his accusers, some of whom, so they said, 'be very symple and of small substance rude both in theyr communication and behaviour not only ayenst hym but also ayenst the estate of the seyd towne'. Secondly, there is the list of twenty individuals (1536) accused of heresy, including all those prominent in the agitations against Inold, presumably in an attempt to discredit them.[16]

Of the 20 so named, including all the above, 13 were accused of holding their views as a result of the activities of four named Protestant preachers in Rye: John Swynerton, priest; Thomas Garrard, chaplain to Bishop Latimer of Worcester; Francis Eliot, an Augustinian friar; and Thomas Lawney, chaplain to Archbishop Cranmer. In part at least, the development of Protestantism in Rye seems to owe much to the work of the itinerant preachers licensed by Cranmer, whose activities clearly, in the case of Rye, must have spilled over the borders of Canterbury diocese.[17] The gist of their sermons is given, making possible an assessment of how far the views of Thomas Byrchett and his associates derived from them.

All four preachers denied the doctrine of purgatory, as, amongst the Rye Protestants, did Robert Wymond for whom it was 'pissed owte' and Thomas Fougler. From this view followed a denial of the efficacy of masses for the dead and hence Fougler's view that he would rather have a dog sing for him than a priest. Swynerton and Garrard had both preached against pilgrimages and oblations to images, the latter view striking another common chord with the Rye group, four of whom (Robert Woode, Robert Wymond, James Dye and Thomas Hog alias White) apparently held strong views on the matter, Woode and Wymond scandalising orthodox susceptibilities with their equation of images with idols, Woode putting the view most forcibly

'that the Image of our blessed lady and other seintes in the Churche be as ydolles and have owthes and can not speke, here, nor see.' Swynerton's objections to the cult of saints went further, extending to the excessive veneration of the Virgin who, as he saw it, was not of such honour as the people paid her. Here again, his views found support amongst the Rye reformers, in particular John Alger and John White. The latter's view was that 'Our Lady being the mother of god was a synner in this world as we be', an interesting comment on early sixteenth century sexual morality. Finally, Friar Eliot had preached against the need for fasting, in which he found support in Robert Wymond's belief that fasting was not ordained of God.

These views may well have cut across much of the traditional usages of saints' days and fasting, decking of images etc. which were still being practised in Rye in 1538, despite the royal injunctions to the contrary of two years earlier. They also went much further, especially in regard to the denial of purgatory and hence of the whole efficacy of the existing provision of services for the dead.

The Rye Protestants held views in addition to those cited against Cranmer's preachers, indicating an awareness of continental developments. Three of their leading members, Byrchett, Woode and Fougler, stressed the priesthood of all believers, the first two adding that they themselves were, in this sense, priests. The clearest indication of this influence was their attitude towards the sacraments. To Byrchett there were only three: and to Fougler, the Mass itself was 'but a figure or a shadowe in comparison to the present body of God'. To Wymond, it was not of God's making, but of man's, while to Alexander Welles (and two others) 'the blood of Christ, which was shed for them, was sufficient for the salvation of their souls without any other unction' — a somewhat Lutheran outlook.

The new learning seems to have built on older, residual Lollard views and traditional anticlericalism. Thus John Younge (who significantly is excluded from those listed as owing their views to the new learning brought by the preachers) saw the Mass as 'a Jogeler's makyng' while Robert Woode saw divine service as 'of no more effect than the blething of a Cowe to here calff, and the calff ayen to the Cowe'.

Amongst these 20 Protestant agitators, three had earlier been accused or convicted of heresy. Thus Robert Cooke abjured 'certain heresies concerning the sacrament of the altar' at Winchester in April 1534; Nicholas White (described here as of Winchelsea) had abjured a number of essentially Lollard beliefs in 1529; and Thomas Hog alias White is probably identifiable with the Thomas White found in possession of heretical books by the Mayor of Rye in June or July 1533.[18] The last two cases, clearly brought at the instigation of Inold's supporters, indicate that the reformist element was sailing dangerously close to the wind. Yet during the next two decades, 10 of the 19 Rye men on the list became Jurats of Rye by 1559, and one additionally in 1563. By 1559, six had been elected members of Parliament for Rye and four had served as Mayor, namely Thomas Byrchett three times, in 1538, 1539 and 1548; Richard Rucke 1550; Alexander Welles 1557, 1558; and on Welles' death, from 21 December 1558, John Younge. A further two served as Churchwardens or in other municipal offices, while at least one other, Robert Cooke, was actively employed on town business by Thomas Byrchett during his 1548 Mayoralty. Of the remaining five, at least three died within a few years of the compilation of the list, leaving only two unaccounted for — an impressive demonstration of activism amongst the group as a whole.

It is with the rise of this group to office, their social backgrounds and origins, their relations with the previously established local oligarchy and their relationships amongst themselves, and the political and religious events in Rye which ensued in the period to 1559, that

the remainder of this article is concerned, providing an insight into the progress of the Reformation in an important urban trading community in the south-east. The pattern of events in Rye may well have implications for our understanding of the processes whereby the English Reformation was enforced in many small towns in the provinces.

THE TWO FACTIONS

As Table 2 shows, the occupations of the rising faction were very much those which one would expect to find amongst the more substantial citizens of a port and fishing centre such as Rye. Of the ten for whom details of employment are available, six were connected with the sea, comprising three fishermen, the lessee of the town ferry, a merchant and one ship owner/master.[19] The other four were a butcher, two bakers and a beer-brewer. As with the fishermen who were all masters or at least part-owners of boats, these latter were each substantial men within the town. Butchers, bakers and brewers were all occupations subject to municipal regulation at the time, and their numbers appear to have been strictly limited, the numbers of bakers fluctuating between six and 10 in the mid-sixteenth century, compared with rather fewer brewers.[20]

To some extent, bare occupational descriptions are misleading. By his death in 1556, Thomas Byrchett, the leader of the Protestant faction, who had inherited his beer-brewing business from his father, had amassed a considerable personal fortune, leaving over £200 in cash to his heirs, together with five houses in Rye and lands in Iden alone worth over £300.[21] Others in the group fared similarly well, including in particular Alexander Welles (lands in Playden and Ewhurst, properties in Rye); Robert Bennett (farms at Playden and Iden, six houses together with a barn and slaughterhouse in Rye); John Raynolde (three major properties in Rye, including one outside the Landgate bequeathed to the town as an Almshouse, and half shares in two further properties with his brother); and John Younge who, describing himself in his will (1565) as 'Servaunte to Our Sovereign Ladye the Quene's Majestee', left a number of properties in Rye together with quantities of silver plate and 'other juells'.[22]

The new Protestant element was a relatively homogeneous group, bound together not only by outlook but also by close ties of friendship, kinship and marriage. Thus John Raynolde's sister was John Mede's wife, Robert Wymond's sister married Alexander Welles, and the families of Byrchett and Welles were similarly connected.[23] Sometimes they engaged in joint business enterprises, as when in 1543, John Raynolde together with Thomas Fouglar and John Bell of Winchelsea obtained royal licence for a privateering expedition.[24] The closeness of their personal ties, stretching over three decades, is particularly in evidence in the making of their wills especially in the appointment of executors and overseers. The four joint executors of John Raynolde's will (1548) included Byrchett, Welles and Woods, together with John Davydson; Welles and Younge were joint overseers of Richard Rucke's will (1557); whilst in 1543 William Mede made Welles his overseer, with Alexander Wulphyn and Robert Wymond as his executors.[25]

The Protestant views of members of the group were reflected in the religious provisions which they made in their wills. Eight of the original nineteen accused of heresy who went on to become Jurats left wills. Of these, only one, William Mede's (1543), contained any traditional formulae or provision for masses, no doubt in his case reflecting the difficult period in which it was drawn up in the years immediately following Cromwell's execution. By contrast, John Raynolde (1548) stressed salvation through the merits of Christ's passion and made provision

TABLE 2
Rye Protestants from 1536 list — employment and office-holding

Name	*Occupation*	*Offices held*[1]	*Death*[2]
John Alger			b.24/11.45
Robert Bennett	Butcher	Ch.1542 C/W.1557 J.1557	W 1567
Thomas Byspyn	Merchant		
Thomas Byrchett	Beerbrewer	Ch.1528 J.1535 M.1538–9, 1548	
		M.P. 1539	W b.30/10/56
Robert Cooke			
James Dye			W b.15/5/45
Thomas Fouglar	Fisherman	Ch.1554 Cl/M.1559 J.1563	
Ric Jervis	[Merchant?]		W 1552
Adam Lyster		C/W.1536	W 1536
William Mede	Fisherman	J.1538 M.P. 1539	W b.17/2/43
John Raynolde	Seafarer	J.1548	W b.4/9/48
Richard Rucke		Ch.1538 J.1548 M.1553	W b.30/8/57
Henry Soggs			W 1550
Alexander Welles	Baker/Brewer	T.C. 1535 1538 1549–57	
		J.1543–8 1553–8 M.1557–8	
		M.P. 1545 1547 1553	W b.21/11/58
John White	Fisherman	C/W.1553 J.1559[3]	
Thomas White		C/W.1549–50	b.[4]19/11/55
			b.[4]12/4/56
Robert Woode	(Ferry)	J.1538 M.P. 1553	W b.9/2/57
Robert Wymond	Baker	Ch.1537 C/W.1538–9 J.1538	
		M.P. 1545 1547[5]	d.1548
John Younge		C/W.1543–4 Ch.1547 J.1549[6]	
		M.1558[7] 1562 M.P. 1555[8]	W 1566

Notes

1. Ch. Chamberlain, C/W. Churchwarden, Cl/M. Clerk to Market, T.C. Town Clerk, J. Jurat, M. Mayor, M.P. Member of Parliament.
2. W Will surviving, d. year of death, b. burial in Rye parish register.
3. Added in later hand, elected to fill vacancy by death (RYE 60/7 184r).
4. There are two entries for the burial of a Thomas White in the Rye parish registers 1538–9.
5. Died early 1548, George Raynolde elected in his place.
6. Elected to fill vacancy by death, sworn 19/8/49 (RYE 33/7 42v).
7. Elected 21/11/58 on death of Alexander Welles.
8. Elected 6/10/55 (RYE 1/1/ 38v).

Sources:
Annual returns of elections and expenses for Parliament wages in Chamberlain's Account Books (East Sussex Record Office, RYE 60/5-7), Churchwardens' Accounts (RYE 147), Minutes of Hundreds and Assemblies (RYE 1/1-3, 33/7).

for four sermons. And of the four whose wills were drawn up during the height of the Marian reaction, not one contained a traditional bequest, Rucke (1557) and Woode (1558) merely leaving their souls to 'Almighty God my Creator and Maker' whilst the two leading members of the faction, Byrchett (1556) and Welles (1558) both emphasised their continuing belief in salvation through Christ's merits despite the unfashionable nature of such views at that time. Both of those who died after the accession of Elizabeth also went further than mere Protestant conformity, Younge (1566) insisting on salvation solely through Christ's merits 'and by none other workes or dedes but onelie by him' and Robert Bennett (1567) expressing a predestrinarian conviction of rising again 'at the daye of Judgemente with the righteous people'.[26]

The Protestant faction differed from the older political establishment in Rye both in terms of social background and in age. Of the fourteen traditionalist jurats whose social status/origins are known, there was a similar proportion of seafaring traders: six fishermen and three merchants/ship-owners; and also a butcher. Unlike the Protestant faction, however, who seem to have acquired their lands as a result of commercial activities within Rye, four traditionalists appear to have come into Rye only recently from local landowning families (at least two of gentry extraction).[27]

In contrast, within the Protestant faction, William and Robert Wymond, John Younge, William Mede and Thomas Byspyn all counted Mayors of Rye amongst their immediate forebears. In their case the clash of ideologies reflected, rather, a generation gap. This is particularly apparent in the relationship of Robert Cooke, father and son: the elder, churchwarden (1536–8) and a signatory of the petition supporting the traditionalist Inold; the younger an abjured Protestant heretic (1534) and active opponent of all that was going on in Rye church during his father's churchwardenship. A similar situation existed between Robert Bennett, father and son, and between Thomas Byspin and his father William — the former actively denouncing Rye clergy for their Popish excesses to Thomas Cromwell, whilst the latter, by his will (1531) with its traditional Latin preamble, requested masses and a one year's obit for his soul.[28]

By way of further contrast to the reformist element, in which no one individual was obviously dominant either socially or politically, in a real sense the traditionalist faction was also the Fletcher faction. From the 1520s the Fletchers had come to dominate Rye Corporation. At the time of his death (1545) a substantial merchant and ship-owner, John Fletcher had been seven times Mayor of Rye and had served in the Reformation Parliament. A protegé of Wolsey's, at the end of his life he retained his court connections and was still regularly employed on the King's business as one of his most experienced sea captains during the crises with first the Empire and then France in the later years of the reign. His was a political dynasty, his sons Richard (d.1559) and Thomas, both succeeding him as Mayor and M.P., the former under Mary and Elizabeth, the latter under Edward VI and Elizabeth.[29] Commensurate with their influence was the Fletcher wealth. John Fletcher, according to his will (1545), left eight shops at Strand, nine tenements with gardens and other appurtenances in Rye and three others which he had only recently built on the town dyke, together with a newly-constructed storehouse, a mill and marshlands at Lydd and Gateborough, the latter of which he held in fee farm of the King. His son Richard's wealth (1559) was almost as impressive including ownership of the "Mary Gold", one third part of the "Jhesus", and extensive holdings in tenements, lands and shops in Rye.[30]

The Fletcher influence extended widely within the traditionalist faction. John Edolff's wife

was John Fletcher's daughter; there were similar family connections with the Pedles. There were business connections too, Richard Ynglett having a three-eighths share in a boat which he owned together with Richard Fletcher. Similarly, Fletchers acted as overseers and witnesses to the wills of several fellow jurats, including John Fletcher as overseer for John Swanne (1542) and Richard and Thomas Fletcher joint overseers for William Johnson (1558).[31]

There were similar links between other members of the traditionalist faction. Family ties included the marriages of William Roberthes to Annys Ynglett (1544) and of William Johnson to Johane Cobbe (1558); friendship ties, those between John Marche (d.1543) and Robert Maycott his overseer, William Roberthes who drew up the will, and Richard Nycoll whose children he included among his bequests.[32] Such ties rarely cut across the bounds of faction. Partly, no doubt, this was due to differences in age. Primarily, however, it is a further indication of the extent of the differences separating the two groups, which were divided not only by religious and political considerations, but also by elements of personal mistrust and even enmity.

As with members of the Protestant faction so with the Fletchers and their associates the religious bequests in their wills provide confirmation of their religious outlook. Thus Richard Ynglett (1544) and John Lindsey (1545) both had their wills drawn up by Master William Inold, by then Vicar of Rye. In both cases the sentiments were overtly traditional with the bequest of the soul to God, the Blessed Virgin and all the saints, and with provision for masses. Richard Ynglett even left £4 for the buying of a set of vestments 'to the honour of God and his service in the church of Rye'. Similarly, George Mercer had the religious preamble to his will (1541) drawn up entirely according to the traditional Latin formulae — the only Rye person to have done so in ten years; and further he provided for 'an honest and well disposed priest to syng at Jesus alter within the church of Rye . . . dirige and masse for my sawle and the sawle of Anne my late wiff, our parents' sawles and all christen sawles dayly by one half yere next after my decease.' In stark contrast was his son Nicholas's will (1564) which reflected the changed religious times. Drawn up by William Blomfeld 'Mynyster', in it he left his soul to "My Lord and God Jesus Christ by whose only death passion and merits I do constantly and assuredly beleve that I am saved and with him and by him shall inheryt everlastying lyff".[33]

Religious differences between the two groups were accentuated by elements of longstanding personal distrust, the result of a number of clashes between leading members of the two factions from the early 1530s onwards.

Such personal animosities clearly ran deep, for from 31 August to 8 September 1531 John Eston, another active Protestant sympathiser and cousin of William Wymond was imprisoned at Mayor John Fletcher's orders for having abused the latter as 'a knave and consumer of the town money'. Eston was eventually awarded twenty marks damages from Fletcher at the orders of Thomas Cromwell. The money was reimbursed Fletcher by the Cinque Ports at the instigation of William Byspyn who accused Eston 'of mallice and dispite'. That same year Fletcher somewhat prophetically threatened another of Byrchett's associates, Robert Cooke the younger, with the words 'I tell thee, Cooke, and I would thou shouldest know it, that I have a sword of vengeance in my hand and I may strike and will strike the proudest of you all when I list.[34]

Some eight years later, in October 1539, Fletcher put his threat into effect. Shortly after Thomas Byrchett's election to a second term as Mayor in August of that year, John Fletcher wrote to the Comptroller of the Royal Household accusing him of siding with the fishermen to obstruct the royal purveyor, 'I could bring the fishermen to a reasonable price, but that the

mayor encourages them to the contrary'.[35] As a result, Byrchett spent some weeks imprisoned in Dover Castle at the Lord Warden's orders for failure to enforce the 1524 fishing ordinances, before being released on Cromwell's instructions, it having been reported to him by one of his agents that the mayor was 'as honest a man as any in the town, of such sobriety and good judgement', a discreet favourer of the word of God, loyal to Cromwell and that 'Fletcher may have procured this matter against him for malice'.[36] There can scarcely have been any love lost between the leaders of the rival factions after that incident.

Somewhat apart from the two groups stood a smaller number of uncommitted Jurats. One of these, George Raynoldes, who first appears when he was chosen as a Jurat by the conservative William Roberthes in 1546, as with several other traditionalists came from a local landed family — at Bredhurst, Kent. His views however changed very much with the times, and he played an active role as M.P. (1548–52) and as Mayor (twice, in 1551 and 1552) at the height of the Edwardian Reformation, again serving as Mayor under Mary (1556) on this occasion at the nomination of her Council, losing office a year later in a contested election to Alexander Welles the Protestant, but returning yet again as M.P. (1563) and Mayor (1564 and 1565) under Elizabeth. His will (1577) requested Rye's Minister to preach at his burial and provided substantial bequests to the poor, the Almshouse and to other town projects. His personal bequests span many of the sons and daughters of the leading members of both earlier factions.[37]

Four other Jurats' careers suggest similar cross-party affiliations. James Jetter as Mayor first brought in Thomas Byrchett as a Jurat in 1535, the same year that Alexander Welles first served as Town Clerk[38]. Alexander Wulphyn (d.1549) as Mayor first made Welles a Jurat in 1543, later making him an overseer of his will and leaving him his gold signet ring. However he also appointed as Jurat Clement Cobbe (1542) in each case replacing conservative with conservative and radical with radical, so maintaining the existing political balance. His will, while Protestant in sentiment, stressing salvation through Christ's merits, was however witnessed by two conservatives, William Johnson and Robert Maycott. Thus, even at the last, Alexander Wulphyn strove to maintain a balance.[39] Richard Nycoll's will (1548) displayed a similar eclecticism; and finally amongst the older Jurats, Robert Barnes's affiliations are also unclear, though in 1545, during John Fletcher's last Mayoralty, he was fined 16s. for contravening the fishmarket regulations by selling part of his catch out of market.[40]

From the mid-1530s onwards therefore, Rye politics was dominated by the existence of two rival factions. Divided sharply over religion and also often by age, members of the two groupings displayed strong elements of personal dislike one for another, and apart from a handful of uncommitteds whose personal affiliations spanned both factions there was little personal contact between them. Each grouping had its own internal bonds of family, friendship and business ties linking both its leading members and their supporters in the community at large. Both groups had connections amongst the rival political elements at Court — the reformists with Cromwell and later with the Somerset faction, the conservatives with the local catholic gentry, the Gages, Oxenbridges and Bakers who were well-represented in government throughout the period. Finally stood the organisation of the liberty of the Cinque Ports, within which Rye corporation itself existed and operated, and at Dover the Lord Warden, seeking (often unsuccessfully) to extend his own influence and authority within the individual members, of which Rye was perhaps economically the most important and certainly the most independent. Against this backcloth the internal struggle in Rye during the Reformation years was fought out.

THE BEGINNINGS OF REFORM: HENRICIAN RYE 1538–47

The summer of 1538 marked a turning point in the political fortunes of the Rye Protestant faction. In June, Sir William Inold, their recalcitrant traditionalist curate, was finally removed from the parish church at Thomas Cromwell's instigation, to be replaced by one more sympathetic to the new ways; and at the end of August, Thomas Byrchett assumed the Mayoralty for the first time. Amongst the twelve Jurats whom he chose were four new faces, Robert Marden, Robert Wymond, William Mede and Robert Woode, the last three close associates in the struggles of the preceding years when they were all listed in the heresy accusations made by Inold's supporters. Robert Wymond also became a churchwarden in September; and Alexander Welles once again became Town Clerk, another of Byrchett's associates, Richard Rucke, being elected as one of the two Chamberlains (often a first step towards becoming a Jurat).[41]

The Rye Protestants' triumph coincided with the height of Cromwell's campaign against continuing traditionalist dissent at the break with Rome, and incidentally mirrored similar election results in other south-eastern municipalities including Canterbury, Sandwich and other Kentish towns.[42] The new mood was reflected in the chamberlains' accounts for Byrchett's first term in which are to be found letters from Henry VIII directed via the Lord Warden (18 March 1539) to Rye and other ports together with detailed instructions from Christopher Hales to the Kentish J.P.s for the more rigorous enforcement of the Royal Supremacy against, in particular, clerical 'mayntenors of the Bysshop of Rome's usurpyd and feynyd autorytye wyth all hys papysticall supersticions and abuses'.[43]

The new determination to enforce the Henrician church settlement was marked in Rye by the treason trial of Randall Bell, capper of Rye or Lewes, who was tried by a special commission of Oyer and Terminer at Rye on 13 September 1539 before Thomas Byrchett, Mayor, the Attorney-General, Sir John Baker, and five other judges, on a charge arising out of disturbances committed during divine workship in Rye parish church a month earlier. On that occasion (15 August — the Feast of the Assumption — it can hardly have been coincidental) during high mass and in the presence of the Mayor and Jurats, Bell, with his cap on his head, ascended the chancel to the north side of the altar at the time of consecration, and immediately prior to the elevation proceeded to the middle of the altar 'and dyd offer to cacche and take the sacrament vyolently out of the prystes handes callying the pryst false knave and sayd thow cannyst nott make God'. The deacon trying to restrain him, he drew his dagger and 'dyd speke many raylying wordes' whereupon Robert Wymond, Jurat, left his seat and commanded him away to prison. Examined that same evening by the Mayor together with two conservative Jurats and two reformists, John Fletcher, John Swanne, Robert Wymond and Alexander Welles, Bell justified his actions indicating that 'he was commaunded to do (so) by the kynges councell namying therle of Shrewsbury and the Lord Montacue'. Both were indeed prominent conservatives opposed to Cromwell's (and the King's) policies. But both were also dead, Lord Montague executed for treason the previous December; and Shrewsbury having shortly pre-deceased him from natural causes.[44] Bell's naming of these men is therefore distinctly odd, though there can be no doubt of the chronology of events. Next day, significantly, Bell was examined by the Mayor and four members of the Protestant faction alone — Robert Wymond and Alexander Welles being joined by Robert Woode and John Raynolde — and on this occasion he went on to say that 'the Churche dyd stande awry' and 'not as Cryst dyd leave yt but ys nowe removyd in that the pope ys refusyd to be hede of the Churche and therfore there cann be no salvacyon nor any due mynystracyon of the Sacramentes and other rytes of the Churche untyll

the pope be hede of the Churche ayene . . .' It was evidently decided to make an example of Bell, for early in September he was sent to London to be examined by the Council, subsequently being returned to Rye to stand trial.[45]

Apart from measures against public religious dissent, the two years of Byrchett's Mayoralty saw a number of changes within the church itself. Although counselling caution, especially with regard to the conducting of services in English until the King's further will was known, the Bishop of Chichester, writing in July 1538, promises Alexander Welles that Inold's replacement would be an honest man 'who I trust, will preach the word of God purely, and be a means of quietness'.[46]

Caution was certainly a keynote of the new administration for when in January 1540, a certain Lyndesey anticipated events somewhat prematurely by removing a number of candlesticks from the Church, it was ordered that he replace them forthwith 'and ther in the Churche they shall remayne wyth such other goodes to thusys before assygnyd that ys to them that gave unto yt frelye'.[47] However, there was to be no return to the days of Inold's overt traditionalism; a single leaf from one of the church's fifteenth century antiphonals (for the feast of St. Sylvester and the Circumcision) endorsed 'Thomas Birchett, mayor, 31 Hen. VIII' and used to wrap the plea rolls of the Court of Record for that year bears witness to that.[48] And the basic attitude of the administration can be seen in Byrchett's letter to Cromwell justifying his policy of discrimination against foreigners and denizens resident in the town not only on the grounds that they were taking work away from local men, but also that in the event of invasion they might prove dangerous because of their 'Romanist' sympathies.[49]

April 1539 saw the election of a new Parliament, the eighth of the reign. For the first time, Rye was represented by two committed Protestants: the Mayor, Thomas Byrchett, and William Mede, Jurat.[50] It was, however, Thomas Cromwell's last Parliament, passing the attainder against him and being dissolved on 24 July 1540, the day after his execution. Rye, as elsewhere, succumbed to the reaction which followed, and in August 1540 John Fletcher (in his absence) was once again returned as Mayor.[52] The following year, Inold returned to Rye, not as curate, but as Vicar, presented by the King, the new patron of the living since the dissolution of Stanley Abbey in 1538.[52] The entry marking his death in the Rye burial register in March 1545 notes he was then also Dean of Battle and Vicar of Boughton, Kent — an indication of the extent both of Inold's personal rehabilitation, and also of the shifting nature of royal policy.[53] However, even before his death Protestant fortunes were once again in the ascendant, both nationally, with the King's sixth and final marriage to Catherine Parr, and locally with the election in 1545 as representatives to Henry VIII's last Parliament of Alexander Welles and Robert Wymond, Welles having been made a Jurat two years previously.[54] In Rye itself, another indication of the changed direction was the decision by Mayor and Jurats in 1546 to sell off 'certen plate of the churches' for which they received £16 4s. 10d., the sum entered in the chamberlain's accounts for 23 May of that year.[55]

THE EDWARDIAN REFORMATION: 1547–53

The accession of Edward VI on 28 January 1547 marked the start of a thoroughgoing Protestant transformation of the English church. The new direction was first felt in Rye in July, when the Crown presented Edmund Scambler to the Vicarage, vacant since the death of Inold's successor, Thomas Chapman S.T.D. Scambler, a committed Protestant, was later to be married in Rye church (15 December 1552). Deprived under Mary, he went to London,

organising clandestine Edwardian services until the accession of Elizabeth brought him a Bishopric.[56]

Scambler's appointment provided a fresh impetus to reform, which on this occasion in Rye was remarkably slow in getting off the ground. However towards the end of the financial year Michaelmas 1546–7 the churchwardens' accounts provide an indication of the turn of events with the entry for the receipt of 4s. 8d. paid by Mr. Brychett and John Davison 'for iii tables that *the idolles* stode in at the Hiegh Aulter'.[57] Thereafter the progress of the reformation can be followed in the many entries in the Rye churchwardens' accounts, which are particularly full for the ensuing decade.

That Michaelmas, John Sharpe and John Hynxsted entered into the first year of their churchwardenship and events began to move in earnest. On 26 December, the church paid Alexander Welles, Jurat, 26s. 8d. for the two Bibles which he had supplied.[58] Shortly afterwards, a number of items of expenditure indicate the changes in the church fabric which were taking place at this time. On 10 March 1548 the pulpit was repaired; the damage incurred by the removal of the altars was made good (12 May) and the rood loft was removed (22 July). That same day a lock was bought for the poor box which had been set up, and two chains for the Bible and Erasmus's *Paraphrases* (the latter obtained by Richard Augar, curate, on 22 May) were paid for on 6 June.[59] The spring and summer also showed an increase in prosecutions by the municipal authorities for illegal gaming.[60] However, the main political changes within the town had yet to come.

On 25 August 1548, Thomas Byrchett, by now the father-figure of Rye Protestantism, assumed the Mayoralty for the third and last time. His nomination by the Lord Protector in a letter dated 18 August urging his election as a 'veary honest, wise and discrete man . . . by whom we be assured dyvers waies the same town shall have good order and rule'[61] indicates the importance with which Byrchett's election was viewed by the government. This was further emphasised when later that autumn Protector Somerset included Rye in his itinerary during a progress through Kent and East Sussex.

Once again Byrchett's election heralded a major Protestant advance amongst the civic office-holders. Amongst the twelve Jurats which he chose at the beginning of his mayoralty were three newcomers to the bench, all close associates from the struggles of the previous decade: William Wymond, Richard Rucke and John Raynolde. Later, during the year, following the deaths of two Jurats from his party, he added two more, John Younge and Gabriel Adams.[62] Three weeks after Byrchett's election, at an Assembly on 16 September, the Protestant faction made a further advance, the Sexten, Thomas Searles, being 'avoyded out of his office' to be replaced by one more sympathetic to reform, Peter Jamys. At the same time it was agreed 'that the vestments and juelles of the Churche shalbe by the said electors at their disposicion; and for makinge of the Table of the Commynion at their discretion'. A further Assembly on 29 September confirmed John Sharpe and John Hynxsted in their Churchwardenship for another year.[63] Their accounts for that year (Michaelmas 1548–9) record the sale of church plate which followed:

Fyrst receyved in moneye for ye Crosse ..... £52 15s.
Receyved more of Mr. Byrchett Maior & Wulphen ..... £18 10s.
Receyved more for certeyne laten solde ..... £ 5 10s.
Receyved more for gylte plate liii ounces at 5s. thunce ..... £14 4s. 8d.
Receyved for plate parcell gylte xli ounce and di at 4s. 10d ..... £10 1s. 5d.
Summa £101 1s. 1d.

A portion of this money went towards further church expenses incurred as a result of the reforms. Thus 27s. 4d. was spent on various service books, £13 10s. on painting the inside of the church, £4 for painting where the rood loft had been, 6s. 4d. for the provision of a communion table and 33s. 4d. *'for clensying ye chaunsell from poperye'* — a choice of language indicative of the current mood.[65] However, the bulk of the proceeds seems to have been expended on secular projects, the items being listed, unusually, in the two pages of accounts which followed. Part went on expenses towards the costs of the new conduit, bringing fresh water to the top of the hill on which Rye stands. But the major item was the £32 16s. expended in Parliament wages to Rye's two representatives at Edward VI's first Parliament, Alexander Wellys and George Raynoldes.[66]

The surviving records show a surprisingly close and effective relationship between Somerset's administration and the Rye municipal authorities during this year. Rye's M.Ps secured an act of Parliament (2 and 3 Edward VI c. 30) enabling the Mayor and Jurats of Rye (and Winchelsea) to regulate the dumping of ballast by ships in the Camber and fine offending masters.[67] They also (unsuccessfully) preferred a bill to protect Rye's supply of timber from depredations due to the iron industry and secured a new book of fines (i.e. local customs tolls).[68]

The occasion of Somerset's visit afforded an opportunity for the presentation of a petition requesting the use of the stone from Camber Castle (already obsolete, only ten years after its construction because of the rapid silting in the haven) for a number of town projects including the lengthening of the town jetty.[69] Perhaps it was deliberate policy to encourage open access in this way, as a further means of stabilising the regime. Certainly Byrchett and his colleagues displayed a striking activism and persistence in their pursuit of the town's interests. Thus Robert Cooke, the former abjured heretic, received his freedom at an Assembly on 4 May 1549 'in recompense of his paynes and charges bestowed in the delivery of a letter to the Lorde Protectoure's grace concernenge our conduites', while in addition to the town's further supplication for the stone from Camber Castle, there was yet another supplication to Somerset 'for puttynge downe the iron mylles' in June 1549. Such corporate activity was clearly deliberate policy, and mirrors similar projects in other towns at this time, demonstrating a conscious attempt on the part of Edwardian Protestant regimes to revive mercantile fortunes through increased municipal enterprise.[70]

After such a spate of activity, the Mayoralty of Thomas Fletcher (1549–50) was relatively uneventful. There is a notable dearth of new developments mentioned in the churchwardens' accounts for that year. Nor are there any indications of special activity in the chamberlains' accounts (the records of Assemblies and Hundreds, so full for 1548–9 are virtually non-existent henceforth until 1554, though thereafter they form a continuous series).

The year 1550–1 saw the election of Richard Rucke, one of Byrchett's associates from the 1530s as Mayor, marking the further progress of reform. Payments by the churchwardens included 12s. 4d. to Mr. Welles for a Psalter, four paper books 'for songes for the churche' and 'one boke for the Communyon and of the hole services' — the introduction of the first Edwardian Prayer Book. Another Bible was bought from London at a cost of 12s. plus 3d. carriage, and receipts for the year included 6s. for 'pecis of Copis' bought by Thomas Fletcher during his Mayoralty and proceeds from the sale of a silk stole and quantities of lead and iron from the former site of the Friars.[71]

The same year the site of what came to be known as Welles's Almshouse was granted to the Mayor, Jurats and Commonalty, in perpetuity for the building and maintenance of 'a house

and . . . garden . . . for the poor of Rye, i.e. the elderly, the sick, the dying, the senile and the debilitated'.[72] The project evidently attracted widespread support since bequests to the Almshouse figured prominently amongst the charitable provisions of a number of wills during this time, including the bequest of several pairs of sheets, three beds, blankets and seven 'loodes of logges', together with various sums of money including £5 from William Wymond, Jurat (1551) and £6 13s. 4d. for a new chimney and extension made some years later by George Raynolde (1577) during whose Mayoralty the land had been taken over by the corporation.[73]

A further development that year was the decree by the Mayor and Jurats on 1 March 1551 'that from the fyrst of Marche next comyng no bruer in thys towne make any bere callyd dubble dubble payne of fyve markes and that no typler after the vi of Marche next sell any bere above the pryce of ob (½d.) the quart payne of iiis. iiiid.' Presumably 'dubble dubble' was felt to be too strong to be acceptable to the current Protestant moral sobriety, though 'syngle' and even 'dubble bere' continued to be tolerated. No doubt there were limits as to what public opinion and local drinking habits could be expected to stand![74]

The churchwardens' accounts for 1551–2 recorded further changes within the church itself. The chancel was again white-limed, John Wheler the painter receiving payment not only for this but also for painting 'iii Tables in the church', presumably of the Scriptures, since soon after he was paid 'for writing of ii tables in Our Ladies Chaunsell and for mending of the Ten Comaundementes and for dyvers other places in the scripture in the Church' for which he received a total of 53s. 4d. *A Homily Book* and another edition of Erasmus' *Paraphrases* were obtained the same year, for 16d. and 6s. 8d. respectively, and in January 1552 another Bible was bought, this time 'of the largest volume' to be placed in the choir at a cost of 33s. 4d. to be followed in July by the purchase of a second *Book of Homilies*. Early that autumn the town was visited by the Attorney-General, Sir John Baker, who no doubt observed the recent changes.[75]

Weekly payments for bread and wine for communion began on 6 November, an innovation which lasted little more than a year before the change of regime brought about the reintroduction of the Mass. On 8 December the accounts record the purchase of a copy of the second Edwardian *Prayer Book* at a cost of 4s., a second copy being purchased shortly after Christmas 'at Strand gate of a stacyoner there' for 3s. 4d.[76] Its use was however extremely short-lived, for the reign of Edward VI was drawing towards its close.

The 27 May 1553 marked the final phase of the Edwardian Reformation, with the payment of 5s. 6d. that day to cover the expenses incurred by the churchwardens together with Thomas Byrchett, in riding to Hastings to appear before the King's Commissioners there, presumably with their inventory of remaining church plate. That July, Bishop Scory visited Rye; but by then Edward VI was dead, and it was to be only a matter of time before the new Queen began to impose traditional orthodoxy once again on the English Church.[77]

REACTION AND RESISTANCE: MARIAN RYE 1553–8

News of the death of the King reached Rye on 27 June. On 21 July a servant of Sir Robert Oxenbridge brought a copy of the proclamation of Mary as Queen. Events began to move with increasing rapidity as the Queen sought to impose her new policies on the nation. On 3 September the writ for the election of two burgesses to Mary's first Parliament arrived from the Lord Warden, followed two days later by the proclamation 'that none shuld call other herytiquek or papist', reflecting the Queen's desire, at least initially, for moderation in the

process of restoration of the old order.[78] That the old order was to be re-established was however never in doubt.

The Edwardian services were evidently still in force in Rye until mid-December 1553, when, as a result of Parliament's repeal of the Edwardian legislation (with nearly one-third of the Commons voting against), the Prayer Book services lost their legal sanction and ceased.[79] On 12 December a Mass Book was obtained, a second copy being bought eight days later. Vestments were acquired and an altar set up. On 29 December the Queen's proclamation for the restoration of the Mass was brought to Rye, to be followed by the further proclamation on 7 January 'that no man shuld speke any wordes against the quenes maiesties procedinges'.[80] At about the same time the Rye churchwardens and sidesmen travelled to the annual visitation at Hastings (an item for their expenses appears dated 10 January) at which they were presented with a list of 80 articles and injunctions to which they had to prepare a written bill to be delivered again to Hastings, to the Bishop's Commissary there.[81]

They had already had to prepare an inventory of their church goods the previous October. Now, within a matter of days of the visitation the Rye churchwardens' accounts show payment (21 January) for two Graduals, one Manual, four Processioners, three Antiphoners, three Psalters, two Hymnals, one Mass Book, one Legend and 'ii other bokes for the quyere' and 'for the bringing of them at ii tymes' at a total cost of some £8 16s. 8d. At about the same time two candlesticks were brought for 5s. and a sacring-bell for 6d.[82]

The restoration of catholicism in Rye did not come about without a measure of local opposition, however, for on 18 January the Vicar of Rye 'and diverse other of thinhabitauntes there' were ordered to appear before the Privy Council. Those summoned included not only Edmund Scambler, but also Thomas Byrchett, Alexander Welles, John Younge and other leading Protestants, who 'being admonisshed by the Lordes to live hereafter like good and quiet subjectes, upon hope they will so do were . . . dysmissed of thier further attendance' on their appearance on 20 February[83]. Shortly afterwards, Edmund Scambler was amongst those clergy deprived of their benefices for marriage.

The familiar cycle of traditional festivals was now fully restored. A number of payments to workmen, including those on 21 April 'to certen men to help uppe the Aulter Stone' and for 'iii daies working uppon the Aulter and the Steppes' indicate the preparations being made for the full-scale restoration of the Easter ritual. For the first time since the accession of Edward VI payments were made for the setting up of the Easter Sepulchre for the traditional vigil, for a paschal candle, coals and incense and for a pair of censers (4s.). Other expenses during the year to Michaelmas included the provision of a holy water stoop at Whitsun and two payments indicating the buying back of goods formerly belonging to the church as the Cross, censer and chrismatory 'withe other implements belonging to the Churche' for which William Parterege was paid 25s; and 'the herse clothe of vellvett and gold' for which the churchwardens paid Mr. Barnes 45s.[84] On 20 August, on behalf of the queen, Sir Richard Sackville presented John Browne to the Rye Vicarage, vacant by virtue of Scambler's deprivation. When Bishop Day visited Rye that summer (probably for the induction) the Rye incumbency was once again in the hands of a clerical conservative.[85]

1555 showed that the Protestant opposition could still muster considerable local support when the occasion arose. That August Richard Fletcher was re-elected Mayor for a second term. But at the Session held on 6 October to elect Rye's two representatives at Mary's fourth Parliament, the commonalty chose John Younge, Jurat, in what can hardly have been other than a calculated gesture of defiance, though they prudently left the choice of the second

member to the Lord Warden.[86] Younge had been one of those summoned before the Council in January 1554 and he was undoubtedly well-known to the authorities for his close association with the local Protestant faction since the 1530s. The overturning of Younge's election can therefore hardly have come as any surprise in Rye,which found itself represented once again by John Holmes, port controller and M.P. for Rye in the three previous Marian Parliaments, together with an outsider, Sir Reginald Moone.[87]

1556 marked a concerted governmental effort to reassert its authority. In June, a special court presided over by the Mayor and Jurats sitting exceptionally with John Browne the traditionalist Vicar ordered William Scragge, cutler, to appear before Bishop Day and the other royal commissioners at Lewes on the 18th to answer various charges against him, his two bondsmen including William Gibon, another of those leading Rye Protestants who had earlier appeared before the Council for their religious opposition.[88] Possibly the charges against Scragge were connected with proceedings against Thomas Ravensdale, the only known Rye inhabitant to have been burned for heresy during the reign.[89] Whatever the reason, shortly thereafter, Thomas Lamb, one of the Rye curates was summoned to London, appearing before the Council in late June or early July 'for the Churches matters'. Immediately afterwards, the churchwardens and sidesmen were summoned to Lewes 'apperying before my lorde bysshope and the other Commyssioners the xvth of July'.[90]

In August, Bishop Day again visited Rye, staying at the Vicar's house. Possibly shortly after this visit, or perhaps before, Lamb had to make another journey to Lewes 'for an answer of my lord bysshope'.[91] Unfortunately, the records provide little more than a bare chronology, but clearly something serious must have occurred to merit this degree of interest by both the church authorities and the Privy Council.

A further indication of the concern felt at events in Rye was the letter sent by the Privy Council on 15 August for the election as Mayor for the ensuing year of George Raynoldes 'the Quenes Majesties servant, whose service shalbe to thadvancement of the common wealthe and benefite of that towne'. He was duly elected Mayor a fortnight later.[92] Inside the church, 1556 saw the rebuilding of the altar in Our Lady Chancel, followed early the following year by the re-erection of the Rood Screen and the obtaining of Images from London.[93]

In 1557 the Privy Council again nominated George Raynoldes as Mayor, he having, according to their Lordships' information 'behaved himself well in that offyce and is like to doo so agayne'. However, the Rye electors clearly thought otherwise, for at the end of August 1557 they returned Alexander Welles as their Mayor. The death of Thomas Byrchett the previous October had left Welles, who had combined the powerful position of Town Clerk with that of Jurat since 1553, as the effective leader of the Protestant faction. His election to the Mayoralty in defiance of the Privy Council's instructions was therefore clearly unwelcome and, on 7 September an Assembly authorised 'Mr. Mayor, Mr. Flecher and certen of the commons' to ride up to London at the expense of the town 'to answere the councelles letter brought done by Mr. Raynoldes for the eleccon of the Mayor', it being added in the margin 'an evill presidente'. Between that date and the following 23 April when he was paid a total of £31 6s. 8d. expenses, Alexander Welles had to travel no fewer than four times to appear before the Council to 'answere certen pointes of our charter'. In mid-October 1557 he spent six days in the Fleet after leading the local opposition in Rye to the latest forced loan (to finance the war with France), being finally released on 21st 'having a good lesson given to him to beware of the like disobedience hereafter'.[94]

Welles's election to the Mayoralty in 1557 coincided with the replacement of the two

previous churchwardens that Michaelmas by Robert Bennett, newly selected as a Jurat by Welles, and Robert Fowler. Both men were committed Protestants, so their election can scarcely have been coincidental, any more than can Welles's choice in the appointment of three new Jurats on 5 September. At an Open Hundred held that day, in addition to Robert Bennett, an old associate from the struggles against Inold, Welles elected as Jurats William Egliston and Robert Marche, the former a Winchelsea man and a staunch Protestant, having only been made free earlier that same day.[95] On 9 December at the election for Rye's representatives to Mary's last Parliament Thomas Fletcher was chosen a member, the first time since March 1554 that one of Rye's M.Ps was a Jurat. The restoration of both seats to members of the Rye corporation had to wait until the first Elizabethan Parliament just over a year later.[96]

In August 1558 Bishop Christopherson visited Rye, the last incidence of outside interest in Rye's affairs during the reign. Later that same month Alexander Welles was re-elected Mayor. In November the new Queen was proclaimed and the dismantling of the Marian structure in church and state soon followed. The altars came down again that spring and from 10 December 1559 the weekly payments for bread and wine resumed, indicating the restoration of the Prayer Book services.[97]

Of those who had led the long struggle to establish the Protestant faith in Rye, few were alive to see its final triumph. Of the 19 associates involved in the initial confrontation with William Inold, at least 14 were dead, including in the years 1556–8 four of the leading members of the group: Thomas Byrchett, Richard Rucke, Robert Woode and lastly Alexander Welles himself, dying in office less than three months after his election to a second term as Mayor. His death coincided with the accession of the new Queen, for he was buried in Rye church on 21 November 1558, only four days into the new reign. His religious books he left to remain in the Vicarage in perpetuity; and his books of precedents and other legal works associated with his Town Clerkship he gave to his successor in that office, Robert Jackson. He was succeeded as Mayor by one of his few remaining old associates, John Younge, who took office on the day of his burial and whose Mayoralty marked the beginning of Elizabethan Rye.[98]

CONCLUSION

The extent and scope of the surviving corporation and other records relating to Rye provide a wealth of detail unavailable for any other East Sussex town during the formative years of the English Reformation. In particular, the existence of the two lists of leading members of the rival factions in the 1530s enable the identification of almost all the main contenders during the struggle for control of the corporation which followed. With the affiliations of all but a small minority of the Rye Jurats known, the broad outlines of the swings of the political pendulum are clear.

As Table 3 demonstrates, from the election of Thomas Byrchett as Jurat and Alexander Welles as Town Clerk in 1535, the Protestant minority went on to capture the mayoralty in 1538–9. Through appointments to fill existing vacancies among the Jurats on that occasion, Byrchett's faction moved into a position of near numerical equality with their opponents. Having acquired political control under Thomas Cromwell's patronage in these years, the reformist faction found themselves out of favour and out of office upon his fall. The reverse of the early 1540s, like the advances of 1538–9 followed the national trend, a similar pattern being found by Clark in Sandwich, Canterbury and other Kentish towns.[99]

TABLE 3
Affiliations of Mayor and Jurats of Rye 1535–58

Year	*C*	*R*	*U*	*Total*	*Mayor*
1535	8	1	4*	13	James Jetter
1538	5	4*	4	13	Thomas Byrchett
1541	6*	4	4	13	John Fletcher
1542	6	4	3*	13	Alexander Wulphyn
1548[1]	3	7*	3	13	Thomas Byrchett
1549	5*	5	3	13	Thomas Fletcher
1551	5	5	2*	12	George Raynoldes
1552	4	5	3*	12	George Raynoldes
1553	4	6*	3	13	Richard Rucke
1554	4*	6	3	13	Richard Fletcher
1555	4*	6	3	13	Richard Fletcher
1556	4	5	3*	12	George Raynoldes
1557	4	6*	3	13	Alexander Welles
1558	4	5*	3	12	Alexander Welles/John Younge

Source:
Rye Chamberlains' Accounts (RYE 60/5–7)

Notes:
C Conservative R Reformist U Uncommitted/Unreliable

* denotes party of Mayor
[1] Subsequent elections to fill vacancies caused by the death of two Jurats left the relative strengths of the factions unaltered.

By the mid-1540s political fortunes were again reversed, as evidenced by the election of Wymond and Welles, both Protestants, to Henry VIII's last Parliament in 1545. The main change in the composition of the magistracy came in 1548, when Thomas Byrchett again used existing vacancies to strengthen Protestant representation amongst the Jurats. For the first time there was a clear reformist majority. The death of two of Byrchett's associates during the year however provided further vacancies which he was anxious to fill with his own nominees, the election taking place on 19 August 1549, only two weeks before the end of his term, a piece of sharp practice which did not go unnoticed by the incoming mayor, Thomas Fletcher, who would normally have expected to fill the vacancies himself. His protest is entered in the Chamberlains' Accounts Book under the names of the two new Jurats in the words 'but not allowed by Thomas Fletcher bycause yf chose these mo then xii'. Nevertheless, they were duly sworn.

Upon his own election as Mayor, therefore, Fletcher retaliated by refusing to reselect one of the newcomers, Gabriel Adams, and throwing off Alexander Welles into the bargain, replacing them both with conservative nominees of his own, one of them his brother, Richard.[100] Adams returned at the next vacancy in 1551, Welles having to wait until 1553 even though one of the Juratships had been empty for two years previously. Welles, however, was re-

appointed Town Clerk in 1549, a post elected by the freemen rather than chosen by the Mayor. It was not until the election of Richard Rucke in 1553 that the situation was fully restored.

The reversal of policy under Mary inevitably had its repercussions on the Mayoralty, Richard Rucke being succeeded by Richard Fletcher and then by George Raynoldes, who had evidently successfully adapted himself to the new regime. However, the election of Alexander Welles in defiance of the Council's renomination of Raynolde showed the underlying support which the Protestant faction had retained.

The years 1557–8 marked a transition from the personalities and issues of the previous two decades. During these two years, the Marian reaction encountered increasing opposition and in Rye at least was faltering well before the accession of Elizabeth. At the same time epidemic and old age removed many of the leading protagonists of the Reformation period, of both factions. With the election of eight new Jurats between August 1557 and August 1559, the personnel at the centre of Rye politics had been almost completely replaced. The newcomers were such however that the Bishop of Chichester in his return to the Privy Council in 1564 had little doubt that Rye (and other East Sussex towns) was now firmly 'governed with suche officers as be faythfull favourers of goddes worde and earnestly given to mainteyn godly orders'.[101] The struggles of the previous decades had given way to a new Protestant establishment.

Events in Rye demonstrate the complexity of political and religious events in the mid-sixteenth century. At the local level, the struggle for control of the corporation did not stem only from religious divisions amongst the political class. There was also a powerful element of personal ambition and factional rivalry providing additional motivation, usually but not always reinforcing the religious/political divide. National decisions provided the framework within which the local contest was fought out, Privy Council decisions on a number of occasions determining its temporary outcome, most notably over the election of Mayor. The relationship was however not entirely one of master and client. The persistent and successful pursuit of the town's economic interests by its Protestant leaders in 1548–9 provides an example of the considerable skill and influence which many local politicians had at this time. The rejection of the Privy Council's Mayoral nomination in 1557, at some cost to the town, further indicates the extent of local political independence which could exist. Nor could the English Reformation be carried through by mere government dictat. With the enforcement (or otherwise) of government decrees dependent upon local magistrates, whether country J.Ps or urban Jurats, a powerful brake on central government existed which could be and was regularly used by local politicians. Examples of this in Rye include the protection of Inold in the mid-1530s and the persistence of the opposition to Marian policies some 20 years later. The progress of events in Rye reveals the complex interrelationship between central government policies and their local implementation which goes far to explain many of the contradictions and compromises which made up the English Reformation.

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Footnotes

[1]Rye was returned as having 530 households and a population of 2,468 in 1565, 'after a decade of massive epidemic mortality'; Public Record Office (hereafter referred to as P.R.O.), SP 12/38/28 quoted in C.E. Brent, 'Employment, Land tenure and population in Eastern Sussex 1540–1640' (unpublished D. Phil thesis, University of Sussex, 1973), hereafter referred to as Brent, thesis, 326.

[2]Rye Custumal, especially clauses 1–6: East Sussex Record Office (hereafter referred to as E.S.R.O.). Rye Corporation MS. (hereafter cited as RYE) 57/1/39v.

[3]Brent, thesis, 309 ff. Probate records of Lewes Archdeaconry Court: E.S.R.O., wills registers, W/A 1–4, W/C4.

[4]From list of Maltodes in force at Rye, 8 September 1550, RYE 57/1/67, and scale of charges for the new storehouse at Strand, 7 December 1555, RYE 1/1/4v.

Cf. C. E. Brent 'Urban employment and population in Sussex between 1550 and 1660' (hereafter referred to as Brent, article), *Sussex Archaeological Collections (S.A.C.)*, 113 (1975), esp. 37–9, and Brent, thesis, 296 ff.

[5]RYE 1/1/40v–41r.

[6]Brent, article, 41–2.

[7]RYE 60/6/2r–6v. There is a further copy of the 1524 Ordinances in the Entry Book of Decrees, RYE 57/7/4–5. For a fuller discussion of the Rye fishing industry and a different interpretation of the 1524 Ordinances, see A. J. F. Dulley, 'The early history of the Rye fishing industry', *S.A.C.*, 107 (1969) 36–64.

[8]*Letters and Papers, Foreign and Domestic, of the Reign of Henry VIII*, ed. J. Gairdner et al., (hereafter referred to as *L.P.*), 14, pt. II (1895), no. 349.

[9]The writs for his execution by burning in Rye Market place dated June 1535 are entered into the Chamberlains' Accounts, RYE 60/5/266–7. The sum of 16s. 8d. expenses 'for fetchynge the heretyk from London' is entered for the same year, RYE 60/5/278v.

[10]John Foxe, *Acts and Monuments* (ed. Rev. J. Cumming, 2 (1875), 724–7; P. Collinson, 'Cranbrook and the Fletchers: Popular and unpopular religion in the Kentish Weald', in P. N. Brooks ed., *Reformation principle and practice* (1980), esp. 176–7.

[11]*L.P.*, 4, pt. II (1872), no. 4017; *L.P.*, 9 (1886), no. 1424.

[12]C. E. Welch: 'Three Sussex heresy trials', *S.A.C.*, 95 (1957), 59–70.

[13]W/A 3/100.

[14]See my forthcoming article 'The progress of the Reformation in East Sussex 1530–59: the evidence from wills, in *Southern History* 5 (1983), based on E.S.R.O. W/A 1–4 and W/C 4. For the Elizabethan period see e.g. Collinson, 194–6 and R. B. Manning, *Religion and society in Elizabethan Sussex* (Leicester, 1969), 76–8.

[15]*L.P.*, 12, pt. II (1891), no. 505. The events leading to Inold's removal, contained in correspondence preserved amongst the State Papers (P.R.D. SP) have been detailed in G. R. Elton, *Policy and police* (1972), 85–90.

[16]SP 1/113/106–9; SP 1/124/21.

[17]For a discussion of the role of preachers licensed by Cranmer in spreading Protestantism in Canterbury diocese including Cinque Port towns, such as Sandwich, see P. Clark, *English provincial society from the Reformation to the Revolution* (1977), 38, 60 ff hereafter referred to as *English Provincial Society*; also P. Clark: 'Reformation and radicalism in Kentish Towns c. 1500–1553', in *The Urban Classes, the Nobility and the Reformation*, Publications of the German Historical Institute, 5 (1979), (hereafter referred to as Clark, article), esp. 114–5.

[18]*L.P.*, 4, pt. II (1872), no. 4627; *L.P.*, 7 (1883), no. 449; Foxe, 2 (1875), 348–9.

[19]RYE 147/1/92v–93r, 106r; RYE 1/2/1v; RYE 60/6/165v; *Acts of the Privy Council of England*, ed. J. R. Dasent (hereafter referred to as *A.P.C.), 1542–7* (1890) 108–9, 115.

[20]E.S.R.O. AMS 2323; RYE 33/7/59–71; RYE 1/2/16r; *H.M.C. Report*, 13, Appendix IV (1892), 52.

[21]Prerogative Court of Canterbury wills registers now in P.R.O. PROB 11/21/11; PROB 11/38/21 (Thomas Byrchett jr.).

[22]PROB 11/42A/1 (Welles); PROB 11/49/14 (Bennett); PROB 11/33/11 (Raynolde); PROB 11/48/11 (Younge).

[23]PROB 11/33/11; PROB 11/42B/11 (Johanne Welles); W/A3/100.

[24]*A.P.C., 1542–7*, pp. 108–9, 115.

[25]PROB 11/33/11; W/A 4/39 (Rucke); W/A 1/44 (Mede).

[26]W/A 1/44; PROB 11/33/11; W/A 4/39; PROB 11/40/39 (Woode); PROB 11/38/21; PROB 11/42A/1; PROB 11/48/11; PROB 11/49/14.

[27]Richard Ynglett, John Swanne, Richard Nycoll, William Johnson, Robert Maycott and John Cornysshe, fishermen; Clement Cobbe, butcher; George Mercer of Hawkhurst Place, John Marche, William Byspyn, William Oxenbrydge of Brede, held lands outside Rye; John Fletcher and his two sons, Richard and Thomas, also held lands, but are usually found described as merchants. Lists of ships' masters in churchwardens' accounts RYE 147/1/92v–93r, 106r. For Rye ships involved in the Boulogne expedition, see *L.P.*, 20, pt. II (1907), no. 27 (ii). For evidence of recent immigration and landholding interests outside Rye, see W/A 1/77 (George Mercer); W/A 5/206 (Nicholas Mercer); PROB 11/39/24 (Cobbe); PROB 11/43/2 (Maycott); PROB 11/29/24 (Marche). For the Oxenbridges, see *Visitations of Sussex*, Harleian Society, 53 (1905), 14–15.

[28]PROB 11/25/25 (William Byspyn); PROB 11/23/10 (John Wymond); RYE 147/1/78r; SP 1/124/21. For a list of Mayors of Rye, see L. A. Vidler, *A New History of Rye* (Hove, 1934), 159.'

[29]J. Collard. *A Maritime History of Rye* (Rye 1978), 18–19. For details of Fletcher's employment as a sea captain on behalf of the crown, see *L.P.*, 4–20 passim.

[30]W/A 1/102–3 (John Fletcher), another copy is registered PROB 11/43/32 (1560); PROB 11/44/10 (Richard Fletcher).

[31]PROB 11/43/32; PROB 11/44/10; W/A 1/59 (Ynglett); W/A 1/23 (Swanne); PROB 11/42A/18 (Johnson).

[32]Entries in Rye parish register, E.S.R.O., PAR 467 1/1/1; PROB 11/29/24; W/A 1/204 (Nycoll).

[33]W/A 1/59; W/A 1/204; W/A 1/77; W/A 5/206.

[34]*L.P.*, Addenda, 1, pt. I (1929), no. 739; *A calendar of the White and Black Books of the Cinque Ports 1432–1955*, ed. F. Hull (1960), (referred to hereafter as Hull, *Calendar*), 214–5, 217–8, 223.

[35]*L.P.*, 14, pt. II (1895), no. 341.

[36]*L.P.*, 14, pt. II (1895), no. 546.'

[37]W/A 7/67

[38]RYE 60/5/283r.

[39]Hull, *Calendar*, 233; RYE 60/6/27r; W/A 2/9.

[40]W/A 1/204; RYE 33/10/1v.

[41]*L.P.*, 12, pt. I (1890), no. 1150; RYE 60/5/335v.

[42]Clark, article, 119 ff.

[43]RYE 60/6/9–12r.

[44]RYE 12/1–8; J. D. Mackie: *The earlier Tudors 1485–1558* (1957), 396.

[45]RYE 60/5/344v, 356v.

[46]*L.P.*, 13, pt. II (1893), no. 147.

[47]RYE 33/7/58r.

[48]RYE 35/3. According to L. A. Vidler: 'Some leaves of an early service book once in use in Rye Church', *Sussex Notes and Queries*, 7 (1938), 33–5, this leaf together with others similarly used as wrappers for the Rye Court of Record plea rolls for 1550 and 1553–6, were probably taken from service books destroyed as a result of the provisions of the First Act of Uniformity in 1549. However the handwriting on this leaf is quite distinct from that on the leaves used to wrap the later rolls, and its use may therefore be contemporary with the roll it encloses.

[49]*L.P.*, 14, pt. II (1895), no. 349.

[50]Payments for their Parliament wages are entered in

the chamberlains' accounts for 1538–9 and 1539–40 RYE 60/5/344v, 356r.

[51]RYE 60/5/361r.

[52]*L.P.*, 16 (1898), no. 1308 (45).

[53]PAR 467 1/1/1. He was presented to the Vicarage of Boughton Aluph by the College of Wye in November 1537 and had a dispensation to hold a second benefice granted in December 1539. Lambeth Palace Library, Reg. Cranmer, fol. 362v; D. S. Chambers, ed., *Faculty Office Register* (1966) 202. I owe these references to M. L. Zell.

[54]Payments for their Parliament wages were made on 20 November 1545 and 20 January 1546. RYE 60/6/122r.

[55]RYE 60/6/119r.

[56]W.S.R.O. Register Bp. Day 30b. For an account of Scambler's later career, see the *Dictionary of National Biography*, 17 (1909), 885.

[57]RYE 147/1/111v.

[58]RYE 147/1/116r.

[59]RYE 147/1/116v.

[60]Compare for example, the receipts of fines for gaming in 1543–4 with those for 1546–7. RYE 60/6/51, 139.

[61]RYE 60/6/167v, 180.

[62]RYE 60/6/167v. Of the new Jurats, only Gabriel Adams' affiliations cannot be identified with complete certainty. However as one of Byrchett's appointees, objected to and not reselected by Thomas Fletcher in 1549, it seems probable that he was of the Byrchett faction.

[63]RYE 60/6/165v. This was an unusual occurrence. Normally churchwardens were appointed for two years each, one retiring per year.

[64]RYE 147/1/114r.

[65]RYE 147/1/114r.

[66]RYE 147/1/114r and v.

[67]For the draft bill put forward by Rye Corporation, see RYE 99/1. There are a number of examples of prosecutions under the Act: see e.g. RYE 60/7/59r.

[68]RYE 147/1/114r.

[69]RYE 147/1/117r; RYE 60/6/180 ff, 193r, 200v.

[70]cf. e.g. the economic policies of the protestant ruling group at Canterbury in Clark, article, 119.

[71]RYE 147/1/122r, 123r.

[72]RYE 111/1 translation from the Latin. The boundaries of the property given correspond with those of the plot of land bequeathed for an almshouse by John Raynolde in 1548. PROB 11/33/11.

[73]PROB 11/35/8 (Wymond); W/A 3/41 (Dier); W/A 3/130 (Brown); W/A 4/20 (Hope); W/A 4/35 (Ayle); W/A 7/67.

[74]RYE 1/1/32v.

[75]RYE 147/1/124r and v, 127r, 128r, 129r.

[76]RYE 147/1/129v–130r.

[77]RYE 147/1/130r.

[78]RYE 60/7/58r, 59r and v.

[79]RYE 147/1/135r.

[80]RYE 147/1/135r; RYE 60/7 fol 77r.

[81]RYE 147/1/134r, 135r, 136r.

[82]RYE 147/1/133r, 135r and v.

[83]*A.P.C., 1552–4*, (1892) 387, 391, 395.

[84]RYE 147/1/133v, 134r, 135v, 136r.

[85]RYE 147/1/136r; G. S. Butler, 'The Vicars of Rye and their patrons', *S.A.C.*, 13 (1861), 273.

[86]RYE 1/1/38v.

[87]RYE 1/1/31v; *House of Commons Members. Parliaments of England 1213–1702* (1878) 391. The returns of members elected from all of the Cinque Ports to this Parliament were tampered with. From 1554 notices of elections and names of elected members appear in the Assembly Books. Prior to that date MPs can be identified from entries for Parliament wages in the Chamberlains' Accounts. The intervention of the Lord Warden in the elections to Mary's first Parliament in October 1553 had led to a protest from all the Cinque Ports towns which resulted in an uneasy compromise whereby the Lord Warden was usually granted one nomination and individual towns the other: RYE 60/7/59r. For a copy of Cheyney's letter on that occasion, see Winchelsea Corporation Court Book, E.S.R.O., WIN 51/123r. For an earlier attempted intervention (January 1553), see 'Notes from an old record book', 11–13, unlisted MSS amongst the Hastings Corporation Records, held in Hastings Museum, and placed with the earliest Court Books (C/A (d))—quoted in J. M. Baines, *Historic Hastings*, 2nd ed. (Hastings, 1963), 45–6.

[88]RYE 1/1/47r; *A.P.C., 1552–4* (1892) 391.

[89]Foxe, 3 (1875), 947. An entry in the Rye parish register PAR 467/1/1/1 for the marriage of Margery Ravynsdale to Symon Johnsone on 16 November 1559 confirms the presence of a family of that name in Rye at this time.

[90]RYE 147/1/140v, 142r.

[91]RYE 147/1/140v; RYE 60/7/127v, 128r.

[92]*A.P.C., 1554–6*, (1892) 327; RYE 60/7/129r.

[93]RYE 147/1/140r, 144r.

[94]*A.P.C., 1556–8*, (1893) 112, 166, 182, 185, 214; RYE 1/2/6v, 15v.

[95]RYE 1/2/5r and v.

[96]RYE 1/2/7v, 25r.

[97]RYE 147/1/154v, 159v.

[98]RYE 1/2/23v; PROB 11/42A/1.

[99]Clark, *English Provincial Society*, 41–4, 57–9, 67–8.

[100]RYE 60/6/167v, 202r; RYE 33/7/42v.

[101]M. Bateson, ed., 'Collected Original Letters from the Bishops to the Privy Council 1564', *Camden Miscellany*, 9 (1895), 8–11.

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THE RISE OF A GRADUATE CLERGY IN SUSSEX, 1570–1640

by Peter R. Jenkins, B.A.

Novelists may be as responsible as historians for many of our ideas about the past status of the parish clergy. The image of squire and parson dominating a community is strong in accounts of eighteenth-century rural life, the manor house and the parsonage attending to economic and moral matters respectively. Further, until the arrival of doctor and schoolmaster, the parson was the only educated professional man likely to be encountered by most of the population. But this had not always been so, for it was the Reformation and its associated social upheavals that stimulated the rise of a graduate parish clergy. The result was that by 1640 many parishes, including most of those in Sussex, were served by a scholarly minister instead of a merely literate priest as in medieval times.

Several forces acted toward this change. The newly established protestant church sought educated administrators and divines as well as parish clergy able to spread the new theology. Puritans more simply craved a learned, preaching ministry. Both groups saw that their ambitions could be achieved through the recruitment of university graduates and so aided the great expansion of the universities that followed the Reformation. While this was also a response to the needs of common law and civil administration so that the universities became responsible for the shaping of intellectual groups others than the clergy,[1] their older seminary role remained dominant. At least two new colleges, Emmanuel and Sidney Sussex at Cambridge, were founded with the intention avowed in the statutes of Emmanuel of 'rendering as many persons as possible fit for the sacred ministry of the church and its sacraments'.[2] These foundations and many smaller gifts and bequests provided the universities with a new wealth and prestige that was reflected in architectural splendour and numerical expansion. Student entries at both Oxford and Cambridge rose from 150 a year in 1500 to between 400 and 500 by 1600.[3] There was also a tightening of administration as the universities sought to enforce greater social and intellectual control over their students. In turn, the aspiring clergyman saw university education as a great advantage, both in obtaining a parish living and in seeking advancement within the church. Certainly, in Sussex natives of the county who received livings in it in the early seventeenth century were mostly graduates returning from studies outside the county, whereas in earlier times many local men beneficed can only have attended local schools. As this advantage came to be increasingly a necessity, the universities helped to create a new professional clergy by establishing a uniform standard of qualification where before ordination had been almost entirely at the discretion of individual bishops.

However, the clergy have usually been excluded from studies of the history of the professions because they are not concerned with the 'ordinary business of life' as physician or lawyer might be.[4] But in the late sixteenth and early seventeenth centuries the church was very much engaged in the ordinary business of life. Although its basis was spiritual the church married, buried, and proved wills, its courts could often deliver swifter judgements than the civil courts, as an institution it was a major landowner, while through the system of churchwarden's presentments it attempted to keep a watch on the morals of the community. When historians have seen

professionalism in the English church at this time, it has generally been among the élite who occupied the episcopal bench, the offices and chapters of the cathedrals, and who often possessed political influence. Simple clergy lists do not give an overall picture of the state of the clergy which would reveal an increasing proportion of graduates and help to explain its cause. Such a survey would need to be based on records of the installation of clergy to livings across the whole diocese, and fortunately in Sussex (where county and diocesan boundaries largely coincide) these have been reconstructed by Mr. W. D. Peckham.[5]

TABLE 1
Graduates beneficed in the diocese of Chichester, 1601–40

Bishop	*All patronage*			*Episcopal patronage*		
	Priests beneficed	*—of whom graduates of Oxf. & Camb.*	*Graduates as percentage*	*Priests beneficed*	*—of whom graduates of Oxf. & Camb.*	*Graduates as percentage*
Watson[1] 1601–5	89	76	85	19	18	95
Andrewes 1605–9	79	74	94	26	25	96
Harsnet 1609–19	190	183	96	44	44	100
Carleton 1619–28	127	104	82	24	21	88
Montague 1628–38	139	130	94	38	38	100
Duppa[1] 1638–40	78	75	96	15	15	100
Totals	702	642	91	166	161	97

[1]Part only of episcopate.

The education of these men was analysed by collating the institutions to livings within the diocese for the years 1601–40 with the published lists of members of the universities of Oxford and Cambridge.[6] From these institutions which are shown in Table 1, 480 individual clergy were identified, with their date of institution, living, patron, and usually educational qualification. The main problem in tracing them in the *Alumni* is the variety of spelling of names. Sometimes two men of the same name can be distinguished by reference to the fragmentary visitation records. Three hundred and sixty-four of the 480 were traced as graduates in the *Alumni,* although a further 55 were attributed degrees in the institution records, as may be seen from Table 2. The institution records are probably correct in this, for evidence of qualification had to be produced by clergymen before being admitted to a living, while the *Alumni* do not claim to be exhaustive. Records have been lost and many men who

satisfied all the requirements for a degree failed to graduate formally because of sickness or absence.

TABLE 2
University background of graduates beneficed in Sussex, 1601–40

Degree	*m*	*BA*	*MA*	*BD*	*DD*	*BCL*	*DCL*	*LLB*	*Total*
Oxford	7	34	100	21	15	4	2	–	183
Cambridge	4	22	128	26	11	—	—	1	192
Totals	11	56	228	47	26	4	2	1	375
Not traced in *Alumni*	–[1]	13	38	3	–	–	–	1	55
Total	11	69	266	50	26	4	2	2	430

[1]Matriculations (m) have been obtained only from the *Alumni* and it is therefore impossible to ascertain this figure.

That more than 60% of these graduates had proceeded to take a master's degree may seem a high proportion until the nature of a university education at this time is considered. The B.A. was awarded after a student had completed four years of residence, although this was reduced to three years for the sons of peers, knights or esquires. In that time he studied a blend of classical literature and scholastic philosophy, the latter centred on the works of Aristotle. It was only after graduation that more specialized studies of theology, law or medicine were introduced, the student having proved his intellectual worth. The M.A. required a further three years of study, while the degrees of bachelor or doctor of divinity or law entailed further specialized study and were often awarded on special recommendation some years after completing studies at university. In the early seventeenth century most graduates took holy orders, perhaps as many as 80% from some colleges,[7] and the act of proceeding to a M.A. indicated an intention to enter the church.

The organisation of teaching was almost as important as its content. The universities were made up of colleges which had individual and widely differing characters. At Cambridge, while the university as a whole enjoyed a reputation for fervent puritanism at the opening of the seventeenth century,[8] feeling was strongest in certain colleges as may be seen from Table 3. Trinity was the largest foundation at either of the universities with 50 undergraduates, and there some tutors apparently held private services in their rooms, while Pembroke had a distinguished protestant tradition.[9] Although less radical than at Cambridge, puritanism was also a vigorous force at Oxford,[10] as shown in Table 4. The influence of such strongly protestant heads of college as Thomas Sampson at Corpus Christi and Nicholas Bonde at Magdalen was considerable, the latter assisting in the foundation of Sidney Sussex at Cambridge. In addition to those colleges especially known for their puritanism, students worked in a strongly puritan atmosphere at Broadgates Hall which was refounded as Pembroke College in 1624, and puritan sermons were preached at Balliol and Lincoln College. Further, there were influences on the student other than his college. Open lectures were provided by the university to supplement the teaching of the colleges, while the student's relationship with his tutor was undoubtedly vital in forming opinions.[11] Puritan tutors were scattered throughout the universities, even within less radical colleges.

TABLE 3
Colleges attended by Cambridge graduates beneficed in Sussex, 1601–40

College	*m*	*BA*	*MA*	*BD*	*DD*	*LLB*	*Total*	*Fellows*[1]
Trinity[2]		3	22	2	2	1	30	8
St. John's	1	5	17	5	2		30	6
Christ's		4	17	1	1		23	1
Pembroke[2]		1	14	3	1		19	7
Peterhouse	1		10	2	1		14	2
Clare[2]	1		9	2			12	
Queens'		2	5	3	1		11	3
Emmanuel[2]		2	8				10	
Sidney Sussex[2]		1	7	1	1		10	1
King's		1	3	3	2		9	6
Jesus	1	1	3	1			6	
Caius[2]		1	3	1			5	1
Corpus Christi		1	3	1			5	1
Magdalene[2]			4	1			5	1
St. Catharine's			2				2	
Totals	4	22	127	26	11	1	191	37

[1]Not included in total.
[2]Colleges noted for puritan sympathies at this period.
m = matriculated.

By the end of the sixteenth century the universities were able for the first time to supply sufficient educated and zealous men to fill the ranks of the parish clergy. However, it was estimated that £30 a year was the minimum income needed to attract an educated man to a parish living and in Sussex there may have been as few as four livings that met this standard. A survey of 1603 included in a petition from the Sussex gentry to James I found that a third of the parish livings were impropriated and many more poor, 23 being worth less than £16 and some as little as £5. As a result, 50 men held two or more parishes to supplement their incomes and a further six were not resident on their livings.[12] Impropriations, by which the major part of the tithe income of a living had been assigned away from the parson into lay hands, to support the incomes of diocesan officials, or university or charitable endowments, were responsible for much of this poverty. It is perhaps surprising then that another survey of 1603 should have been able to record the following graduates among the clergy of the diocese: D.D., 11; B.D., 15; M.A., 87; B.A., 39.[13] These 152 graduates represented half of the clergy and included most of those holding posts within the diocesan administration. Although this was an official survey and the figures may have been adjusted to advantage by the authorities, the proportion of graduates varied greatly between dioceses. In 1603 some 67% were graduates in Ely diocese, where Cambridge colleges held a number of livings, while in York diocese the figure was as low as 31%, due largely to poverty and remoteness. But in Sussex factors other than economics had been at work to raise the standard of education among the clergy, principally the early reforming energy of Bishop Richard Curteys and the influence of puritanism among the lay patrons of livings.

TABLE 4
Colleges attended by Oxford graduates beneficed in Sussex, 1601–40

College	*m*	*BA*	*MA*	*BD*	*DD*	*BCL*	*DCL*	*Total*	*Fellows*[1]
Magdalen[2]		9	11	7	2			29	11
Magdalen Hall[2]	1	8	10		1			20	
New College		1	11	1	3	1	1	18	5
Christ Church[2]	1	1	8	3	1	1		15	
Brasenose[2]	1	2	10	1				14	
Queen's[2]	2	3	5	3	1			14	2
Hart Hall	1	2	5	1				9	
Trinity		1	2	4	1	1		9	2
Merton		1	6		1			8	2
St. John's		1	2		2		1	6	2
St. Alban Hall			3		1			4	
All Souls	1		1		2			4	2
Balliol			4					4	
Corpus Christi			3	1				4	1
St. Edmund Hall		1	3					4	
St. Mary Hall			4					4	
Pembroke		3	1					4	
Lincoln			3					3	
New Inn Hall			1			1		3	
Gloucester Hall			2					2	
Oriel			2					2	
University			2					2	
Exeter[2]			1					1	
Totals	7	34	100	21	15	4	2	183	27

[1]Not included in total.
[2]Colleges noted for puritan sympathies at this period.
m = matriculated.

Curteys was elected bishop of Chichester in 1570 and during the twelve years of his episcopacy he made a determined attempt to spread the new reformed religion throughout Sussex. He was a graduate and senior fellow of St. John's College, Cambridge, where he had been university proctor in 1563 and president of St. John's for a short time in 1565 until driven out by opponents of his attempts to reform the college. Curteys had been supported in these reforms by Sir William Cecil, secretary of state and chancellor of the university, and when Curteys failed, Cecil was influential in obtaining his preferment to the deanery of Chichester from which post he was elevated. A popular preacher at Cambridge, whose theology was a moderate Calvinism, Curteys believed that preaching was the central duty of the clergy but supported the hierarchial structure of the church and was thus no presbyterian. He was a puritan to the extent of wanting to reform the church from within and to this end brought enthusiasm for the preaching of the word to Sussex, in particular by appointing Cambridge

graduates to livings within his gift. It was said in 1577 that 'whereas it was a rare thing before his time to heare a learned sermon in Sussex, now the pulpittes in most places sound contynually with the voyce of learned and Godly preachers'. Certainly, in the previous six years Curteys had prefered or helped in the preferment of some twenty clergymen who were 'well able to preache in any learned audience in this realme'.[14]

He tackled the problems of poverty by augmenting and amalgamating livings, but in doing so frequently angered the cathedral chapter and county gentry, and the price of his reforms was considerable pluralism and non-residence among the educated clergy. In 1579 the 127 parishes of Chichester archdeaconry contained as many as 25 non-resident clergy and 41 pluralists.[15] Further, his hopes of raising the values of livings by returning impropriated tithes met with negligible success, as the policy was also to do on a national scale. This was in part due to the reliance of the bishop and his officials on income derived from such impropriations. The precentorship of the cathedral was accompanied by the rectories of Oving and West Dean, while the chancellor held Chiddingly and Pevensey. In these practical terms a benefice was a piece of freehold property whose owner derived income from tithes and rents, rather than a cure of souls. It was a distinction that was upheld by the courts of common law, while a healthy profit could be derived from leasing the right of presentation at a vacancy.

The rights of many laymen to present clergy to livings also helped to raise educational standards. While men such as Curteys sought reform within the church, many puritans were active among the laity, particularly in the east of the county.[16] Their demands for a learned, preaching ministry were based on the premise that the duty of the clergyman was to explain, interpret and teach the scriptures to the souls of his cure rather than simply to perform ceremonial. At Rye a tradesman was accused of puritanism in 1591 for saying that 'my lord of Cantabury is but the Pope of England, and the Booke of Common Prayer which he alloweth to be sayde in the Church is but the masse translated and dumbdogs do reade it, for those that do not preache they call them dumbdogs'.[17] The strength of feeling at Rye had been demonstrated as early as the 1570s when the corporation paid a yearly stipend to augment the value of the living. Further, a strong group of clerical puritans was established at Lewes by the 1590s and by 1600 puritanism had spread to many of the market towns, manor houses and farmsteads in east Sussex.[18] Puritanism was especially strong among the gentry families, the Morleys, Bowyers, Mays and Pelhams being singled out by Bishop Curteys for their protestantism and independence,[19] and all held advowsons of livings as part of their estates. It was a natural extension of puritan belief to present university trained preachers to these livings when vacant, and in the east of the county more advowsons were held by lay patrons than by the bishop.

Despite this activity, the puritans sought more radical reform. Of the many petitions addressed to King James I on his accession in 1603 two came from Sussex, one signed by 26 members of the gentry, the other by 2,285 of those of lesser status including 40 of the clergy.[20] Both groups called for the establishment of a 'learned, godly, and resident ministry, with sufficient maintenance'.[21] Of these demands the first at least, that of education, was largely met by 1640 through the recruitment of a very high proportion of graduates into the clergy of Chichester diocese. Table 1 shows that the bishops of Chichester almost exclusively selected graduates for their patronage. The Crown was also a major patron, both holding advowsons itself and having the right to present when a vacancy remained unfilled for more than eighteen months. The Lord Keeper of the Great Seal administered Crown patronage and graduates were favoured, for out of 107 Crown presentations to Sussex livings between 1601 and 1640, no more than eleven were not of graduates.

TABLE 5
Presentations to Sussex livings by Magdalen College, Oxford, 1601–40

Date	*Name and Degree*		*Rector/Vicar—living*	*Fellow*
1602	Thomas Phippes	BD	R. Bramber & Botolphs	1585–1607
1603	Stephen Gough[1]	MA	R. Bramber & Botolphs	1598–1603
1603	Isaac Pocock	MA	V. Sele (Upper Beeding)	1597–1608
1605	Nathanial Vertue[2]	BD	R. Bramber & Botolphs	1588–1608
1607	Richard Boughton	BD	V. Findon	1573–1606
1608	James Wrench	MA	V. Old Shoreham	g
1609	James Wrench	MA	R. Bramber & Botolphs	g
1610	John Fowkes	MA	V. Old Shoreham	g
1613	Edmund Carpenter	BD	V. Findon	1582–1613
1615	William Greenhill	MA	R. New Shoreham	g
1619	Toby Garbrand[3]	BD	V. Findon	1605–1619
1623	Laurence Davenport	MA	R. Bramber & Botolphs	1619–1623
1633	John Nurth	BA	R. New Shoreham	g
1636	Robert Williamson[4]	BD	V. Sele	1617–1652
1638	Nicholas Garbrand[3]	BD	V. Washington	1619–1639
1639	William Franklin	MA	V. Findon	g

g Graduate of Magdalen College or Hall.
[1] Deprived 1605, a puritan.
[2] Vice-president of the college, 1606.
[3] The Garbrands were brothers, sons of a Dutch protestant refugee and bookseller of Oxford.
[4] Proctor 1628, vice-president 1632.

But there was one significant patron who presented only graduates. This was Magdalen College at Oxford, and the men presented are listed in Table 5. Relationships between a college and a particular part of the country were common; at Oxford, Exeter had been founded to accommodate scholars from Devon and Cornwall, while Merton gave preference to candidates from Winchester diocese where the college held estates. Such a relationship existed between Magdalen and the county of Sussex. The college was founded by William of Waynflete in 1458 and he gave as part of its endowment the estates of Sele Priory which included the advowsons of Bramber and Botolphs, Upper Beeding, Old and New Shoreham, Findon, and Washington. Waynflete decreed in consequence that a number of rooms at the college were to be reserved for natives of Sussex, but none of the men presented to college livings has been identified as originating from the county. They were commonly fellows of the college, and those who retained their fellowships are unlikely to have been resident on their livings as they were required to live in college, the parishes being held to augment a modest university income while the church was left in care of a curate. This is almost certainly true of Thomas Phippes who received Bramber in 1602 and the rectory of Shawell in Leicestershire in 1605. However, in 1607 he resigned his fellowship when presented by the college to the living of Selborne in Hampshire, and probably took up residence there. Stephen Gough gave up his fellowship on receiving Bramber, and he was certainly resident there. Gough was a puritan whose energy in helping to organise the petitions to James I led to his deprivation from the living in 1605.

This small group serve to illustrate many of the problems encountered in studying the rise of a graduate ministry. While it is clear that many more graduates were finding employment in the ranks of the parish clergy during the late sixteenth and early seventeenth centuries, it is too simple to ascribe this solely to the fulfilment of puritan ambitions. A university education was becoming a necessity in many walks of life. The sons of the gentry attended university to seek a liberal education, while a degree offered wide new opportunities to those of more humble origins such as before the church alone had done. Entry to the professions became the key to social mobility after the Reformation, and while common law offered the chance of wealth to its practitioners, the church could at least offer some security and social status, and to the pious the opportunity to preach and write. A degree came to be a prerequisite rather than a guarantee of finding a parish living in Sussex, but although better qualified on paper these graduates were not necessarily more vocationally suitable than their predecessors.[22] Further, the practices of pluralism and non-residence continued so that some parishes in which a graduate held the living were in fact served by a curate and the immediate cure of souls in the county might not have been in the charge of such highly educated men as the statistics suggest. But pluralism never affected more than a third of the parishes of Sussex at one time and by the early seventeenth century many curates were themselves university men seeking a parish of their own or hoping to finance further periods of study. Many graduates did hold relatively poor parish livings and served their parishioners well, carrying out their duties with diligence and the benefit of education.

The increasingly common shared experience of many clergy and gentry in attending university tended to bring the parson socially closer to the squire while separating him further from the community than did his office alone. Higher standards of education helped to give the parson greater status, wider contacts with fellow students through the university and among the local clergy, and possibly a greater sense of self-importance. As such it was an important part of the process and perhaps the price of creating a profession from a looser vocational grouping. It was a complex process, one stimulated by forces from within the church, from the laity, the universities, the Crown and from among the clergy themselves. Yet it was a process characteristic of its age, as characteristic as the image of the country parson it bequeathed to later centuries.

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Notes

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[1]M. H. Curtis, *Oxford and Cambridge in transition 1558–1652* (1959), 261.

[2]R. O'Day, *The English clergy* (Leicester, 1979), 134.

[3]H. Kearney, *Scholars and gentlemen* (1970), 28.

[4]A. M. Carr-Saunders and P. A. Wilson, *The professions* (Oxford, 1935), 3.

[5]West Sussex Record Office, Add. MS. 10, 908.

[6]J. Foster, *Alumni Oxonienses* (Oxford, 1892); J & J. A. Venn, *Alumni Cantabrigienses* (Cambridge, 1922–7).

[7]M. H. Curtis, 'The alienated intellectuals of early Stuart England', *Past and Present*, 23 (1962), 42.

[8]P. A. Welsby, *Lancelot Andrewes 1555–1626* (1958), 17.

[9]Welsby, 17–18.

[10]V. H. H. Green, *The history of Oxford University* (1974), 57.

[11]W. A. Pantin, *Oxford life in Oxford archives* (Oxford, 1972), 9.

[12]S. B. Babbage, *Puritanism and Richard Bancroft* (1962), 191.

[13]British Library, Harleian MS. 280, f. 158r.

[14]R. B. Manning, *Religion and society in Elizabethan Sussex* (Leicester, 1969), 71, 63–4.

[15]Manning, 175.

[16]W. J. Sheils, *The Puritans in the Diocese of*

Peterborough, 1558–1610, Northamptonshire Record Society, 30 (1979), 9.

[17]C. Thomas-Stanford, *Sussex in the Great Civil War and the Interregnum, 1642–1660* (1910), 23.

[18]A.Fletcher, *A county community in peace and war: Sussex 1600–1660* (1975), 62.

[19]Fletcher, 24.

[20]Babbage, 192.

[21]Babbage, 191.

[22]R. O'Day, 'Ecclesiastical patronage', in *Church and society in England Henry VIII to James I* (1977), 146.

Sussex Archaeological Collections **120** (1982), 171–184

THE PHYSICAL DEVELOPMENT OF THE ROYAL PAVILION ESTATE AND ITS INFLUENCE ON BRIGHTON (E. SUSSEX) 1785–1823

by Sue Farrant Ph.D.

I

In September 1783 George, Prince of Wales, heir to King George III paid his first visit to a Brighton already established as Britain's most fashionable seaside resort. He soon formed an attachment to the town, partly because of its easy accessibility to London, and was a frequent visitor until he became King. Then, affairs of state and lavish expenditure on Windsor Castle and Carlton House reduced the number and length of his visits to the town. From 1786 the Prince's residence at Brighton was the Royal Pavilion. By 1823 it had assumed its present architectural style and most of the present grounds had been purchased. The Pavilion was a 'town house' situated in a prominent location just to the north of the commercial centre, beside the main road to London and facing onto the Steine, a fashionable promenade. From the mid 1780s, with continuous building to the east and north of the Steine, the Pavilion became even more centrally located (Fig. 1).[1]

The initial site of the Pavilion and its subsequent development must be considered in the context of town houses. In spite of its present opulent appearance and relatively spacious setting within a densely developed town, its history is not comparable with large stately houses such as Cirencester Park or with castles like Arundel or Warwick which dominated their towns. The expansion of these residences and their parks during this period resulted in the demolition of adjacent town buildings and diversion of roads. The Pavilion did not develop from an established residence within extensive grounds: its impact on Brighton was on a smaller scale. Its owner never intended to achieve the physical dominance of the town and the deliberate rural isolation upon the town's periphery to which contemporary owners of emparked residences seemed to aspire.[2]

By the 1780s the attitude of many wealthy landowners towards the ownership of town houses had undergone a period of adaptation upon which the construction of terraced town houses, for renting, in London's western suburbs and in the resorts such as Bath had considerable influence. The costly tradition of maintaining a detached town house with private grounds such as Marlborough House in London or Shelley's in Lewes was being superseded by the practice of renting furnished terraced houses. Renting was cheaper and allowed a more varied lifestyle during the winter months, for time could be divided between London, a county town, and the increasing number of spas and seaside resorts where 'taking the waters' was occupying lengthier periods. Terraced houses were built at high densities and usually lacked private gardens. Most of the houses were used principally for sleeping in, there was little private entertaining apart from card games and light suppers. Their occupants' social lives were mainly conducted on the promenades, in the baths, libraries, coffee rooms, public gardens and at the assemblies and other public events. These events were the major attraction of Georgian towns particularly in the seaside resorts, spas and the capital. The mobility of the country's aristocrats and gentry particularly during the autumn was helped by improvements to roads which made travel easier and cheaper.[3]

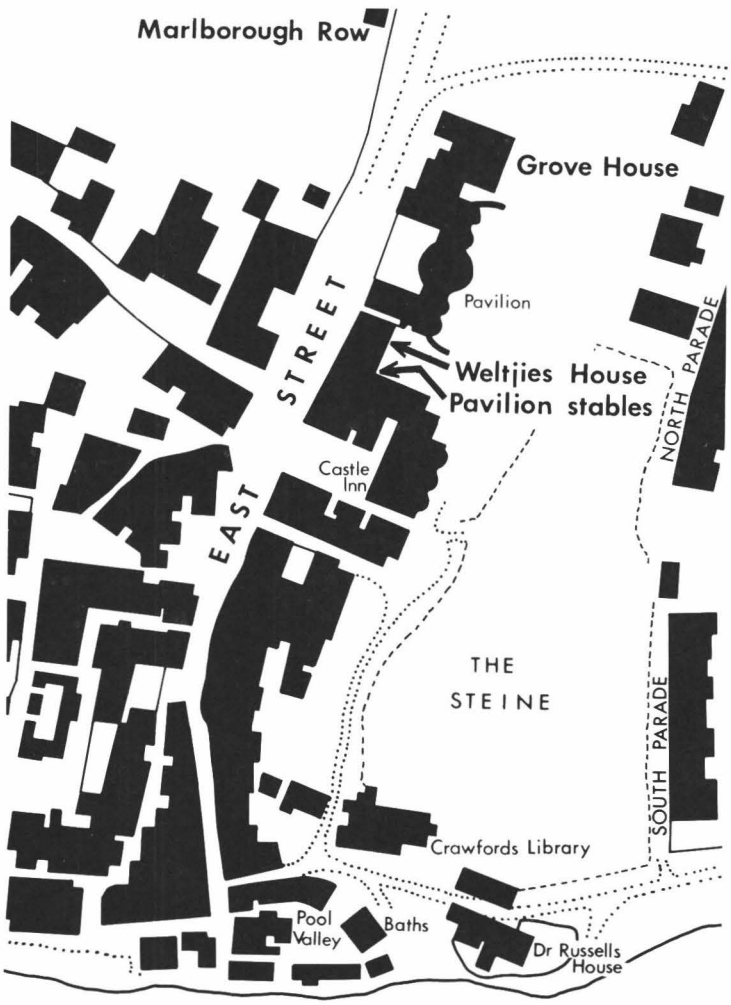

Fig. 1. The Pavilion's site in 1779 before development began.

Ownership of a suburban villa, standing slightly apart from the town, was a fashionable but expensive alternative to a terraced house for families of substance who wished to have a detached house and either preferred more seclusion than a town house could offer, or could not afford the high price of detached property in the town centre. Few villas were built in the provinces before the early nineteenth century and then normally by prosperous townfolk. For visitors terraced houses or town houses had the advantage of being central which was important because their aim was social intercourse during their stay. Rich landowners who owned villas near London, such as Lord Burlington, also owned detached town houses within the capital and used their villas as country retreats.[4]

In Brighton the development of resort housing reflected stages in the evolution of upper class housing described above. Between 1750 and 1780, when urban development was confined within the boundaries of the old town (East, North and West Streets) a few town houses were

purchased by aristocrats and gentry such as the Duke of Marlborough, Sir Lucas Pepys and Mr. Percy Wyndham. Almost all of them were built on the eastern fringe of the existing town facing the Steine (Fig. 1). Most of these houses lacked the private grounds associated with older town houses such as those in the county towns of Lewes and Chichester and represented a short, transitional phase in resort housing. From the early 1780s the typical form of housing for the wealthy in Brighton was terraced. A few suburban villas were built to the east and to the west of the old town between 1783 and 1800 but most of these were demolished by 1810 because terraced housing remorselessly submerged them.[5]

Although his royal relatives generally preferred to lavish money upon suburban residences, the Prince, who was in his early twenties, wanted a fashionable and central location for himself rather than suburban seclusion. A terraced house would have been inappropriate and too small for the heir to the throne and consequently a town palace, the Pavilion, was built.

Stages in the building of the Pavilion illustrate the problems of establishing and extending a large town house and its grounds, even for a very wealthy person, in a prosperous, rapidly growing town without suitable sites and where most of the land was owned as small plots. It also reveals the impact of such a development upon subsequent urban change in its immediate locality. The Pavilion Estate (building and grounds) obliterated former tenements and their boundaries. A section of East Street had to be closed, but the overall effect on the direction and sequence of urban development was less than that of Arundel Castle and Park on Arundel in the same period.[6] The commercial value of proximity to the Pavilion for business in this fashionable part of town inflated land values, and this limited the amount of land which the Prince's agents were able to buy to provide space for their royal employer's increasingly grandiose buildings and gardens.

II

When the Prince came to Brighton at the start of the resort season in September 1783, he stayed for 11 days as a guest of his uncle, the Duke of Cumberland, who had been a regular visitor to the resort since the late 1760s. At the time Brighton had about 3,000 permanent inhabitants and several hundred visitors but all of its housing was densely packed within its seventeenth century street pattern. The fashionable resort area was on the town's eastern side and consisted of the eastern end of North Street, East Street and the Steine. Grove House, which the Duke had rented, stood at the northern end of East Street facing the Steine which served as the promenade because the cliff tops in front of the town were narrow, crumbly and unsafe.[7] Only a circulating library stood on the eastern fringe of the Steine and beyond it open downland stretched eastwards into the distance (Fig. 1).

In 1784 and 1785 the Prince returned to Brighton. In July 1784 he occupied the detached lodging house of a wealthy landowner, Thomas Kemp, which faced the Steine and stood between Grove House and the town's largest inn, the Castle Inn (Fig. 1). Mrs. Fitzherbert stayed in a lodging house at the north-western corner of East Street near Kemp's house (Fig. 1). This discreet arrangement was probably repeated in 1785 when they married.[8]

Sometime in 1785 or early in 1786, the Prince decided to have a permanent residence in Brighton and in 1786 Weltjie, the Prince's steward, personally leased Kemp's lodging house with the adjacent coach house and stables for three years at £150 per annum with an option to purchase the property for £3,000. When Weltjie bought the property in 1787 he also purchased land on its south-east side, between Kemp's property and the Castle Inn for £2,800 from

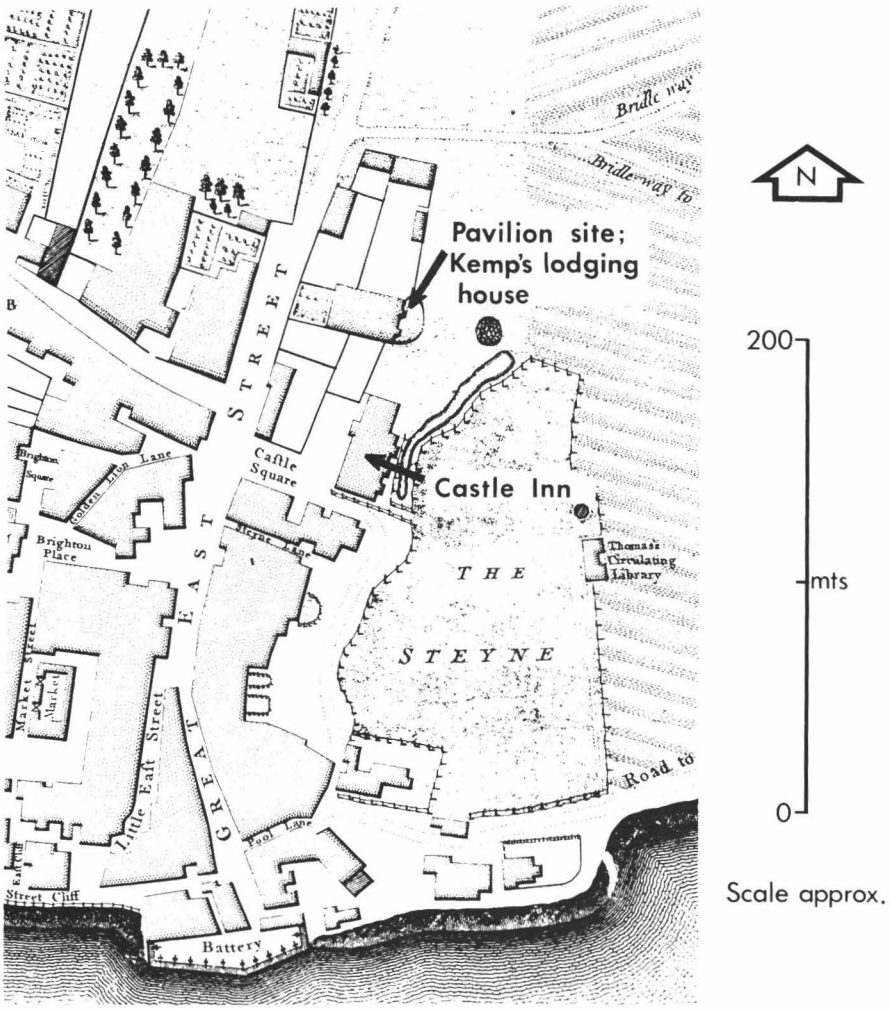

Fig. 2. The Pavilion and environs in 1788.

Richard Tidy, a rich inhabitant of the town. In 1789 Weltjie purchased an ice house in the chalkpit at the upper (western) end of North Street and in 1790 he took a long lease of land near Kemp's lodging house.[9] In 1785 there was still a seaview from the eastern front of the house eastwards across the Steine or across the downland, but the agricultural land on the eastern side of the Steine was being built on and soon after 1800 the downland view was lost.

From 1786, the important purchases of land can be linked to three stages in the Pavilion's evolution. In the first, from 1786 to 1802, building was confined to the land purchased by Weltjie in 1785–6 and the influence upon the town either physically, or visually, was comparatively slight and was overshadowed by the overall speed of the town's physical growth.

In the second phase, from 1803 to 1808, the grounds were extended to build new riding stables, now called the 'Dome'. In order to link the new ground to the Pavilion site, East Street, a major routeway was closed and the Prince built New Road, a less convenient route. Thus

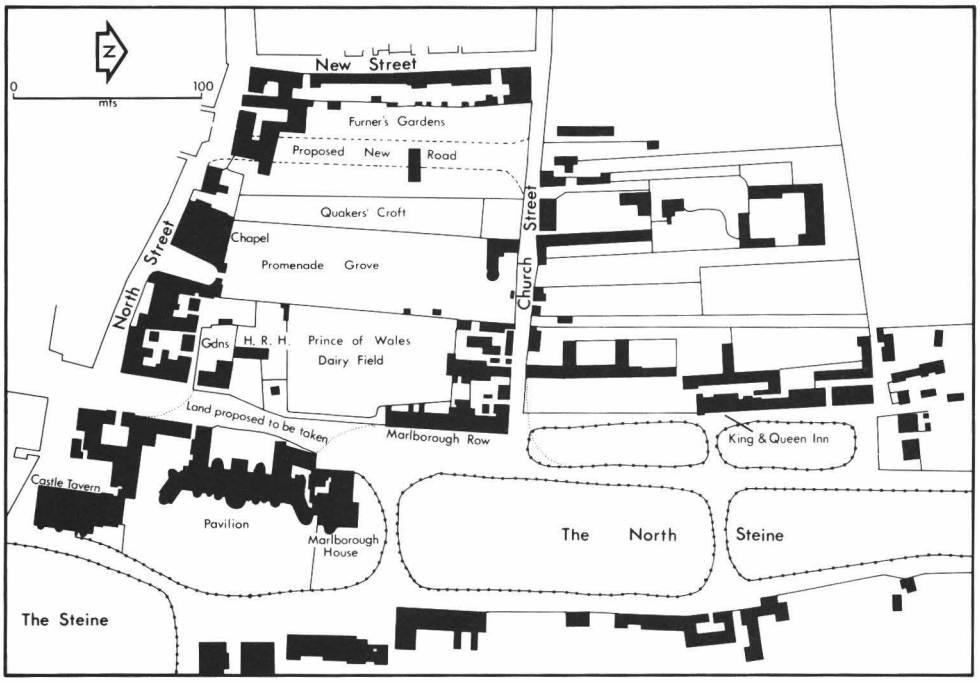

Fig. 3. Map for the expansion of the Pavilion Estate and New Road. (Master from author)

expansion was achieved by disrupting the main road pattern. The increase in the estate's area resulted in greater intrusion into the town's physical and visual landscape but on the eastern side only (Figs. 3–5).

In the third and final stage, between 1808 and 1822, when the final remodelling of the Pavilion was finished, extra land was purchased for that purpose and to give the grounds greater privacy; the latter consideration resulted in the purchase and demolition of well known landmarks, the Castle Inn and Marlborough Row.

III

During the 1780s, while Weltjie was buying land, he paid for the conversion of Kemp's lodging house into the Pavilion, partly because the Prince of Wales was so heavily in debt that his alterations to Carlton House had to stop and other temporary economies also had to be made.[10] Henry Holland, the architect who was employed at Carlton House, designed and supervised the building of the Prince's 'Marine Pavilion'. Kemp's lodging house was used as the southern wing of the new building which was designed so that the state rooms faced eastwards towards the Steine and the entrance and the two service wings faced East Street. The entrance and the drawing room had a domed roof. The bow-fronted north and south wings were symmetrical and the building was faced with yellow mathematical tiles. Work began in 1786 and, when the Prince inspected progress in May 1787, he expected to occupy the building within some eight weeks and the local newspaper claimed that 150 workmen were employed in order to get it finished and furnished on time.[11]

By 1788, when Weltjie was leasing the buildings to the Prince of Wales, over £6,000 had

been spent by Holland on it and on the construction of Weltjie's house and the Prince's stables, both of which were built between the Pavilion and the Castle Inn (Fig. 2). Holland's simple, classical design for the building and the plans for the gardens were probably based upon a book of illustrations of pavilions (country residences) around Paris, which was published in the mid 1780s.[12] It is this building which Pasquin described as, '. . . built principally of wood; it is a nondescript monster in building and appears like a mad-house or a house run mad as it has neither beginning, middle or end'.[13]

The same satirist claimed that the land was given to the Prince by the town 'for which he allows them £50 yearly to purchase grog and tobacco'. This remark is a neat reinterpretation of the Prince's meagre annual 'bounty' (£50) which was distributed to the town's poor.[14]

From the late 1780s, the presence of the Pavilion began to affect strongly the development of its immediate surroundings. On the eastern side of the Steine, urban development spread northwards as well as eastwards along the cliff top, because views of the Pavilion attracted some visitors to lodgings in its vicinity as an alternative to sea views. The northern area of the Steine became increasingly popular for promenades and other social activities, but the Prince's view and the use of the area were periodically spoilt by a large elongated and unsightly pool of water which gathered in front of the Pavilion and Grove House. In 1793, the Prince and the Duke of Marborough (the latter had moved from his first house further south to Grove House, which he bought in 1790), contributed towards the cost of laying a water drain in the Steine down to the sea in order to improve the drainage of the gardens of both properties which were probably made very damp by the flooding. In return, both men were allowed to enclose some of the Steine as part of their gardens.[15]

In 1793, Weltjie claimed that he had spent £23,249 on the purchase of land and on the building works for the Prince (the land cost £5,800 and Holland's work £16,200). The Prince's agents negotiated with Weltjie about purchasing the property and it was suggested that he should take the Prince's Okehampton Estate in part payment. Both parties agreed to employ arbitrators who would report within a year and to accept their decision. Weltjie then withdrew from the arrangement because he did not wish to have the Okehampton Estate. Meanwhile two valuations were produced in 1794 by the two arbitrators. One set of calculations agreed with Weltjie's valuation of the cost of the land but cut his estimates of the building costs by nearly £3,000, reducing the total to £20,992, 10% less than Weltjie's claim. The second estimate was based on the supposition that the 'Marine Pavilion' was suitable only for use as a royal palace. As it would not be saleable the valuation for that building should only be based upon the value of the building materials and the land so assuming that the building had been demolished. The only saleable buildings were the stables and Weltjie's house. On this basis the total value was only £15,570 which was 68 % of Weltjie's claim. Although in 1794 the local newspaper claimed that the Prince had purchased the Pavilion, negotiations failed and Weltjie and his heirs let the estate to the Prince until he bought it in 1808.[16]

By 1794, the Prince was encumbered with enormous debts which included large bills from Brighton tradesmen and could not afford to buy the Pavilion. Yet Holland was asked to provide plans for enlarging it. These may have been commissioned while negotiations with Weltjie were being conducted. When the Prince married Princess Caroline of Brunswick in 1795, and his debts were settled, he purchased Dairy Field which was directly opposite the Pavilion on the west side of East Street. The name was derived from the use of all or some of it for the Prince's dairy from 1794 to 1802.[17] Possibly the Prince used part of the land (which was the only open space left fronting onto East Street) as a garden. Detached gardens were quite

common in Georgian towns and some of the crofts west of Dairy Field were used for gardens by people who were resident elsewhere in the town (Fig. 1). When Henry Holland finished the improvements commissioned in 1794 no further alterations were made to the Pavilion until between 1800 and 1802. Then, Holland spent about £13,300 on renovating and enlarging the Pavilion including extra rooms, a new entrance hall and portico and a gallery which was decorated in the chinoiserie style. The gardens were landscaped by Lapidge and included Dairy Field as a separate garden on the west side of East Street (the dairy was moved to Preston in 1802). Lapidge had been an assistant of 'Capability' Brown (Holland's father-in-law).[18] This work marked the end of the first stage of the Pavilion's extension when it was confined to land purchased by Weltjie. By 1802 the limitations of the site for building were obvious and were emphasised by the use of Dairy Field as a garden. In order to enlarge the house, add extra service buildings or extend the garden, more purposeful planning, and the town's co-operation, were necessary because East Street had to be closed so that land purchases on its western side could be incorporated into the Pavilion Estate.[19]

IV

In 1802, East Street extended northwards as far as Church Street. Its role as thoroughfare had been greatly enhanced after 1760 by serving as the main road into the town for two of the three main routes from London — via Lewes, and via Clayton. These roads, both of which were turnpiked in the 1770s, converged north of Brighton and joined East Street just north of the Pavilion. The road from Lewes also brought a considerable volume of traffic from Tunbridge Wells, a spa town.[20] Most of the traffic passed into Castle Square and North Street where, by 1802, most of the coaching companies' offices and carriers' wagon inns were. Land which faced onto East, Church or North Streets had a high commercial value because of the area's importance as the town's main business area. The proximity of the Pavilion encouraged the development of the fashionable Promenade Grove just west of East Street and the aptly named Princes Place in North Street, both of which were opened in 1794 (Fig. 3). The spate of purchasing which was initiated but not completed between 1802 and 1808 was precipitated by Porden's design for a capacious stables dominated by an enormous domed roof and containing a riding school and tennis courts which the Prince probably commissioned in order to demolish both Weltjie's house and the old stables to extend the Pavilion (Fig. 4).[21]

The area to the west of East Street (where the Prince proposed to have his stables built) still had boundaries which were established by the seventeenth century. Then the area was divided into long crofts (enclosed paddocks) stretching from the rears of buildings along the north side of North Street almost to Church Street. The frontages of North and Church Streets were lined with shops, houses and stables. Even in the early nineteenth century the old boundaries influenced the purchasing of land, and in order to obtain enough space for the new stables, the Prince's agents had to buy entire crofts (Quakers' Croft, Promenade Grove, Furner's Gardens) and some properties on the street frontages. Negotiations for purchase were being concluded after the stables were built.[22]

The history of the croft called Promenade Grove is most unclear. These gardens were immediately to the west of the Dairy Field. The croft had been part of the gardens of a large town house in the old town which had stretched from the Knabb on the south side of North Street to Church Street but were divided by North Street. These gardens were owned by a doctor (Sir Lucas Pepys) and his wife (the Countess of Rothes). Lord Leslie, the heir to the

Pepys family, sold the land in 1791 to John Kirby 'high class grocer' from London who subsequently built some shops on the land beside North Street and sold some land to the Reverend Thomas Hudson for the Chapel Royal. Hudson then sold his unwanted land to two builders who built some of the shops in Princes Place. Kirby attempted to build over the rest of the garden before becoming bankrupt in 1793–4. By 1794 the elm-shaded croft had been leased to Mr. Bailey who then opened it as the Promenade Grove. The Prince of Wales and aristocrats visited it for breakfasts, firework displays and music recitals until it was closed after the Prince had bought it in 1802. Thus Kirby had purchased too much land from the Pepys family and his creditors (who included a London bank and local gentry) were left with a lot of it to manage until the Prince purchased the entire area and paid the respective claimants. The sale to the Prince included some shops in Princes Place at the entrance to Promenade Grove and all the tenants were given temporary leases until the land was needed.[23]

Negotiations for the Quakers' Croft (Fig. 3) were prolonged by its management by trustees, none of whom were resident in Brighton, and who had leased the three quarters of an acre which was not a burial ground to Thomas Furner for £15 a year to use as additional land for his market gardening. His lease had also to be bought by the Prince, yet the purchase of Furner's own gardens was quickly concluded by January 1804. The overall process of land purchase was protracted because Porden (the architect), and Bicknell (the Prince's solicitor), were anxious to save money by exchanging small plots of land not needed for the new project, such as land to the north of New Road, for property they did not want, erecting a new building as part of the agreement if necessary.[24] An important exchange which was necessary in order to complete the projected site for New Road was made with Samuel Shergold's heirs. Shergold had developed the Castle Inn and two separate and extensive stables. One of his stables stood north of the Quakers Meeting House and blocked the projected junction between New Road (through Furner's Gardens) and North Street (Fig. 3). It was agreed that this stable and Shergold's other stable in Church Street, which occupied land needed for the Prince's stables, should be exchanged. In return for both plots Shergold's heirs received a parcel of land to the west of New Road with new stables and coach-houses which were built by Porden in 1804.[25] Whereas some of the properties on the boundaries of the new grounds were purchased in order to absorb them, others, including land owned by Bradford, Sands and Brooker were also bought in order to control land use on the estate's fringes.

Though the Prince was consulted about purchasing land it is unclear who suggested that East Street should be closed to give his residence privacy, and in order to link the palace with the new stable and grounds. The idea must have been suggested once Porden's design was approved because in 1802 negotiations with the town commissioners began and, while land purchasing was in progress, the new route was agreed by both parties and the northern part of East Street between Castle Square and Church Street was closed. This agreement was of great value for the Prince, for it enabled him to contemplate more grandiose landscaping and removed a major constraint on the subsequent redevelopment of the Pavilion which began in 1814. The present New Road, which replaced East Street, was opened in the spring of 1806 when soldiers were employed to build it (Fig. 3). The Prince's solicitors had few problems in arranging this closure, which was agreed to in 1803. For the diversion of the main road through Arundel to London in order to extend his park the Duke of Norfolk had to get a private Act of Parliament passed in 1803.[26]

Porden began building the stables in 1803 when, conveniently, Parliament agreed to an increase in the Prince's allowance. In 1805, when the shell was standing, the Prince

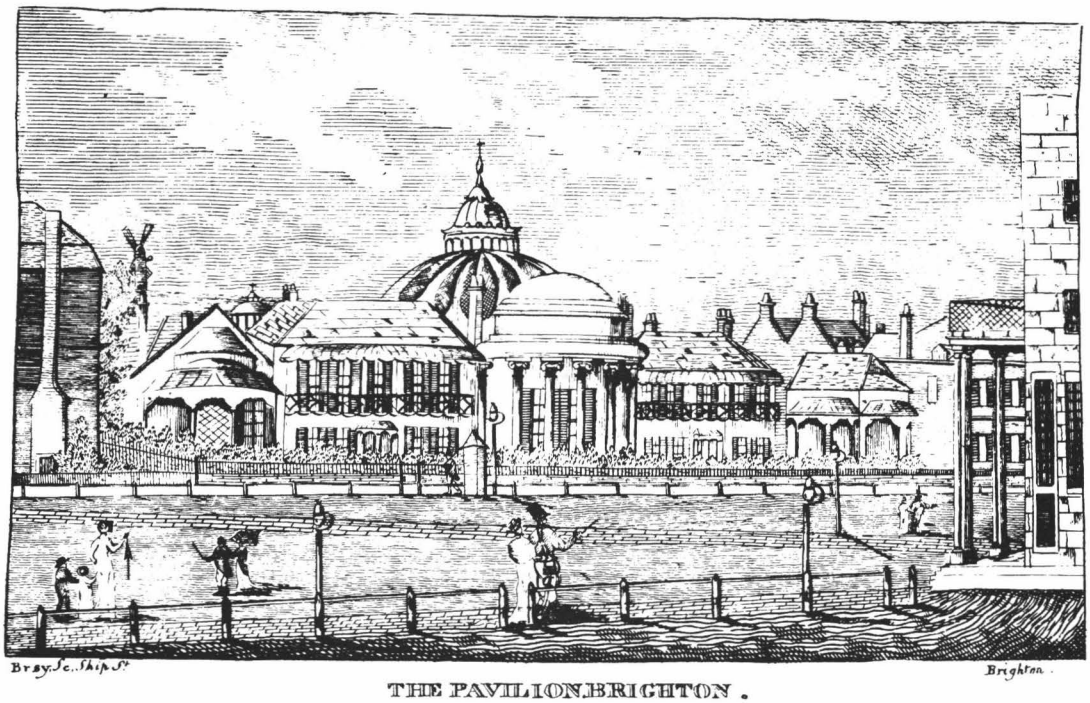

Fig. 4. The Pavilion in 1808 with the Dome behind it.

commissioned new designs for the grounds and the Pavilion from Humphrey Repton (the landscape gardener). By 1807 the Prince had received a copy of Repton's designs (which he produced jointly with his son, an architect) although they were not published until 1808.[27] The Prince did not use them, probably because the 'Dome' was still absorbing far more money for land and materials than anyone had estimated. That was partly because of the complex roof design and also due to the town's accelerating growth rate which increased the cost of land, labour and building materials. Repton's ideas probably instigated the next phase of change for he recommended an enlarged 'Hindoo' style Pavilion based on Cockerell's interpretation of Indian architecture at Sezincote in Gloucestershire. The Prince had visited Sezincote and knew that Repton had advised on landscaping.[28] Repton suggested that an Indian style Pavilion would complement the Turkish style of the 'Dome' and counteract the stable's dominance of the house and grounds. His plans included converting the Pavilion's grounds into a garden which could be used all year. In order to provide enough space, Marlborough Row, Marlborough House, the Castle Inn and other buildings were to be demolished.

By the end of 1808, the upheavals caused by the building of the 'Dome' had nearly ended. Plots of land on the west side of New Road were being disposed of to creditors or sold, for Porden was very concerned by the Prince's indebtedness. Amongst the purchasers was Henry Cobb, who built the Theatre Royal. He so adeptly negotiated his purchase that he managed to buy the land as freehold instead of leasehold as had been agreed with Porden. The latter was angered to discover that Cobb, by dealing direct with Bicknell, and ignoring his previous agreement with Porden, had also extended the time over which he would pay for the land. This action made Porden's cash flow problems even worse.[29]

By the latter part of 1808, new buildings along the western side of New Road and on the western side of the 'Dome' (out of view of the Pavilion) made the building less obtrusive from the west and north. The view of the 'Dome' (Fig. 4) from the Pavilion was partially obscured by Marlborough Row (Fig. 3). The scale of the 'Dome' and the irregular shape of the grounds also stimulated the next and final stage of redevelopment and expansion. The imbalance between the pavilion and the new stables provoked adverse comments. In 1807 a regular contributor to *Gentlemen's Magazine* was complimentary about the Pavilion's design and, after commenting sourly upon the design of the nearly completed stables said of them, 'The whole congestion is a sort of professional frolic, running a short lived antic around the chaste and modest elevations of the Pavilion . . .'.[30]

V

Between 1808 and 1812, land was purchased in order to extend both the Pavilion and the gardens. In 1810 five shops were bought in Castle Square (which backed onto the Pavilion Estate close to the Palace), and some redevelopment left space for the Pavilion grounds to be extended. Covenants on the use of the buildings and access to a private road between them and the Estate gave greater privacy. The most vital purchase for the expansion of the Pavilion was made two years later when Marlborough House (previously Grove House) was purchased from the Duke of Marlborough for £9,000. The Lords of the Manor of Brighton-Lewes then confirmed the grant of a substantial area of land on its northern and eastern sides (once part of the Steine), which had been incorporated into the grounds of the house after 1780, on condition that it was not built on.[31]

In 1812, the Prince commissioned new designs for enlarging the Pavilion from James Wyatt whose only work here (he was killed in a coach accident in 1813) was to link Marlborough House to the existing Pavilion as an interim measure.[32] On Wyatt's death, John Nash was appointed as the architect and he successfully submitted an 'Indian style design' to the Prince which would envelop and extend Holland's classical style Pavilion. Nash had once been Repton's partner and his ideas were reminiscent of the building which Repton suggested in his unsuccessful plan of 1806.[33]

Nash's grandoise ideas prompted the final spate of purchases in this third and final phase of which the most important were Marlborough Row and the Castle Inn. Negotiations for the Castle Inn, Marlborough Row and shops in Castle Square, owned by the Hall family, began in 1813 and were costly and prolonged (Fig. 3). The first purchase of a share in the Castle Inn was made by accident. Thomas Attree, the Prince's solicitor, noticed that Samuel Shergold Jnr. was auctioning his quarter share of the Inn, combined with the entire title to a small piece of land adjacent to the Pavilion's southern lawn. Attree realised that, if the plot was built on, it would spoil the Pavilion's setting and he resolved to buy it himself if he failed to persuade the Prince's agents to sanction the purchase in time for the auction. The property was expected to fetch £2,500. Attree claimed that he paid £2,060 but later lists of the land purchased give a figure of £1,960. Attree was eventually paid for the purchase by the Prince's agents and he was commissioned to buy the other shares in the Castle Inn.[34]

The Prince did not own all four shares in the Castle Inn until 1821 when it closed because business had declined due to the congested location, competition from other more modern inns, and the declining interest in the assemblies which had once been a major attraction. The Prince's agents were probably aware of the Inn's decline in 1815 when they refused to pay £6,000 for James Shergold's half share, which included its icehouse.

In 1822, the Assembly Room (which had been built by Crunden in the 1770s as an extension of the Inn) was converted into the Pavilion's Royal Chapel. Alterations to the interior of the chapel included gothic embellishments, an organ and a water closet. Mathematical tiles were applied to the part of the extension that the demolition of the main building exposed. In an effort to keep down the cost of land purchases, the Prince's agents tried to persuade John Hall to take surplus land from the Castle's grounds in part payment for his property in Castle Square. Hall agreed and leased the shops which he built on the site, constantly finding excuses for failure to enforce the covenants which were intended to prevent windows from being inserted on the northern side of the building which might overlook the Pavilion, and to prevent noxious or noisy traders or obstructions near the estate's boundaries.[35]

Attree found negotiations with the alert and businesslike owners of Marlborough Row particularly challenging. The Prince and his agents intended to use the houses for temporary accommodation while Nash worked on the Pavilion and then to demolish them. The nine houses had been built as lodging houses at various dates between 1784 and 1802, while the smithy at the northern end of the Row, on Church Street, was in use before 1790. Most of the owners had other business interests in Brighton but the occupiers were mainly widows who let rooms. Attree attempted to negotiate simultaneously with the respective owners to prevent prices being increased. His success cannot be assessed because of the different floor areas, ages and conditions of the properties and valuations of contents in cases when the agreement included that element. Attree purchased numbers 1–8 but the town commissioners bought number 9 and the smithy for road widening in 1830 when part of the land was given to the Pavilion estate. Numbers 1–4 were demolished in 1820 and 5–7 in 1821, having been occupied by George IV for Christmas in 1820.[36] Number 8 still stands beside the north gate. While Attree was negotiating the purchases of land he was expected to try to postpone payment to keep the annual cost of the rebuilding of the Pavilion more evenly distributed. To help pay for the new Pavilion, land around the icehouse in North Street (which Weltjie had bought), was sold. The sale was helped by the access roads which were laid out for adjacent land which Thomas Read Kemp was selling.[37]

The Prince's lavish palace as redeveloped by Nash was no longer a marine pavilion and from 1818 its owner used saltwater only by having it pumped into baths in the palace, after the installation of suitable equipment and water storage.[38]

A visitor said critically in 1821: 'Nash has been principally employed, and he seems to have produced an Ephermeran wonder, which would not carry his fame to the next generation; large sums have doubtless been expended which may prove beneficial to those who have been employed in the undertaking; but it can never convey any lasting credit on our natural taste';[39]

Another adjustment of roadways resulted from Nash's extensive schemes. In 1817, the 'waste' to the north of Marlborough House was completely assimilated into the Estate and the entrance to Church Street from the Steine was moved northwards as a result.[40]

VI

By 1823, major expenditure on the estate and buildings had ended (Fig. 5), Windsor Castle and Carlton House absorbing the King's attention. At least £250,000 was spent on Carlton House between 1820 and 1829 when it was demolished. The Pavilion might have suffered the same fate in the 1840s, but it was purchased by the town after Queen Victoria had indicated that she no longer wished to use it.[41]

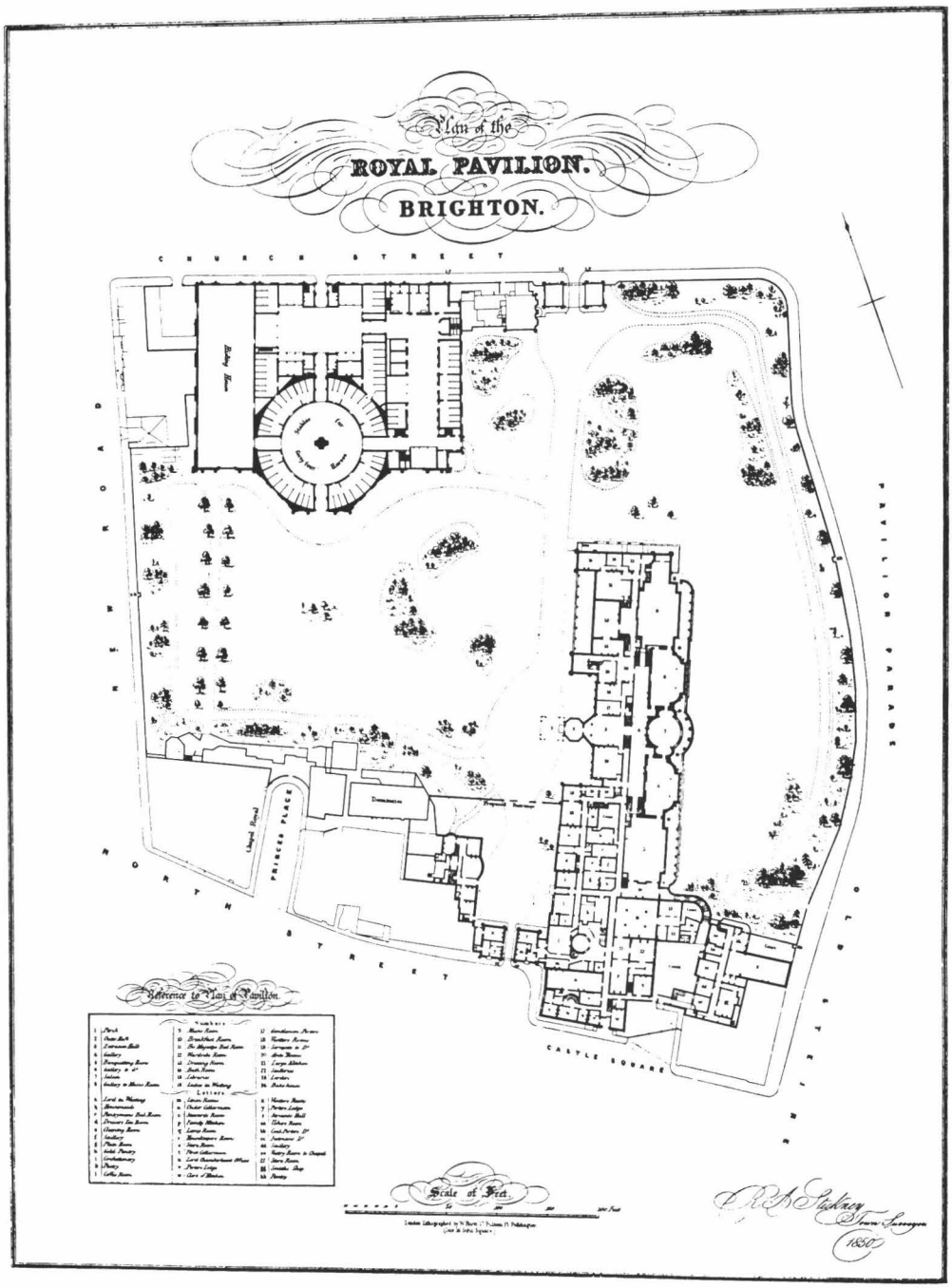

Fig. 5. The estate in 1850 showing the service buildings erected by 1823.

The role of the Prince and his Pavilion in the town's success as a resort has often been exaggerated. Brighton's easy access to London and the prosperity of its surrounding region were of much greater significance for the town's sustained growth.[42] The town's accessibility is illustrated by the Prince's visits, which were quite frequently interrupted by short trips to London. The majority were not as brisk as his escapade in July 1784, when he rode to London and back in a day.[43] The Pavilion's influence upon the town's overall direction and pattern of growth was neither considerable nor sustained. The Steine survived as an established resort area because of the lack of an alternative promenade until the 1820s. Prices for land and rateable values of property reflect the strength of interest in sea views from the 1780s, although the presence of the Pavilion enhanced prices for land by the Steine where the sheltered location and the fashionable setting were also very important.[44] The long line of coastal development by 1820 is perhaps the best evidence of the dominant attraction of the sea.

The continued use of the palace did influence land use in its vicinity by helping to ensure that the Steine would remain as open space. The Pavilion screened the Steine from the network of streets and industry developing on the old town's northern side, and gave it an attractiveness which was retained even after the coast road (opened by the King in 1822) provided a new promenade for the rich and linked the newer, better housing of Brighton's eastern and western suburbs.[45]

By 1830, when the King died, his seaside palace was in the busy centre of a bustling town while fashionable visitors were mainly resident in its outer suburbs. They had been able to move to new areas by renting, whereas the King could not, having invested in his opulent seaside bauble. The building's major influence was upon the central business district and the main routeways into it. The road diversions of 1805, when East Street was closed and the Steine became the main road into Brighton, actually helped to alleviate congestion in North and East Streets, for traffic which did not wish to go to them was diverted up Church Street or directly into the eastern suburbs. The building's continued use helped to keep the town's main business area wealthy, in North Street and the old town, and stopped its migration into St. James Street or Western Road which became suburban extensions of the main area from the 1810s.[46]

References

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[1]S. Farrant, *Georgian Brighton 1740–1820.* University of Sussex Centre for Continuing Education Occasional Paper No. 13 (1980) for an account of the town's growth.

[2]T. R. Slater, 'Landscape parks and the form of small towns in Great Britain,' *Transactions Institute of British Geographers,* n.s., 2 (1977), 314–31.

[3]E. Pawson, *Transport and economy: the turnpike roads of eighteenth century Britain* (1977), 277–9, 287–93, Sussex case study.

[4]J. Charlton, *Chiswick House and gardens* (1978), 4. T. R. Slater, 'Family, Society and the ornamental villa on the fringes of English County towns,' *J. Historical Geography,* 4 (1978), 133.

[5]Farrant (1980), 29–36.

[6]Slater (1977), 320–2.

[7]Farrant (1980), 15–24.

[8]*Sussex Weekly Advertiser* (hereafter *S.W.A.*), 7 Sept. 1783.

[9]Brighton Borough Town Hall Deeds (hereafter THD), 1604/5 & 6. Royal Archives (hereafter R.A.), 33507, 33498. East Sussex Record Office (hereafter E.S.R.O.), Hove 19. Sussex Archaeological Society (hereafter S.A.S.), BRI 115, S.A.S. Muniments deposited in E.S.R.O. since 1982.

[10]R.A., 33518.

[11]*S.W.A.*, 28 May, 1787.

[12]D. Stroud, *Henry Holland, his life and architecture* (1966), 88.

[13][A. Pasquin], *New Brighton Guide* (1796), 16.

[14]*S.W.A.* 7 Feb. 1791.

[15]*S.W.A.* 2 April 1792.

[16]R.A., 33518.

[17]S.A.S., BRI 86 and 129. E.S.R.O., Hove 656. J. G. Bishop *The Royal Pavilion, Brighton* (Brighton, 1897), 30.

[18]Stroud (1966), 89. R.A., 33557. J. D. Parry, *Coast of Sussex* (1833; rept. 1970), 92.

[19]East Street was a public road for which the Town Commissioners were responsible.

[20]S. Farrant, 'Sussex by the Sea: the development of seaside resorts 1730–1900', in E. Sigsworth ed., *Transport and the Regions* (Hull, 1982).

[21]E. Cobby, *Brighthelmston Directory* (Brighton, 1800). M. Crawford *A Description of Brighton and the adjacent country* (Brighton, 1794), 22–3.

[22]H. Roberts, *A history of the Royal Pavilion, Brighton* (1939), 56, 82–3, lists many of the transactions but does not provide sources or relate them to the map he dates as 1803, but which is enrolled in Quarter Sessions in 1805 (see Figs.). R.A., 33602, 33563, 33597. E.S.R.O., Hove 656. S.A.S., BRI 129. R.A., 33602–33620.

[23]Promenade Grove: S.A.S., BRI 86, 93, 85.

[24]E.S.R.O., Hove 665. S.A.S., BRI 127. T.H.D., 1604/1, 5, 6. R.A., 33578.

[25]R.A., 33602–33620, 34210, 33671, 33589, 33599. S.A.S., BRI 130, 131.

[26]E.S.R.O., QR/E 703, QO/EW 36. Slater (1977), 320.

[27]H. Repton, *Designs for the Pavilion at Brighton by H. Repton with the assistance of his sons* (1808).

[28]H. Repton (1808), vi-viii, 29. T. Davis, *John Nash* (1966), 84.

[29]R.A., 33589, 33599.

[30]*Gentleman's Magazine* 78 (1808), 126–7.

[31]T.H.D., 1604. R.A., 33705, 34118, 34074, 34031, 34035, 33658. S.A.S., BRI 88.

[32]J. Mordaunt Crook and M. H. Port, *History of the Kings Works* (1973), 49.

[33]T. Davis (1966), 83, 84–6.

[34]Best described in R.A., 33788–33806, Tho. Attree's account.

[35]R.A., 33686, 33684, 33734, 33827, 33690, 33950, 33976, 34021, 34037. S.A.S., BRI 101, 132, 114, 124, 92, 105.

[36]R.A., 33788–33806, 33923, 33810, 33695, 33621, 33852, 34139, 34158, 34160, 33938. S.A.S., BRI 102, 103, 104, 106, 107–111, 112a, 112b, 124., See also S.A.S., BRI Manor of Brighton Lewes Court Books. E.S.R.O., Land tax 1780–1820.

[38]S.A.S., BRI 124.

[38]S.A.S., BRI 90. R.A., 33834.

[39]British Library. Add. MS. 33658, Journal of Rev. J. Skinner (ref. from J. H. Farrant).

[40]E.S.R.O., QR/E751, QO/EW42.

[41]N. Pevsner *The Buildings of England: London*, I (Harmondsworth, 1973), 570.

[42]Farrant (1980).

[43]*S.W.A.*, 2 Aug. 1784.

[44]See maps of Brighton and rate books of Brighton. Ref. Library SB 352–1 B.76. 1814 Rate Book.

[45]E. W. Gilbert, *Brighton Old Ocean's Bauble* (1954, reprint Bath 1968), 99.

Sources of maps

Fig. 1. Yeakell and Gardner, *Brighthelmstone* (1779).

Fig. 2. T. Budgen, *A new and correct plan of Brighthelmstone* (Brighton Sept. 1788). The only known original is British Library K.42.16.

Fig. 3. E.S.R.O., QR/E705, Quarter sessions enrolment.

Fig. 4. T. Attree, *Topography of Brighton* (Brighton 1809).

Fig. 5. Borough of Brighton, Secretary's Dept., Town Hall. Brighton Area Reference Library, *Smiths Cuttings: Pavilion Vol. II.*

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THE UNOFFICIAL ENCLOSURE PROCEEDINGS: A STUDY OF THE HORSHAM (SUSSEX) ENCLOSURE 1812–1813

by John Chapman

The Horsham Common enclosure is of particular interest in that, in addition to the official records, the private papers of one of the principal unofficial participants also survive. These reveal the complex motives involved, and show that political interests played at least as important a part as the desire for agricultural improvement in initiating the enclosures process. They reveal also the degree to which personal animosities could prolong and complicate an enclosure which was apparently unopposed, and how individuals bent on creating problems could do so without taking steps which would reach the official record.

One of the major problems in the study of Parliamentary enclosure of land is to determine the real motives of those involved, and the reasons why the proceedings followed the course they did. The awards, with a few exceptions,[1] contain nothing more than a straightforward account of the allotments made, and even the commissioners' minute books, where they exist, are normally confined to recording claims and counter-claims, though a few may include the detailed evidence of witnesses examined to determine matters in dispute.[2] The occasional chance survival of private papers is thus of particular interest, for it may reveal the role of personalities in the proceedings, and may show the relationship of the enclosure to other contemporary events. The Horsham Common enclosure of 1812–13 is such a case, for though two of the principal landowners, the Duke of Norfolk and Robert Hurst, seem to have left few papers of relevance,[3] and those of the third, Sir Henry Fletcher, have not been located, the papers of Thomas Charles Medwin, a Horsham solicitor, make it possible to appreciate some of the complexities behind the bland official record.[4]

The formal proceedings of this enclosure were the subject of a highly detailed account by W. Albery some thirty years ago.[5] Albery's version, however, follows very closely the Hammonds' views on the motivation for enclosure,[6] and his assumption that the whole process was a simple case of a tightly organised conspiracy by the three major landowners to out-manoeuvre all other parties cannot be sustained. As Medwin's papers make clear, relations between Fletcher, on the one hand, and the Duke and Hurst on the other, were far from cordial, and personal antagonisms had a significant influence on the enclosure proceedings.

Medwin was in an unusually good position to see the whole enclosure process, for he initially acted for the Duke, and later for Fletcher and his allies. Indeed, as steward to the manor of Horsham he had had responsibility for the Common since 1787, so he was intimately involved with the area for over 25 years. He was also the Duke's steward for the Rape of Bramber and, according to Albery, a close political ally of the three landowners, who were all firm supporters of the Whig cause.[7] His knowledge thus extended to the personalities as well as the land.

The area affected by the enclosure, Horsham Common, consisted of some 737 acres[8] of

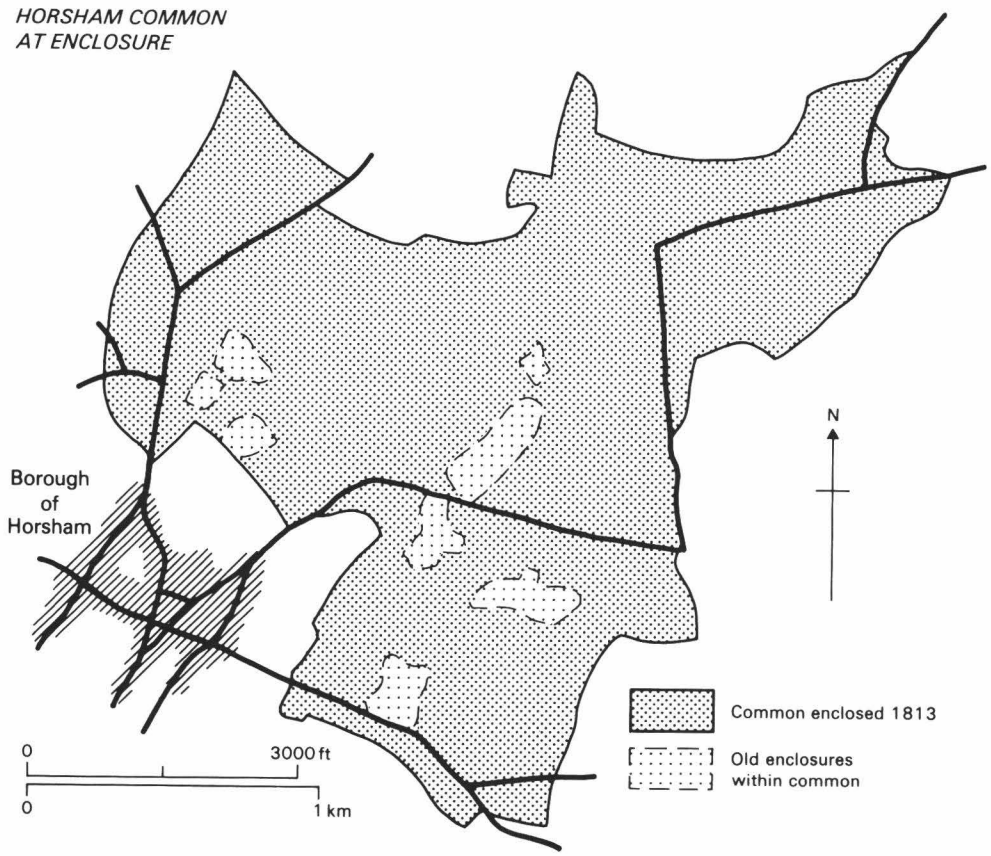

Fig. 1.

'waste' lying on the edge of the town of Horsham, (see map) and the events leading up to the enclosure were inextricably linked with the political struggle for the control of the Horsham parliamentary constituency, a factor not unknown elsewhere.[9] Until the succession of Charles Howard as eleventh Duke of Norfolk in August 1786, the family appear to have neglected both Common and borough for many years, and the former had been freely encroached while the latter, politically, was a 'rotten borough' firmly under the control of the Ingram family, who were ensuring the election of Tory members.[10] As lord of all four manors concerned with the Common, the new Duke had an obvious motive for intervening to prevent abuses, and, to an active Whig politician, the borough must have been a tempting target. The fact that, by a legal quirk, Horsham voters were able to vote additionally not only for the county constituency but also for the Shoreham one[11] can only have enhanced its desirability, while the total confusion of the legal entitlement to votes provided the necessary opening for an attack. However, the process of buying out burgage holders and landowners, which was necessary to gain political control, would also have increased the Duke's ability to push through an enclosure of the Common, a prospect which the Duke, as an active encloser in Sussex,[12] Norfolk[13] and elsewhere, could hardly have missed.

The first major step in the political campaign was a successful attempt in 1787 by Medwin and the Duke to have their own supporters, rather than those of the Irwins, appointed to the Court Baron. They were then able to manipulate the acceptance or rejection of admissions to burgages, and hence the number of qualified voters. This also, however, left them with clear and unequivocal responsibility for the Common. Thus, when six individuals, including Robert Hurst, wrote to Medwin on 10 September 1787 demanding that he put a stop to encroachments and other nuisances which infringed their rights, he was forced to take action. The quotation of Court Leet presentments for similar offences, presumably to establish precedents, makes clear the recent neglect, for there were no references later than 1742.[14] Similarly, Medwin, in his own survey of 1798, records many cases of illegalities sanctioned by default, including a 99-year lease of 15 December 1724 to one John Burstow for land 'enclosed some few years since . . . out of Horsham Common', where no rent had been paid for about fifty years.[15] Not surprisingly, the occupier in 1798 flatly denied any liability for payment.

The first stage in the re-imposition of control saw the presentment of eighteen cases on 9 October 1787, including, ironically, one against Hurst. These covered offences ranging from leaving dangerous pits after digging stone and gravel to erecting a shop and tannery buildings on common land. One encroachment, by J. Manley, Esquire, was as large as 1½ acres.[16] Medwin was stung into appointing a reeve to prevent further problems, but without total success, for a later letter from the Duke authorised him to prosecute further offenders. The Duke, however, expressed his displeasure at the use of his own name on the warning notices, and was clearly unwilling to be seen to be personally responsible for any action taken,[17] probably for political reasons.

Elsewhere the desire to be free of the problem of encroachment and other abuses was a major reason for enclosure, and this must have been a factor here. From the Duke's point of view there may also have been a political motive, for in the confused state of the local franchise there was at least a possibility that successful encroachers might acquire a vote, and not necessarily one on which he could rely. Thus he had ample reason for wishing to be rid of the Common, though precisely when the idea of an act was first mooted is impossible to determine. Medwin was making active attempts to tidy up the estate during the early years of the nineteenth century, beginning in 1799 with moves to sell lands and buildings in order to redeem the land tax. Later activities included the sale of an acre of common to the Board of Ordnance as a site for an armoury in 1804.[18] Enclosure might have been a logical culmination, but the Duke was in no position to force one through without the consent of either Lady Irwin, current holder of the Ingram lands, or Sir Henry Fletcher. He was locked in an increasingly acrimonious and writ-strewn battle for political control with the former, and his attempts to buy out the latter were unsuccessful. Though his prime objective was Fletcher's voting power, he had, in Albery's words, 'one eye at the same time upon the enclosure of the Common', and only Fletcher's determination to extract an exorbitant price eventually killed the deal, after several years of wrangling.[19] Thus it was not until after the death of Lady Irwin late in 1807 that any progress could be made.

After further protracted haggling, this time with Lady Irwin's heirs, an agreement for the purchase of the Ingram lands was finally drawn up on 31 December 1810[20] and the Duke took possession in April 1811, gaining an almost free hand in both the borough and the Common. On 4 Septemer Medwin drew up a draft notice of intent to submit a bill,[21] and the bill itself reached the House of Commons on 20 January 1812 when it was read for the first time.[22]

It is clear that the other landowners, at least, had no serious objections to the enclosure,

for the committee of the House of Lords reported that the owners of all but 36 acres had given their support, and even the remainder were neutral rather than hostile.[23] Furthermore, the transparent inaccuracy, probably adopted for political reasons,[24] of naming the Duke's relative, the Earl of Suffolk and Berkshire, as lord of Horsham manor in the act offered an opportunity to cause trouble for anyone wishing to do so. In fact the bill proceeded smoothly through the various stages, piloted by Hurst as M.P. for Sussex. The Commons committee formed after the second reading on 25 February[25] reported favourably on 10 March,[26] and the only hint of anything untoward was a note that they had made certain amendments, including changing one of the proposed commissioners.[27] Unfortunately in the absence of any committee minutes the reasons for this are not clear, but there were no further problems and the bill finally received the Royal Assent on 20 March 1812.[28]

This smooth and amicable progress was not continued into the actual enclosure. While the Duke and Hurst apparently acted in collusion throughout, Fletcher had good reason to be wary. There were various ways in which the claims to the common might be interpreted by the enclosure commissioners, and the resulting allotments to some individuals would be substantially different. The methods were summarized for the Duke by Henry Howard[29] as follows:-

(i) allotments might be made to all occupiers 'making possession the Rule', in which case the award would be to the lessee, unless the lessor had explicitly reserved the common rights to himself

(ii) allotments might be made by valuation of ancient tenements, in which case only freeholders or burgage tenants would be eligible

(iii) allotments might be based on the proportion of the burgage rent paid for each burgage.

The first, in Howard's view, was likely to be the one established if any law suits were brought, and would have given the Duke the largest share, while Fletcher would lose substantially as many of his lands were leased to Hurst. Indeed it would mean "nearly an end to Sir Henry Fletcher, both in the Borough and in the common". The second would very much favour Fletcher, and be the worst for the Duke, since it would probably give votes to many burgage owners, but was unlikely to be the method established. The third would give greatest advantage to the Duke, and was strongly supported by Hurst, in spite of the fact that he stood to lose greatly by it since the lands leased to him would not qualify.[30] The Duke's subsequent tactics were clearly based on the assumption that this assessment was correct, and that the third alternative was the one to be supported.

Fletcher, meanwhile, must have been fully aware of the Duke's tactics, for he had acquired the services of Medwin, who had hitherto had a major hand in framing them. Medwin ceased to be employed by the Duke early in September, apparently after some disagreement, and promptly became agent to Fletcher, who he was already assisting in the Pulborough enclosure.[31] In this capacity he wrote to other minority landowners inviting them to a meeting to discuss tactics during the enclosure,[32] and succeeded in forming an opposition group. He offered his services to the commissioners as clerk but was rebuffed when Dewdney Stedman, another local solicitor, was given the post,[33] and hence he had no official status in the proceedings. However, as co-ordinator for the Duke's opponents he had a powerful influence on subsequent events.

It was only at this point that the three commissioners, who figure so largely in the official records, became directly involved. Two of the three, Thomas Hopcraft of Crowton in

Northamptonshire and George Smallpiece of Stoke by Guildford, were already experienced in this work, though the third, William Clutton of Reigate, was apparently a newcomer. They were immediately faced by a deluge of claims and counterclaims, reflecting the different possible interpretations outlined by Howard. Fletcher, presumably aware of the dangers to his position if he caused problems, followed the Duke's line and claimed "an adequate allotment . . . in proportion to the Burgage Rents payable by him to the Lord of the said Manor'. The Duke, through his new agent Joseph Harting, issued a wide range of individual objections plus a blanket statement that he 'generally objects to the claims of all persons not being Tenants of the Manor and having no rights of common upon that part of the lands . . . to be enclosed in the Manor of Roughey'.[34] A mass of objections flowed from most of the other parties, ranging from complaints about the size of the claims to niggling over the description of some lands which did not appear to be in the exactly prescribed legal form. Whether the commissioners were unable to agree amongst themselves or whether they simply felt it prudent not to become involved in a situation where personal animosities were aroused is not clear, but at a meeting on 27 August 1812 they declared themselves not competent to judge the claims about the burgage allotments and demanded an assessor.

The method of choosing the assessor strikes the twentieth century mind as somewhat curious, though all parties at the time seemed perfectly happy with the arrangements. The commissioners suggested a Mr. Scarlett for the post, Harting, as the Duke's agent, proposed a Mr. Harrison, while Medwin, as the rival agent, suggested John Gurney. The three names were then placed in a hat, and Gurney's was the one drawn. On 23 September, with Gurney's assistance, the problem was resolved, and the enclosure proceeded with an auction of land to cover expenses on 23 October.

At this point the enclosure was apparently complete, but in practice the uncertainties continued as the various aggrieved parties deliberately prolonged the disputes. Fletcher and the Rev. Charles Bridger objected to Gurney that Hurst in his capacity as impropriator of the tithes had been granted five acres too much, since they contended that his eleventh should have been calculated on the residue after deduction of the lord's share and the land sold for expenses. This argument Gurney promptly squashed with a note, dated 15 December, that the impropriator's share was in his view correct. Meanwhile Hurst and the Duke announced that they intended to dispute the commissioners' verdicts in the courts, which effectively prevented Medwin from fencing and leasing the allotments as he had intended.

Fletcher's personal antipathy to Hurst is clear from a letter of 25 December to Medwin, and he was obviously becoming increasingly exasperated with the Duke. Medwin himself was furious, and on his own admission decided to be as awkward as possible. He refused to accept the formal notice of intent to take court action when Stedman, the Duke's solicitor, presented it on 22 December on the grounds that only one commissioner, Hopcraft, had signed it, and it took Stedman almost a month, until 16 January, to collect the necessary signatures of the others and return. Meanwhile Medwin wrote to a London lawyer for an opinion as to the legality of the Duke's action in challenging the decisions after agreeing to accept Gurney's arbitration, only to be informed that he was not legally bound by his agreement and the court action could proceed.

Whether there was any real intention to proceed is open to doubt. The potential gains in land would have been minimal and would hardly have justified the expense involved. Fletcher certainly seems to have doubted whether it was anything more than an irritating delaying tactic, and so it ultimately proved, for on 7 May 1813 Medwin wrote to Bridger announcing that as no

action had begun within three months both he and Smallpiece were of the opinion that no court action was now possible and he had fenced the allotments as a preliminary to leasing them.

The final award was eventually signed on 15 July 1813,[35] but even at this stage the issue of the Horsham enclosure was not dead. In 1814 Medwin, with some delight one may suspect, pounced on two supposed irregularities affecting Hurst's properties and wrote for yet another legal opinion. His grounds for complaint were that Hurst 'had prevailed upon' the Commissioners to allot him half an acre of land lying within Horsham borough, which did not form part of the area specified in the original act, and that Hurst had realigned a road there. Again, however, he got little comfort from the legal opinion. The lawyer consulted, John Sens of Lincoln's Inn, firmly squashed the complaint about the road on the grounds that the commissioners had full powers to realign any road other than turnpikes and Hurst's action would almost certainly be accepted. As for the allotment of land within the borough, while accepting Medwin's point, he wondered why Medwin had taken so long to raise the matter, and implied that the courts were unlikely to upset the award at this stage. In the face of this advice Medwin obviously felt unable to proceed any further, and the last rumblings over the enclosure died away.

Whether the end result of the haggling was a fair distribution of the land is impossible to determine. Albery's view, that it was not, represents a judgement on the morality of enclosure as a process rather than an attempt to assess the honesty with which this particular enclosure was conducted. Unfortunately even the latter cannot be tested in any objective manner, for there is no means either of assessing the validity of the original claims or of converting legally acceptable claims into acres allotted. However, it can be stated that there is no detectable partiality in the acceptance or rejection of claims by the commissioners, and that varous matters complained of, insofar as they were genuine, were the result of minor errors rather than deliberate dishonesty. It also says something for the independence of these men that the Duke was clearly uncertain how they would rule, even though he, as lord of the manor, and Hurst, as tithe owner, must have had a major part in naming two of them. Certainly there is no evidence that any of those who received allotments were seriously unhappy with the results, and Bridger, writing to thank Medwin for his efforts, expressed his delight at the outcome.[36]

The Horsham enclosure has some general significance in that it illustrates the tensions and manoeuvering which could occur even in an apparently straightforward enclosure. The official records give no indication of any problems, for there was no formal opposition to the enclosure, and the threats of legal action were not pursued. In practice, however, there was sufficient disagreement to force the commissioners to seek outside help, and to cause frustration and delay to the various landowners involved.

Much of the trouble sprang not from any great concern over the land as such, but rather from the political and personal animosities of the principal protagonists, who in the later stages seem to have been more interested in scoring points than in ensuring swift, fair and inexpensive proceedings. It is of particular significance that much of this activity was provoked and controlled by an individual who was not an official party to the enclosure, and whose name might never have appeared in the official records. Such shadowy and often unrecorded figures as Thomas Medwin must have played a major role in many enclosures but only rarely is it possible to reveal their full influence.

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Footnotes

[1]E.g. Slayley, Northumberland County Record Office, QRA 9.

[2]E.g. Beeston and Pitcroft, Portsea, Hampshire, Portsmouth City Record Office, CLC 4/13.

[3]Arundel Castle Archives, and West Sussex Record Office (W.S.R.O.), Hurst Papers (not fully catalogued) respectively.

[4]Horsham Museum (H.M.) Manuscripts, 200–4 and 432.

[5]W. Albery, *A Millenium of Facts in the History of Horsham and Sussex 947–1947* (Horsham, 1947), 169–203.

[6]J. L. and B. Hammond, *The Village Labourer* (1911).

[8]J. Chapman, 'The Parliamentary Enclosures of West Sussex', *Southern History,* 2 (1980) 90.

[9]See, for example, S. Elliott, 'The Open Field System of an Urban Community: Stamford in the Nineteenth Century', *Agricultural History Review,* 20 (1972), 165 and 168.

[10]Albery (1927), 114.

[11]Albery (1927), 116–7.

[12] E.g. Houghton and South Stoke, W.S.R.O., Add, MS 5161.

[13]E.g. Forncett, Norfolk County Hall, uncatalogued.

[14]H.M. MS 201.

[15]H.M. MS 200.

[16]H.M. MS 201.

[17]H.M. MS 201.

[18]H.M. MS 202, letter dated 3 August.

[19]Albery (1947), 180.

[20]Arundel Castle MS, HO 5.

[21]H.M. MS 204.

[22]House of Commons Journal (H.C.J.), 67 (1812), 129.

[23]House of Lords Record Office, Lords Committee Book, 1812, 18 March, 161.

[24]Albery (1947), 190.

[25]H.C.J., 67 (1812), 147.

[26]H.C.J., 67 (1812), 189.

[27]H.C.J., 67 (1812), 189.

[28]H.C.J., 67 (1812), 214.

[29]Apparently not a relative. F. W. Steer (Ed.), *Arundel Castle Archives,* 1 (1968), 227.

[30]H.M. MS 204.

[31]See Petworth House Archives, 8143 (dated 1808).

[32]H.M. MS 432.

[33]H.M. MS 432. Letter of 21 March 1812.

[34]H.M. MS 432.

[35]W.S.R.O., QDD/6/W8.

[36]H.M. MS 432. Letter of 2 December 1812.

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SUSSEX RELIGIOUS DISSENT *c.* 1830

by N. Caplan

This paper evaluates the strength of Dissent in Sussex in terms of the number and geographical distribution of places of worship and their denominational ties. It discusses the likely numerical strength of Dissent and considers the particular case of the Downland region in which Protestant Dissent failed to make a lasting impression.

I THE NUMBER AND GEOGRAPHICAL DISTRIBUTION OF DISSENTING PLACES OF WORSHIP

The unique Census of Religious Worship in England and Wales taken in 1851 is indeed of first importance in an assessment of the scale and pattern of Dissent in the nineteenth century, but it is possible to gauge the strength of Sussex Dissent earlier in the century without being compelled to work back from the Census. This is largely thanks to the survival of the parish returns of Non-Anglican Places of Worship made in 1829 in accordance with the Order of the House of Commons. The writer drew attention to the great importance of this source for Sussex some years ago, but it was not possible in that short paper to do justice to such an outstandingly valuable source.[1]

In fact, Parliament had given attention well before 1829 to the evident growth of Dissent. In 1810, the House of Lords had called by Order for a List of Places of Worship in parishes 'the Population of which amounts to or exceeds 1,000'[2]. The List for Sussex was printed in 1811. Unhappily, the House of Commons Return for 1829 was not ordered to be printed and the material was then destroyed in the great fire at the Palace of Westminster in 1834.[3] But the originals of the parish returns for Sussex have survived intact in Quarter Sessions records.[4]

The returns provide in so many cases details not only about the places of worship as such but also about the numbers of people involved and their denominational ties. It is an added gain that the returns were compiled by members of the Church of England and thus provide what may fairly be termed an 'Anglican' assessment of the progress of Dissent — most of the returns were prepared by Churchwardens or Overseers. The 1829 returns thus serve as an independent check on the surveys then being made by the Dissenters themselves.[5] In 1829, the Anglican Establishment at national level was deeply exercised about the large and continuing growth of Dissent which was increasingly reflected in pressure by the political allies of Dissent for the total removal of civil discrimination against the Dissenters. This helps to explain why the Establishment had resisted strongly the idea of collecting and publishing official figures about the strength of Dissent.[6]

However, the internal evidence of the Sussex parish returns taken together with the Dissenters' own surveys makes it plain that overwhelmingly the Anglican compilers tried hard to obtain the facts about the strength of Dissent in their parishes. In a good many cases, it is unlikely that the compilers themselves would have had close personal contact with Dissenters, but they knew well the affairs of their parishes. Some of them indeed sought the help of local

Dissenting ministers before making their returns.[7] Consequently, there are no grounds for regarding the returns as having been influenced by any bias against Dissent — as undoubtedly was the case with so many of the Sussex parish returns for the Compton Census in 1676.[8]

Sadly, it is not practicable to reproduce here more than a small sample of the actual returns, but even the few examples below should serve to demonstrate the exceptional value of the 1829 returns.

Ardingly

Ardingly Chapel, Independents — from 1 to 200 worship in it, says the Preacher, and that very few of these are residents — therefore liable to be returned for the villages they reside in. Query — are there 50 members?

Chiddingly

Dicker Chapel (being a branch of Jireh Chapel, Lewes), Calvinistic Independent — 200.

Broad Oak Chapel, Calvinistic Independent, this was a dwelling house Licensed 10 January 1813, transformed into a Chapel in 1814: 150.

Pickhill Meeting, a Farmhouse where there is preaching occasionally — 40.

Cuckfield

Ebenezer Chapel, Independents or Congregational Calvinists — 200.

Providence Chapel, Calvinists, maintainers of the articles of the Church of England or true Gospelers — 100–200, or 300.

Polestub Chapel, Unitarians — 20.

Owing to the absence of one of the Pastors, I have not been able to get the necessary information before, this delay has consequently been occasioned — George Webb, Overseer.

Hailsham

1st. Baptist Chapel, the Particular Baptist Denomination — No. of persons from Hailsham Parish 180 and no. of persons from Other Parishes 60, Total 240.

2nd. High Calvinist, two Chapels — No. of persons from Hailsham Parish 80 and No. of persons from Other Parishes 75, Total 155.

Hastings, All Saints

Ebenezer Chapel, Calvinistic Baptists — 150–200.

Zoar Chapel, Calvinists — 60–80.

Waterloo Chapel, Wesleyan Methodists — about 300 Members, congregation varies from 300–400.

Hastings, St. Clement's

Croft Chapel, Independents Congregational — 250–450, fluctuating.

Bryanites or Bible Christians, Bryanites or Ranters — 8–10 persons.

Hellingly

Zoar Chapel, Calvinists — 200.

Union Chapel, Wesleyans — 150.

Two Private Dwelling Houses, Baptists — about 30.

Sir, There are two Private Houses in Hellingly where about 30 People meet on Sunday Evenings alternately and both Houses Licensed and the Parties are Baptists. In consequence of the Houses being occupied by Families could not decide in my own mind whether they should be brought in or not but to prevent mistakes have given this information that you might decide it in a proper manner.

I remain Sir, Your Obt. Servt.
Wm. Gilmore, Overseer.

Ninfield

Bessells Green Chapel, Calvinistic Dissenters — from 80–100.
Ninfield Shop Chapel, Independents — from 50–75.
Wesleyan Chapel or House, Wesleyans — from 40–60.

Barlavington

None. A Catholick Chapel now building at the new Mansion called Burton, and in Barlavington Parish — 27 persons.

Broadwater

Independent Chapel, Independents — 200.
Wesleyan Chapel, Wesleyans — 50.
Putticks Schoolroom, Calvinistic Independents — 20.

Chichester, St. Peter the Great

Providence Chapel, Calvinists — 250.
Ebenezer Chapel, Independents — 180.
Independent Chapel, Independents — 300.

Horsham

General Baptist Chapel, General Baptists — 200.
Wesleyan Chapel, Wesleyan Methodists — 100.
Independent Chapel, Independents — 500.
Quakers Chapel, Friends, commonly called Quakers — 53.
Roman Catholic Chapel, Roman Catholics — 30.

Nuthurst

There is one Place of Worship in a Cottage in this Parish, Independents. A Minister from Horsham preaches there once a month on a weekday. There may be about 20 Dissenters in this Parish who attend this place of Worship and go to the Meeting at Horsham on Sundays. Between 40 and 50 people generally attend, but of these about one-half belong to the Established Church, and attend the Parish Church on Sundays.

Westbourne

No Building appropriated wholly for Divine Worship, but five Rooms in several houses, Licensed in the Bishop's Court for preaching, Independents — above 125.

Returns were made for 314 parishes of which 112 were recorded as having a total of 190 Dissenting places of worship. This total included both purpose-built chapels and other buildings used regularly for public worship (the latter were varied indeed and included houses, shops and schoolrooms). At this time there were many *House Churches* and the compilers evidently took pains to gather details about such groups of Dissenters. However, it could not have been easy for them to identify all such groups in the towns and the largest rural parishes. Existing Toleration Act registrations would have been some help here, as the return for Westbourne *supra* indicates, but the Act of 1812 amended the Toleration Act 1688 to permit groups of fewer than 20 persons to meet for public worship without registration of their meeting places.

Some of the compilers may well have had doubts about including in their returns very small house groups, as indeed the return for Hellingly *supra* suggests. Moreover, so many of these small groups were quite short-lived as they depended so much upon the enthusiasm of just one or two families. This means that the existence of Toleration Act registrations for say, 1827 or 1828 for a parish does not of itself indicate that the return for that parish in 1829 was in error if it made no mention of the group. There was also for compilers the problem that some of the

small house groups were not independent of the larger chapels with which they were associated and some compilers might have felt that the former ought not to be returned as distinct congregations.

Given these uncertainties, it would be misleading to offer a precise figure for the number of genuinely independent house groups meeting regularly for public worship and whose existence went unrecorded by the compilers in 1829. It seems unlikely however that the total number would have been more than about 15–20 across the county. The broad pattern of distribution of the 190 places of worship recorded was:

Division	*No. of Parishes making returns*	*No. of Parishes with places of worship*	*Total No. of such places*
Eastern	145	74	134
Western	169	38	56
Sussex	314	112	190

This pattern was in clear continuation of the far stronger representation of the *Old Dissent* in the Eastern than in the Western Division that had persisted from the seventeenth century. For example, the Compton Census of 1676 had acknowledged the presence of some Protestant Dissenters in 80% of Eastern Division parishes compared with only 54% of Western Division parishes. For Bishop Bowers' Visitation of 1724, these proportions were 63% and 48% respectively (though the coverage of the Visitation was narrower than that of the Compton Census).[9] This broad pattern was also confirmed by the Protestant Dissenters' own survey of Sussex in 1717.[10]

The historic pattern of distribution of continuing Catholicism in Sussex was the very reverse of this. From the time of the Elizabethan religious settlement, the preponderant strength of the Sussex Catholics lay in the Western Division.[11] This remained true in 1829 and the parish returns then showed that six of the seven Catholic places of worship were in the Western Division.

But this brief comparison between the two Divisions takes no account of the natural regions of Sussex with their associated economic and social characteristics. Weald, Downland and Coastal Plain all march across the administrative boundaries. The writer has not, however, examined in the required depth the extent to which the pattern of distribution of Dissent *c.* 1830 may have reflected materially the influence of these regional characteristics — except in the case of the Downland which is discussed below. Certainly, there was a wide and strong distribution of Protestant Dissent throughout the Weald, High Weald and Coastal Plain and the only major natural region in which Protestant Dissent failed to establish itself on a continuing basis was the Downland. In the writer's view, the pattern of distribution of continuing Catholicism owed nothing to the influence of regional characteristics.[12]

II DENOMINATIONAL PATTERN

Inevitably, there are uncertainties about the denominational ties of a number of the Protestant Dissenting places of worship as stated by the parish returns of 1829. It cannot be surprising that, despite their local knowledge, some of the Anglican compilers would have been puzzled by the rather fine distinctions in this field. This applied evidently most of all when it came to the distinctions between the congregations described variously as *Independent, Independent Calvinist, Calvinist* or *Congregational.* Moreover, a number of congregations

were still using denominational titles from the past which failed to reflect important changes in their theological stance in 1829. All the remaining groups described by the compilers as *General Baptist* had become by then Unitarian or Free Christian churches.[13] Several of the churches described as *Countess of Huntingdon* had become Congregational by 1829. Taken as a whole, however, the returns show that the compilers had made a real effort to identify the denominations involved and that they succeeded well in the attempt.

It is important in this context to note that the growth of Protestant Dissent as a whole in Sussex, and of particular denominations, as revealed by the 1829 returns far exceeded that shown by the surveys prepared around this time by national Dissenting interests themselves. The latter included notably the surveys published by the *Congregational Magazine* in 1826, 1829 and 1836.[14] That for 1829 records for Sussex a total of only 87 Dissenting places of worship, and even that for 1836 gave only 98 places, compared with the total of 190 provided by the parish returns of 1829. The most striking discrepancy here in terms of the various denominations related to the Methodists. Both for 1829 and 1836, the *Congregational Magazine* surveys gave a total of only 20 Wesleyan Methodist places of worship compared with the 53 such places recorded by the parish returns of 1829; for the Particular Baptists, the figures were 13 and 12 compared with 38.

These discrepancies serve to demonstrate convincingly that the Anglican compilers of the 1829 parish returns were not influenced by any bias against Dissent in the actual preparation of their returns. It is not known to what extent the *Congregational Magazine* surveys drew upon information supplied by correspondents in Sussex itself. The internal evidence suggests that such help, if available, must have been rather slight because local correspondents could hardly have been so lacking in knowledge of the large progress actually made in Sussex. These Dissenting surveys ought not therefore to be taken as providing a reliable assessment of the scale and denominational ties of Protestant Dissent in Sussex at the time.

The table below summarises the information provided by the parish returns of 1829 about denominational ties and compares this with the figures provided by other sources including the

TABLE
Dissenting places of worship in Sussex 1810–51

Source	*Total No.*	*Catholic*	*Presbyterian/ Unitarian*	*Independent/ Congregational*	*Particular Baptist*	*Wesleyan Methodist*	*Calvinistic Methodist*	*Other Methodist*	*Friends*	*Others*
Lords Return 1810[1]	57	3	5	19[3]	18	5[5]	–	–	7	–[9]
Congregational Magazine 1829	87	6	4	31	13	20	6	–	5	2
Congregational Magazine 1836	93	7	7	41	12	20	6	–	5	–
Commons return 1829	190	7	8	58	38	53	8	5[6]	6	7
Census 1851	267	8	–[2]	78	50[4]	80	5	–[7]	–[8]	46

Notes to Table

[1] As explained above, this Return covered only the larger parishes.

[2] Included under 'Others'

[3] The Return did not mention either of these two denominations explicitly, but covered them under the general term *Calvinists*.

[4] Intended to cover *all* Baptists.

[5] The Wesleyan Methodists were not strongly represented in the larger parishes as early as 1810, but they had by then a good many societies in the smaller parishes in the eastern part of Sussex.

[6] All these were *O'Brienite* (Bible Christians) meetings.

[7] Included under 'Others'

[8] Included under 'Others'

[9] The 1810 Return included the Jewish synagogue at Brighton, but this has been excluded here from the total. The 1829 return for Brighton also included this Jewish congregation and again it has been excluded from the total.

Census of Religious Worship 1851.[15] The parish returns have been corrected in a small number of cases where there is full independent evidence that an error was made by the compiler.

The close correspondence between all these sources about the number of Catholic places of worship is readily understandable because there would have been no real difficulty in identifying Catholic congregations and there were so few of them in Sussex until late on in the nineteenth century.[16] The growing strength of Methodism has already been mentioned and its growth continued to be substantial after 1830. The Particular Baptists had not been strongly represented in the Old Dissent of the seventeenth-eighteenth centuries when the great majority of the Baptist churches in Sussex were General Baptist. A major factor in the growth of the Particular Baptists was the transformation of all the continuing General Baptist churches into Arian or Unitarian during the first half of the eighteenth century: the period of rapid growth of the Particular Baptists dated from around 1760.

In the Old Dissent in Sussex, the Congregationalists (Independents) had been relatively weak compared with the Presbyterians but in the New Dissent they became the leading denomination. As in the case of the General Baptists, the Sussex Presbyterian churches which had survived into the eighteenth century all became Arian or Unitarian and almost all were later disbanded. It was not until well on into the nineteenth century that new English Presbyterian churches of orthodox theology were formed in Sussex — in the coastal resort towns.

III THE PROBABLE NUMERICAL STRENGTH OF DISSENT

The 1829 Return called for estimates of the numbers of persons 'belonging' to each Dissenting place of worship and almost all the compilers of the parish returns provided such estimates and evidently tried hard to make these realistic. Once again, it is clear that compilers had no inhibitions about acknowledging the great increase that had taken place in the strength of Sussex Dissent. Their estimates can be taken therefore as a good basis of comparison between the numerical strength of Sussex Dissent *c.*1830 and its strength as recorded in the Religious Census 1851.

Inevitably, there are statistical and other uncertainties about some aspects of the 1829 parish estimates — as there are indeed about the 1851 Census itself. Not surprisingly, most of the compilers felt the attraction of 'a good round figure'. when setting down their estimates. In any case, this was reasonable because so many of the Dissenting congregations would have had fluctuating attendances at their services, and many compilers sensibly offered a range of the numbers involved. As far as the County Return to the House of Common was concerned, however, this course was frustrated by the Clerk of the Peace who proceeded to take the median of the ranges, but the ranges remain in the originals of the parish returns.[17] The parish returns as a whole suggest — in the light of the independent material available — that the compilers tended to overstate the numerical strength of Dissent rather than to underestimate this. For example, the estimate for Mayfield was 600 Protestant Dissenters out of a total population of some 2,700 (1831 Census) and this does seem to be on the high side.

The indications are that very few of the compilers interpreted the term 'Persons belonging to' the place of worship as applying only to *adults.*[18] Certainly, if this had been their intention, a great many of the estimates would indeed have been unrealistic in terms of the size of local populations at the time. However, the main problem is to try to assess the extent to which there was an appreciable element of 'double-counting' in the parish returns in consequence of the practice of attending more than one place of worship on Sundays. This practice held good for

Sussex for the members of several denominations (though not for the Particular Baptists) especially in the towns where there were so many chapels and such a diversity of preachers. But the practice was not confined to the Protestant Dissenters themselves. Contrary to some received opinions, there was not a total separation between Anglicans and Dissenters and there were a good many Anglicans in Sussex who were none too happy with their ultra-conservative incumbents and who, though not prepared to leave the Church of England, yet preferred sometimes to attend Dissenting services. And others among the Anglicans recognised the merits of some Dissenting ministers as preachers. A number of the parish returns show that their compilers were well aware of these factors. For example, at Ripe:

> 'Calvinists of the Independent Denomination. Several Families in the Parish attend and many attend who often are at Church which makes it most difficult to draw any line between them. The number of persons who attend varies from 25 to 50.'

The similar case of Nuthurst is mentioned *supra*. Although many compilers did not make specific mention of attendance by Anglicans at Dissenting services, there is a strong likelihood that there was at this time a significant Anglican element included in the estimated numbers of persons attending the Dissenting places of worship in a fair number of cases.[19]

There is also the uncertainty about the extent to which the numbers of Dissenters recorded for a particular parish included persons not resident in that parish (though this factor should not of itself influence the total number of Dissenters in Sussex independently of the general factor of double-counting). With the large increase in the number of Dissenting places of worship during the previous 20 years or so, there was no longer the same compelling need for Dissenters to travel quite long distances to services of their own denomination away from their own parishes of residence. But the need remained still for those Dissenters who had no chapel of their own denomination in their parish and who attached great importance to being able to worship in such a chapel. The return for Sedlescombe is relevant here:

> 'Wesleyan Methodist Chapel, Congregation drawn from a wide area (few Methodists in the Parish and a few others).'

The problem of double-counting arises also for the 1851 Census of Religious Worship because the returns then made of the numbers involved were intended to cover: 'the numbers of persons present at the most numerously attended Services' (on Sunday 30 March 1851). This means that no allowance would have been made — or could have been made in practical terms — either for those Dissenters who attended more than one place of worship on that Sunday, or for those Anglicans who that day attended services both at their parish churches and at some Dissenting chapel.[20] This aspect is discussed further below, but it should be emphasized that the arithmetic of the 1851 Census ought not to be taken at its face value.

The 1829 parish returns point to a total of around 24,000 persons belonging to the Dissenting places of worship. This would have been the total number of *Hearers* — the term adopted generally to describe all persons present at worship whether church members or not and usually intended to include children as well as adults. Most of the compilers did not attempt to make any distinction between church members and hearers, but a number obtained information on this point from the local Dissenting ministers. This information supports the conclusion that the number of church members was usually a modest proportion only of the total congregations even in terms of adults.[21] This distinction, however, does not affect the total number of Dissenters.

The figure of 24,000 needs to be discounted for the undoubted element of double-counting involved in the parish returns, including the attendance of Anglicans at the Dissenting services.

To arrive at a factor for this element is necessarily a hazardous process and it would be misleading to offer any precise figure. It is the writer's view that a total for Sussex of the order of 21,000 to 22,000 would be closer to the mark for the numerical strength of Sussex Dissent *c.*1830. This estimate represents about 10 or 11% of the total population at the time. In 1826, the *Congregational Magazine* referred to Sussex as follows:

> 'It is computed that not more than 33,000 Inhabitants of this County receive the benefit of true Evangelical Instruction.'

There is of course no means now of determining how such a computation was made. In any case, it cannot safely be assumed that its authors intended this figure of 33,000 to be taken as an estimate of the total number of Protestant Dissenters in Sussex. The term 'true Evangelical Instruction' could well have been used to allow also for the parishioners of those of the Anglican clergy who were regarded as strongly evangelical. Plainly, a total of as many as 33,000 is far too high to be credible and the parish returns of 1829 are much to be preferred as a guide here.

The writer has suggested elsewhere that the Protestant Dissenters in the 1670s probably represented no more than 10 or 11% of the Sussex population.[22] It is interesting to find, therefore, that — for all the striking progress made by the new Dissent with the impetus of the evangelical revival — its strength proportionately to the total population was no greater *c.*1830 than it had been two centuries earlier.

Looking ahead to 1851, the Census of Religious Worship gave a total for Sussex of 38,000 Dissenters on the basis of the numbers of persons present at the most numerously attended services on 30 March 1851. This represented an average of 142 persons for the 267 Dissenting places of worship recorded by the Census (compared with an average of 125 persons for the 190 places of worship recorded in 1829). This total included the small number of Catholics. By 1851, the total population of Sussex had risen to 339,000. Taking the Census 1851 figures at their face value, and excluding the 1,200 Catholics, the Protestant Dissenters would have represented only 11% of the population. But this is to allow nothing for the factor of double-counting and there is also the uncertainty about the scale of 'absenteeism' of the Dissenters from those services on 30 March — though it is unlikely that the level of voluntary absenteeism would have been large.

The most realistic course to adopt here is probably to ignore both double-counting and absenteeism and to conclude that in 1851 the Protestant Dissenters still represented no more than 11% of the total population of Sussex. The progress of the various denominations generally between 1830 and 1851 does not at all suggest that the numerical growth of Dissent was proceeding at a significantly faster rate than the growth of the population as a whole. Even though Sussex Dissent had maintained its relative position over this period its actual strength

County	*Dissenters recorded in Census 1851*	*Total population in 1851*
Sussex	38,000	339,000
Suffolk	65,000	336,000
Essex	70,000	344,000
Hampshire	67,000	402,000

was modest indeed compared with the strength of Dissent in reasonably comparable English counties:[23]

IV THE DOWNLAND CASE

The 1829 Return demonstrates that Protestant Dissent was indeed widely distributed across Sussex in all the major natural regions with the exception of the Downland. It is the writer's view that there are substantial grounds for attributing the weakness of organised Dissent in the Downland parishes to the strong and continuing influence of the economic and social characteristics of these parishes. The historic patterns of both Old and New Dissent confirm that the repeated efforts made to establish viable congregations in the Downland region were hardly ever successful.

When, in the closing years of the eighteenth century, the New Dissent had grown substantially, a number of the strong churches in the Coastal Plain, the Weald and the High Weald were active in trying to foster congregations in the Downland parishes. These churches sent out lay preachers to Downland parishes and set up some small house groups. This work was much extended and developed later on with the formation in 1803 of the *Society for Spreading the Light of the Gospel in the Dark Towns and Villages of Sussex.*[24] In this context, the use of this harsh-sounding word 'Dark' conveyed the sectarian meaning that the only places of worship in such towns and villages were parish churches not served by men of strongly evangelical sympathies. The Dissenting ministers most closely involved in the Society's work included those serving churches in Burwash, Heathfield, Newhaven, Brighton, New Shoreham, Arundel and Chichester.

In January 1809, and thanks largely to the warm support of many Congregational churches, the Sussex Mission Society was formed at Brighton. Its object was 'the more extensive spread of the Gospel in the county of Sussex.' The Society was active in Downland parishes through the appointment of home missionaries as well as lay preachers and a number of *Preaching Stations* were quickly set up. Toleration Act registrations during the period 1800–30 reflected this active home missionary enterprise with registrations for Protestant Dissenters in some 35 Downland parishes. Yet, almost all of these groups proved to be short-lived and no organised churches came into being. It was a similar experience between *c.*1870 and 1900 when the Sussex Congregational Union and Home Missionary Society again made a substantial effort to establish groups in Downland parishes, working particularly through the strong churches at Eastbourne, Alfriston, Brighton and New Shoreham.[25] A large number of *Out Stations* of these churches were set up, including those at Jevington, Litlington, Wilmington, East Chiltington, Patcham and Coombes. Once again, none of these proved capable of growing into a viable local church.

These repeated efforts were made in the Downland parishes even though the distances involved for residents in them wishing to attend services in churches of their own denominations in the Scarp Foot Zone were modest enough for those times. There had been evidence of willingness to travel these distances during the period of active persecution of Protestant Dissenters between 1662 and 1688 when a number of *Conventicles* were held in the Zone.

The weakness of Dissent in the Downland parishes was the result largely of their characteristically close-knit economic and social structure. The very smallness of their populations was itself a powerful inhibiting factor against the formation of viable Dissenting churches. In so many of the Downland parishes, a few families accounted for most of their populations and for

Dissent to have succeeded in forming effective and enduring congregations would have had the result of reducing support for the Parish Churches to almost negligible proportions.

Even at its strongest in some of the towns and in the well-populated Wealden parishes, Protestant Dissent rarely represented more than some 15 to 20% of the local populations. A similar ratio in the Downland parishes would have been quite inadequate to provide a viable basis for a continuing local church. Moreover, the absence in the great majority of the Downland parishes of any sizeable group of small traders and craftsmen was adverse to the growth of Dissent because in Sussex generally, as in so many other English counties, it was such groups who contributed greatly to the formation and support of local Dissenting congregations.

In this context, the work of Dr. Colin Brent on rural employment and population in Sussex is of great significance.[26] Brent has concluded of the Downland region that:

> 'The characteristics of the downland region, dominated by sheep-corn husbandry, scarcity of craft employment, consolidation of a labour-saving high farming, erosion of family farmers and little scope for the enterprising cottager, underline its similarity to other increasingly folden regions elsewhere and seem frequently to have been reflected in a "want of inhabitants" and in the decay of corporate life.'

These sixteenth/seventeenth century characteristics of the Downland held good for it generally also during the period *c.*1780 to 1900 — above all in the vital respects of 'want of inhabitants' and of absence of craft employment.

The Downland case was in sharp contrast with that of the Coastal Plain with the latter's rapid development of nucleated settlement, large growth of population and of corporate life from the late eighteenth century. And it was the Coastal Plain that provided the New Dissent with its most notable growth opportunities which it was swift to seize. Understandably, the most spectacular growth was in Brighton. The 1829 Return estimated that the number of Protestant Dissenters there was over 5,000.[27] It was not only the growth of the resident populations with their large groups of small traders and craftsmen which was important here because there was also the substantial financial help provided by the crowds of summer residents who wished to attend churches of their own denominations.

It is to be hoped that before long there will be a full examination of the influence of the economic and social characteristics of the other major natural regions of Sussex on the pattern of development of Sussex Dissent.

ACKNOWLEDGEMENTS

The writer is grateful for the generous help given to him at all times by the staffs of the East and West Sussex Records Offices, by Mr. D. Johnson (House of Lords Records Office) and by Mr. J. H. Farrant.

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Footnotes

[1]N. Caplan, 'Religious Dissent in Sussex *c.*1829' *(Journal, United Reformed Church History Society,* Vol. 1, No. 7, 1974).

[2]British Parliamentary Papers (Lords) 1811 (48), xlvi, 17. The List for Sussex in fact included also seven parishes with populations between 931 and 997 inhabitants. There were said to be 54 Protestant Dissenting and three Roman Catholic places of worship in the 41 parishes listed.

[3]There was one exception to this in that a version of the Return for the County of Lancaster was ordered to be printed: British Parliamentary Papers 1830 (644), xix, 11–34. But this version of the Return has been described as "highly inaccurate" by W. R. Ward: *Religion and Society in England 1790–1850* (1972).

[4]QCR/1/II, E.I. and W.I. These are complete for 314 parishes. The writer's reference in the paper noted in 1 *supra* to the loss of some parish returns arose through a misunderstanding when a bundle of returns was not produced with the remainder.

[5]Notably, the surveys published by the *Congregational Magazine,* 1826–36.

[6]For example, *The Black Book* (new edition, 1835).

[7]For example, at Fernhurst: 'I have been to the Pastor.' At Warminghurst, the Dissenting Minister himself made out part of the return and signed the statement about his own chapel.

[8]An exception should perhaps be made here for the incumbent of Chidham who wrote: 'Some 8 or 10 Persons attend some Dissenting Place of Worship out of the Parish, but of which Sect or Denomination the Devil only knows.'

[9]Though the information provided by the Chichester portion of the Compton Census must be treated with reserve in view of the strong evidence of underestimation of the strength of Dissent, such bias is unlikely to have influenced materially the relationship between the two Divisions of the County as such. The Visitation of 1724 appears to have been largely free from bias. See N. Caplan, 'Notes on Sources for the History of Sussex Dissent *c.*1660–1860,' *S.A.S. Newsletter,* No. 24 (1978).

[10]This was the Sussex portion of the John Evans list which was compiled by the Rev. Robert Bagster of Chichester in 1717. See N. Caplan', Protestant Dissent in Sussex *c.*1717: The Evans List,' *S.A.S. Newsletter,* No. 21 (1977).

[11]See, N. Caplan, 'The Sussex Catholics *c.*1660–1800,' *S.A.C.* 116 (1979), 19–29.

[12]*op. cit.*

[13]The returns for Ditchling and Horsham referred to these substantial *Free Christian* churches as *General Baptist,* but the return for Lewes, St. Michael's Parish correctly described the former *Presbyterian* Westgate Meeting as *Unitarian.*

[14]The *Congregational Magazine* was published from 1818 to 1849 and it was influential in Dissenting circles.

[15]For a manageable account of the mass of material gathered by the Census, see H. Mann, *Abridged Report on Religious Worship in England and Wales* (1854).

[16]Of the seven Catholic places of worship recorded, six were in parishes with a long record of continuing Catholicism and most of these had been Mass Centres from the time of the Elizabethan religious settlement: see, N. Caplan, *op. cit.*

[17]For example, the return for Arlington gave 'from Fifty to Sixty Persons' and the Clerk's note on the official form reads 'Returned at 55'.

[18]The only return that mentioned this point explicitly was that for Harting: 'Adult Attendants Two Hundred, Sunday School 180.' An adult congregation of 200 for Harting parish may seem high, but the Congregational church there served a wide area and it drew support also from the Hampshire side of the border (another aspect of double-counting).

[19]The case of Bosham was extreme because of serious troubles within the Parish Church which led the Churchwarden to add a note of explanation to the return for Bosham Congregational church: 'Now crowded to Excess in consequence of the Parochial Church being so very badly served with an Insufficient Vicar which has caused the Parishioners to desert it.'

[20]It was by no means unusual in Sussex in the 1850s for staunch Anglicans to attend Congregational churches on Sunday evenings where the ministers were respected for the quality of their preaching.

[21]For example, at Northiam: 'One Chappel of Unitarian Baptists. 26 Members or an average number of 100 Persons in their Congregation.' At Peasmarsh: 'Hurst Green Wesleyan Methodists. 30 in Society and 100 usually attend.' The precision of these figures of membership suggests strongly that the compilers had obtained them from the local Dissenting ministers.

[22]N. Caplan, 'An Outline of the Origins and Development of Nonconformity in Sussex: 1603–1803' (unpub. typescript, copies in S.A.S. Library and in British Library and Dr. Williams's Library).

[23]The proportion of total *sittings* provided by Dissenting places of worship in Sussex was the lowest of the English counties except for Rutland.

[24]The *Evangelical Magazine* contains many references to the work of the Society from 1803 on.

[25]Though Alfriston was itself a parish of the Downland, it was so much more populous than the others and it had numbers of small traders and craftsmen.

[26]C. E. Brent, 'Rural Employment and Population in Sussex between 1550 and 1640: Part Two,' *S.A.C.* Vol. 116 (1979), 41–45.

[27]The 1829 return for Brighton included also a Catholic church of 90 persons and a synagogue of 60 persons.

ARCHAEOLOGICAL NOTES

This section of the *Collections* is devoted to short notes on recent archaeological discoveries, reports on small finds, definitive reports on small scale excavations, etc. Those without previous experience in writing up such material for publication should not be deterred from contributing; the editor and members of the editorial board will be happy to assist in the preparation of reports and illustrations.

Chert Axe or Pick from Ashdown Forest

As artifacts in chert are rare in the Weald it is worth recording such a tool found recently in the area of the former Ashdown Forest at TQ 459 307 (Fig. 1). The find spot is on the rather steeply rising valley side of a small stream, and the implement was seen protruding from below the surface where the soil had been disturbed by a tractor wheel. It weighs 860 g.

It was submitted to Mr. R. W. Sanderson of the Petrology Unit, Institute of Geological Sciences, South Kensington, who compared it with samples of chert in their collection and to whom I am indebted for the following report:- 'The pick has been fashioned from a pale grey, translucent spicular chert which is closely comparable to two of our samples of Lower Greensand (Hythe Beds) chert, one from Tilburstow near Godstone, Surrey and the other from Tillington, Sussex. From this it may be concluded that the source

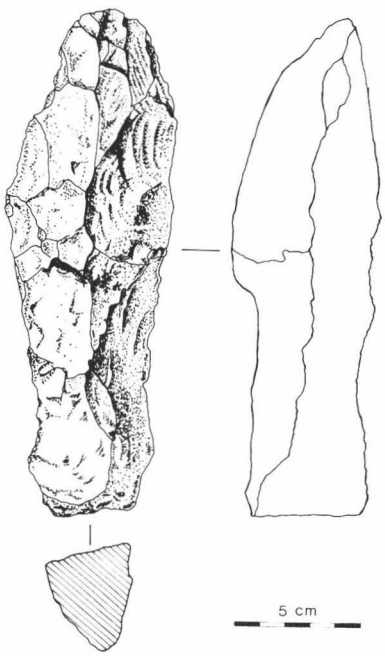


Fig. 1. Chert axe from Ashdown Forest.

for the pick was probably somewhere in the NW quadrant of the Weald, i.e. roughly between Reigate, Farnham and Hindhead.'

My thanks are also due to Mr. D. Champ, Headmaster of East Wickham Junior School, Welling, Kent who made the discovery and brought it to my notice. The axe is at the moment being used as a teaching aid but will eventually be given to the Ashdown Forest Centre. My wife kindly made the drawing.

C. F. Tebbutt

Two flint axes and one stone axe found in eastern Sussex

1. Polished flint axe found in Bodiam TQ 784 261 (Fig. 2)

A fine polished axe of yellow/white flint was found during ploughing on Court Lodge Farm.

The axe is 127 mm long, 57 mm wide at its widest point. It has a very good cutting edge in very good condition. The axe is remarkably bulky and heavy in the hand and the upper surface is very clearly shaped. Both upper and under surfaces show signs of damage both in antiquity and more recently (not shown on the drawing). The butt end is extensively pitted as though it had been used as a hammer stone.

2. Polished flint axe found in Bodiam TQ 769 264 (Fig. 2)

A fine polished axe with slightly flattened sides and of grey/brown flint was found by Mr. D. Foster during drainage work.

The axe is 120 mm long, 55 mm wide at its widest point and shows signs of recent damage to its cutting edge. The butt end appears to have been broken in antiquity with scars along the broken edge. The broad cutting edge is slightly chamfered. The recent damage reveals an orange/brown patination and a light grey centre.

3. Polished stone axe found in Mountfield TQ 743 201 (Fig. 2)

A fine stone axe, grey/green in the interior but polished almost to a bronze colour on the exterior, was found by Mr. S. Blackman at Hoath Hill in Mountfield.

The axe is 115 mm long and 65 mm wide at its widest point. Its cutting edge is worn and blunted. Tests at the British Museum revealed that it is made of green-brown volcanic stuff and came from the Pike O'Stickle factory at Great Langdale in the Lake District. It is not possible to date this item accurately at present, but the factory was working during a large part of the Neolithic period. Examples of this type are not common in Sussex.

These axes remain in the possession of those who found them.

John Bell
Simon Kaner
Gwen Jones

Miniature flint axe from Cissbury

The axe illustrated (Fig. 3) was found in a mole scrape above the flint mines of Cissbury, NGR TQ 137 079, by Mr. A. Barnett, of Kingston, Surrey.

It is of heavily patinated flint and is a mere 8 cm long, 1.1 cm thick and 3 cm wide. Patches of darker colouring at the waist may indicate the presence of a haft, as may

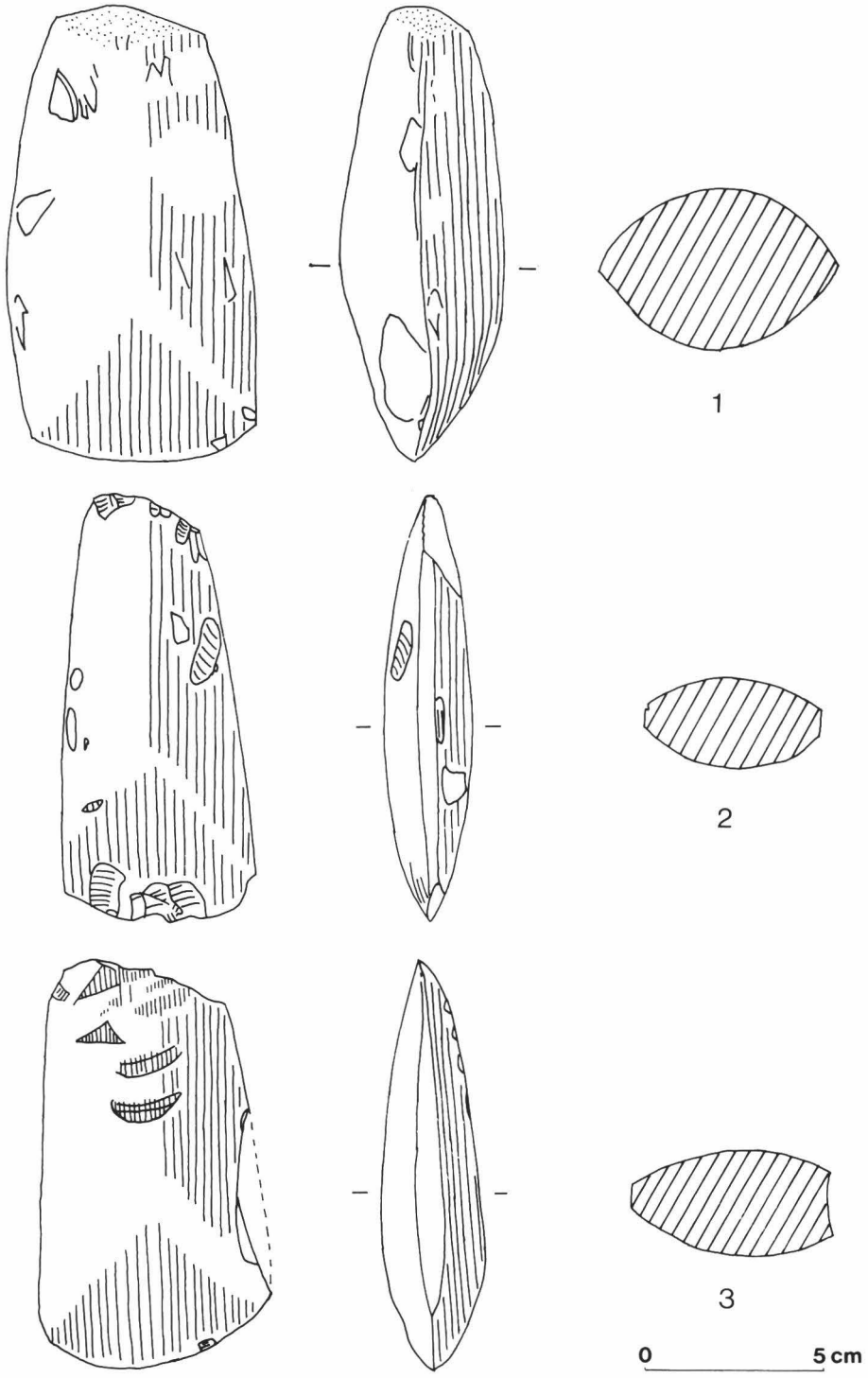


Fig. 2. Two flint axes and a stone axe from East Sussex.

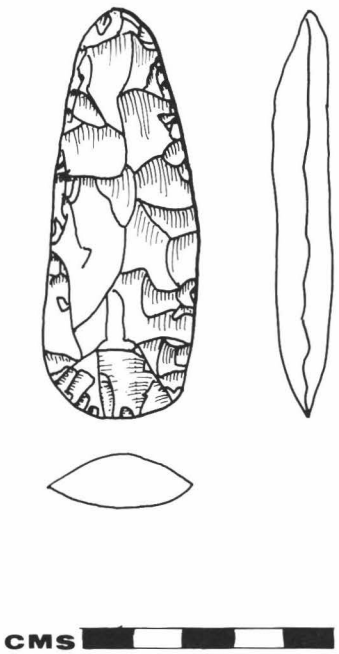


Fig. 3. Miniature flint axe from Cissbury.

a small patch of gloss/polish. It is of typical Cissbury form though its measurements are so slight as to question its use as a functioning axe/adze. Mr. Barnett has retained the axe.

David Field

A Study of the Chronological Development of the Bishopstone Lynchet by Least-Squares Analysis of the Distribution of Datable Artefacts

The mathematical technique of least squares analysis is applied to the positions of datable artefacts found in the Bishopstone lynchet. This enables a 'best line' to be drawn through the distribution relating to a particular period. The resulting lines are found to follow a logical chronology and to suggest the development of the shape of the lynchet.

In Bell's (1977) account of his excavation of the multi-period site at Bishopstone he describes in detail the investigation of a section taken through a positive lynchet. His Plates XIX and XX show the general view and the composite picture of the lynchet section. He writes that 'a trench 17 m long and 2 m wide was opened at right angles to the line of the lynchet and excavated entirely by hand'. His reason for this part of the investigation was to '. . . try and assess when the lynchet had been formed by means of the artefacts it was known to contain . . .' Among the 1,985 artefacts he found some flint tools, a large number of flint flakes and of more particular interest, because dates are ascribable, he found Neolithic, Bronze Age, Iron Age, Romano-British and Anglo-Saxon pottery sherds as well as medieval and modern material. The plan and section of the trench and the distribution of flint and pre-medieval pottery is shown in Figs. 106–9 of his account. A cursory examination of these distributions shows a suggestion of a logical chronology. Certainly the Neolithic wares lie deepest and the Anglo-Saxon the least deep. However, the scatter for each of the different components of the assemblage is considerable.

What we have tried to do is to see if a rather more formal, although scientifically simple analysis of the distributions would lead to more information or, indeed, to the affirmation of a logical chronology. An attempt was made to see if a 'best-line' could be drawn through the appropriate part of the scatter relating to one particular period and to do this the method of 'least squares', very commonly used in the physical and biological sciences, was employed (Barford 1976, Clark 1980 for example).

Very often it is found that there is a simple relationship between two quantities 'x' and 'y', where perhaps, to choose an identifiable and sensible example, y represents vertical position and x lateral position. If the relationship is simply a straight line then

$$y = ax + b$$

where 'a' is the slope of the line with respect to the coordinate frame within which measurements have been made. If the relationship is a curve then more terms will be required to express it, for example,

$$y = ax^2 + bx + c$$

would allow for one peak while

$$y = ax^3 + bx^2 + cx + d$$

would allow for two. In each case the coefficients a, b,

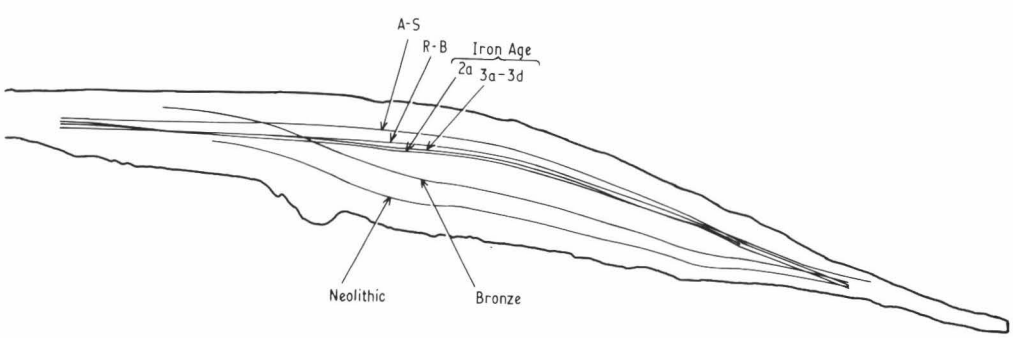


Fig. 4. Cross section of the Bishopstone lynchet showing the least-squares fitted 'best lines'.

c, d etc. are to be determined from the experimental data which must be looked at carefully so that the most appropriate form of curve may be chosen. The nature of actual measurement, involving as it does statistical scatter is such that not all measured points will fit a curve of this type. Consequently, it is necessary to find the best smooth curve, with the fewest number of coefficients to be determined, which goes through the 'scatter' of measurements in this two-dimensional array. The most common method, based on a formal mathematical basis, is that of 'least squares'.

If, for example, the lateral position x is well established we may find several values of y_i for a particular value x_i. Consequently there will be a difference betwen the measured value y_i and the value predicted by the equation. For the case of the equation $y = ax^2 + bx + c$, which is found to be the appropriate one for this investigation, the error is given by,

$$\text{Error} = \varepsilon_i = y_i - ax_i^2 - bx_i - c.$$

The method of least squares consists in minimising the sum of the squares of the errors for each value of y_i. This means minimising the quantity $\Sigma \varepsilon_i^2$, where ε_i^2 represents the square of the error and $\Sigma \varepsilon_i^2$ the sum of all such squares. Simple algebra shows that this is equivalent to solving the set of simultaneous equations,

$$a\Sigma x_i^4 + b\Sigma x_i^3 + c\Sigma x_i^2 = \Sigma y_i x_i^2$$
$$a\Sigma x_i^3 + b\Sigma x_i^2 + c\Sigma x_i = \Sigma y_i x_i$$
$$a\Sigma x_i^2 + b\Sigma x_i + c\Sigma i = \Sigma y_i$$

This is readily carried out using a pocket calculator, or if a computer is available the equations may be solved using an inverse matrix approach to yield the values of a, b and c. We thus have a curve $y = ax^2 + bx + c$ where the coefficients have been determined by the 'best fit' to all the available measurements.

When this approach is applied to the scatter arrays of Bishopstone we are assuming in essence that for the Neolithic material say there is a notional level, arguably the Neolithic horizon, which relates to the acquisition of those artefacts by the lynchet. Thus, for each Neolithic sherd whose depth and lateral position was measured by Bell we have fitted the 'least-squares' best line. We fitted $y = ax^2 + bx + c$ for the value of y measured both from the natural and from the surface of the lynchet. The Bronze Age, Iron-Age 2a, Iron Age 3a–3d, Romano-British and Anglo-Saxon were similarly treated. The results which give the best fit are,

$$y_{Neo} = -0.000158\,x^2 + 0.041\,x + 7.061$$
$$y_{Bro} = -0.000320\,x^2 + 0.078\,x + 13.069$$

where y is measured from the natural and

$$y_{Iron2a} = -0.000579\,x^2 + 0.232\,x - 9.357$$
$$y_{Iron3a-3d} = -0.000448\,x^2 + 0.178\,x - 4.502$$
$$y_{R-B} = -0.000370\,x^2 + 0.132\,x + 0.700$$
$$y_{A-S} = -0.000108\,x^2 + 0.041\,x + 4.705$$

where y is measured from the surface.

We may note that the curves relating to the various fabrics are quite distinct and the Standard Deviation of the Mean when examined shows that the 'best lines' plotted in Fig. 4 have a maximum error in position in either direction of no more than twice the width of the line as drawn.

Interestingly, as Fig. 4 shows, where the region plotted begins at $x = 100$, the Neolithic lies below the Bronze Age, the Iron Age 2a above that and, although remarkably close together, Iron-Age fabrics 3a–3d and the Romano-British just above that, etc. The chronology is rational and the appropriate horizons change and develop with each period from the shape of the underlying chalk natural to the final form of the lynchet profile. It is also interesting to note the confusion which exists at the relatively shallow top and toe of the lynchet. This is what might well be expected. Plough action could easily confuse the strata at the top while ancient ploughing and the production of a negative lynchet at the toe would play a similar role. This is also the position at which the processes of erosion and soil creep might well occur. The resulting curves also give cause to wonder what archaeological phenomenon causes the Bronze Age line to provide the interface between that of the Neolithic which follows the natural, and the Iron-Age onwards where we find an echo of the present surface outline. We should note that there were only 30 Bronze Age artefacts to consider and they appear to have a large scatter (Bell 1977, Fig. 108e); indeed Bell records that these 'finds showed no distinct vertical zonation'. However, analysis of the Standard Deviation of the Mean for the Bronze line shows that it is no more than 1½ times worse than that of the Neolithic.

There must be doubt as to whether we are justified in assuming that the lateral position x_i is well defined. Certainly in Bell's measurements and scatter diagrams it is a well defined quantity, but just what the archaeological implications of that assumption are, is not so clear. Consequently we would not wish to make extravagant claims for what is found. However, the subjectivity of the attempt to examine the chronology of Bell's scatter diagrams in his Figs. 108 and 109 has been replaced with formal demonstration that the best fit to each distribution lies deeper the older the archaeological period it came from. Thus the lynchet artefacts do seem to still represent something real about the time in which they were deposited in spite of reploughing, worm-sorting, etc. etc. Also it would be relatively easy to extend the analysis to include finding the probability that a particular artefact belonged to one era or another by seeing which 'line' it most related to. For an individual sherd, or indeed flint, it might be untrue but the average for a large assemblage would appear to be very meaningful. Alternatively, with a little more mathematics we could establish a 'degree of confidence' which would show how tightly a distribution fitted a particular line. In this way our ability to decide between Neolithic and Bronze Age for example could be toughened by formal probability rather than subjective expectation. Whether the zones can be dated by the pottery within them is arguable but also largely irrelevant: the application of a simple mathematical technique has exposed a sensible chronology and a relationship between it and the development of the shape of the lynchet.

It is a pleasure to acknowledge Martin Bell for providing the original recorded measurements for the positions of the sherds in the Bishopstone Lynchet and for his interest in this work while it was in progress; also to Dr. A. H. Craven of the School of Mathematical and Physical Sciences, University of Sussex for his time and interest in the problem and for obtaining the computer solutions to the equations.

Les Allen

References

Barford, N. C. 1976. *Experimental Measurements: Precision, Error and Truth.* Addison-Wesley.

Bell, M. G. 1977. 'Excavations at Bishopstone' *Sussex Archaeological Collections,* Vol. 115, pp. 251–62.

Clarke, G. M. 1980. *Statistics and Experimental Design*, Arnold. 2nd Ed.

A Bronze Age bucket urn from Middleton-on-Sea (SU 9699 0047)

A self-build group, the Tudor Housing Association, started building round an extension to Priestley Way in August 1981. On 21 September 1981, the contractor for the road extension, E.L. Contractors Ltd., cut through the urn here illustrated (Fig. 5) while digging the main storm sewer trench (*c.* 1.8 m deep by 0.65 m wide). The contractors kindly agreed to take an early lunch while the urn and its immediate surroundings were investigated, photographed and rescued.

The urn, which had apparently been broken in antiquity, was lying on its side at a maximum of 72 cm below the modern turf line, which here is 5.0 m O.D. No specific feature was established, but there was a thin sprinkling of flint nodules at this depth in the immediate vicinity. The only other nearby features so far found, are a small quantity of ash, with particles of burnt bone, at a similar depth, but 14 m due south of the urn; and some daub at the same depth, *c.* 40 m south-west. No worked flints were found in the immediate area.

The soil here consists of sandy brickearth, with flecks of black organic material, and very few flints or other stone, down to about 2.0 m, where it becomes a chalky marl on solid chalk (Hodgson 1967).

Fabric: The clay matrix varies in colour externally from red-brown to grey-black. Internally it is a uniform grey-black, apart from inclusions, as is the core. The filler is, largely, calcined and partially-calcined flint up to 10 mm long. There are some grass markings on the surfaces. The filler is liberal, especially in the base.

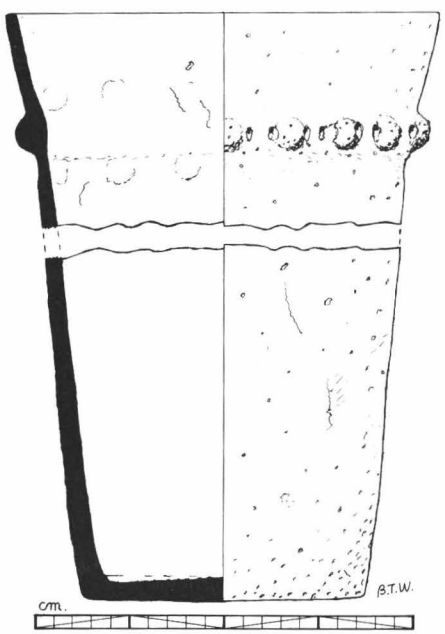


Fig. 5. Bronze Age pottery from Middleton-on-Sea.

Ornament: The cordon apparently consists of a ridge, slightly raised by pinching out the fabric, with applied knobs or lugs pressed in by thumb and finger, with nail marks showing. The external and internal surfaces show partial smoothing of the surfaces of the inclusions. The urn appears to be an example of Ellison Type 10, Middle Bronze Age (Ellison 1978). The material and transparencies of the find-spot have been deposited in the Chichester District Museum.

Other finds in the area: The nearest similar pottery find is apparently a hybrid between Ellison Type 3 and Type 10, at Yapton (SU 973 034) (Lewis 1960). There is a similar find (unpublished) from North Bersted (SU 9296 0092); this may be an example of Ellison Type 3 with four lugs (Ellison 1980).

Basil Wedmore

References

Ellison, A. B. 1978. 'The Bronze Age of Sussex' in *Archaeology in Sussex to AD 1500* (Ed. P. L. Drewett), C.B.A. Res. Rep. **29**, 30–41.

—— 1980. 'The Bronze Age' in 'The archaeology of Sussex pottery' (ed. D. J. Freke), *Sussex Archaeological Collections* **118**, 31–42.

Hodgson, J. M. 1967. *The soils of the West Sussex Coastal Plain* Harpenden.

Lewis, G. D. 1960. 'Some recent discoveries in West Sussex', *Sussex Archaeological Collections* **98**, 17.

A 'Sussex style' of post-ring layout in Bronze-Age roundhouses

A distinctive post-ring pattern, recognizable in certain roundhouses excavated at Bronze-Age settlement-sites, is best represented in Sussex.

In the course of preparing two other papers on post-ring roundhouses (Guilbert 1981 and 1982), my attention was drawn to a point of marked resemblance among a number of structures excavated in Sussex. Each of the structures concerned was recorded on the site of some settlement of Deverel-Rimbury age, which is to say the later second millennium bc or, in conventional terms, the Middle Bronze Age; and each site is situated on the South Downs. Simplified plans of eight roundhouses are seen together at a uniform scale in Fig. 7, the selected postholes being shown solid while those considered supernumerary to the basic ground-plans are outlined. The immediate impressions thus conveyed are of repetition and of simple symmetry.

The best structure for elucidating the attribute featured in all eight is at *New Barn Down*, where arbitrary selection from among the recorded postholes is at a minimum in analyzing the building-plan in Curwen's Cutting VIII (1934), 141–2, PL. III, Fig. 2: redrawn as Fig. 6 herein). There, seven postholes, C–K lie on a circle of 5.0 m diameter, outside which A and L may represent an easterly doorway through a concentric external wall roughly 6.6 m in diameter and not itself represented archaeologically (Guilbert 1981, 308, Fig. 8.R). Thus, hole F is at the back of the ring for internal roof-supports, diametrically opposite not only the mid-point of the interval between C and K, at 3.1 m the widest interval in the ring, but also the mid-point of the 1.6 m-wide doorway — an arrangement frequently encountered elsewhere in post-ring roundhouses

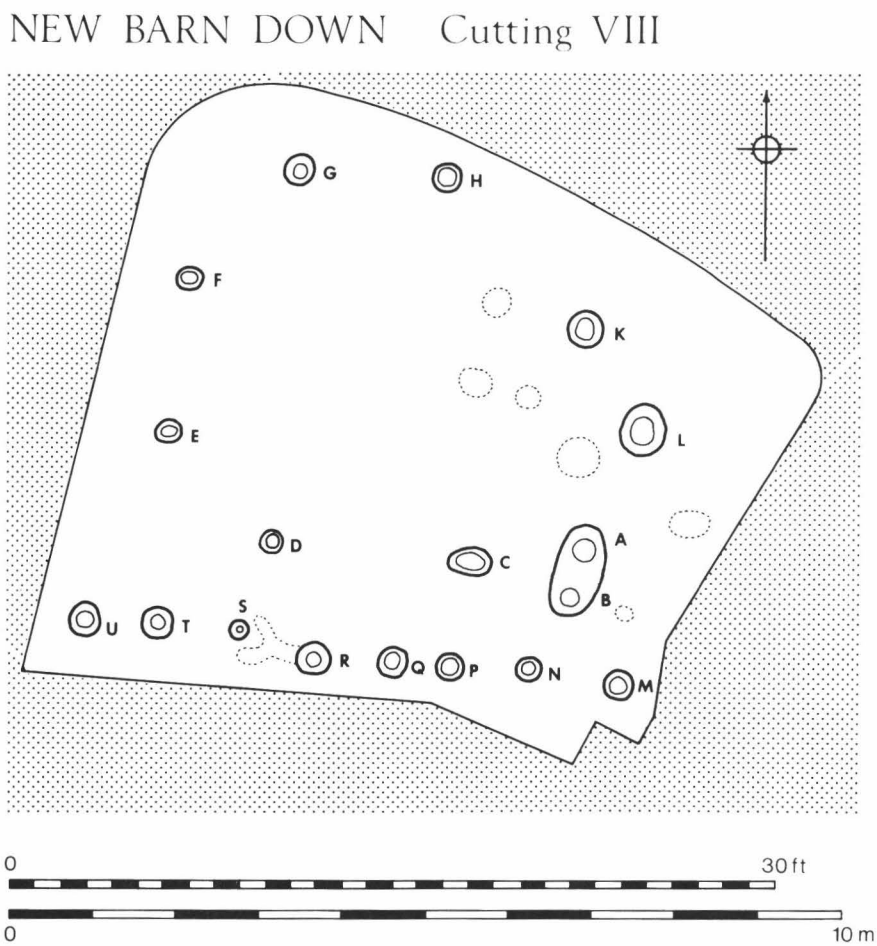


Fig. 6. Postholes of a roundhouse and adjacent length of palisade in Cutting VIII at New Barn Down (after Curwen 1934, Fig. 2).

comprising an odd number of postholes (Guilbert 1982). Holes E and G are equidistant, 1.8 m, from F; D and H are equidistant, also 1.8 m, from E and G respectively; while C and K are equidistant, 2.4 m, from D and H respectively (all measurements are centre-to-centre of postholes, rounded to the nearest 10 cm). In short, there is overlapping symmetry about a diameter produced from F, the odd posthole, and the interspacing is uniform around the 'back' half (approx.) of the circle, thence increasing in two stages down each side of the 'front', or entry, half. Indeed, the dimensions given above come close to a mathematical progression of plus one-third for the front of the ring, with the doorway measuring half the width of the adjacent ring-interval; and, given a little leeway for the positioning of posts within postholes, such proper proportion could have been attained in the building itself.

The case for extricating a closely comparable, and only slightly less regular, pattern of postholes from the dozen or more recorded in Enclosure III, Cutting II at *Plumpton Plain A,* in this instance forming an oval ring of up to 6.1 m diameter, has been detailed already (Guilbert 1981, 308–9, Fig. 4), and Fig. 7 will suffice to make the point here.[1] I have also remarked the likeness to these of the setting of seven postholes composing the 5.0 m-diameter ring of Hut II at *Amberley Mount* (ibid., 315, note 19), though the layout is there less than exactly symmetrical. Following the double-ring model framed for New Barn Down VIII, the complete absence of postholes for an entrance separate from the ring in the excavation-plan of Amberley Hut II is something of a puzzle, but it may be merely that the limit of excavation was taken too near the post-ring (loc. cit.; Ratcliffe-Densham 1966, Fig. 3). Likewise, and even more blatantly, this applies to Hut M at *Itford Hill,* so that confidence in the form of its entrance is impossible (Burstow and Holleyman 1957, Fig. 16). And, as in the Plumpton A/III/II roundhouse, at least one entrance-posthole must be restored to the plans of both Itford Hut L, which includes a seven-post ring of similar dimensions to Plumpton A/III/II but circular (ibid., 184–5, Fig. 15; Guilbert 1982, 00 and 00, note 4), and

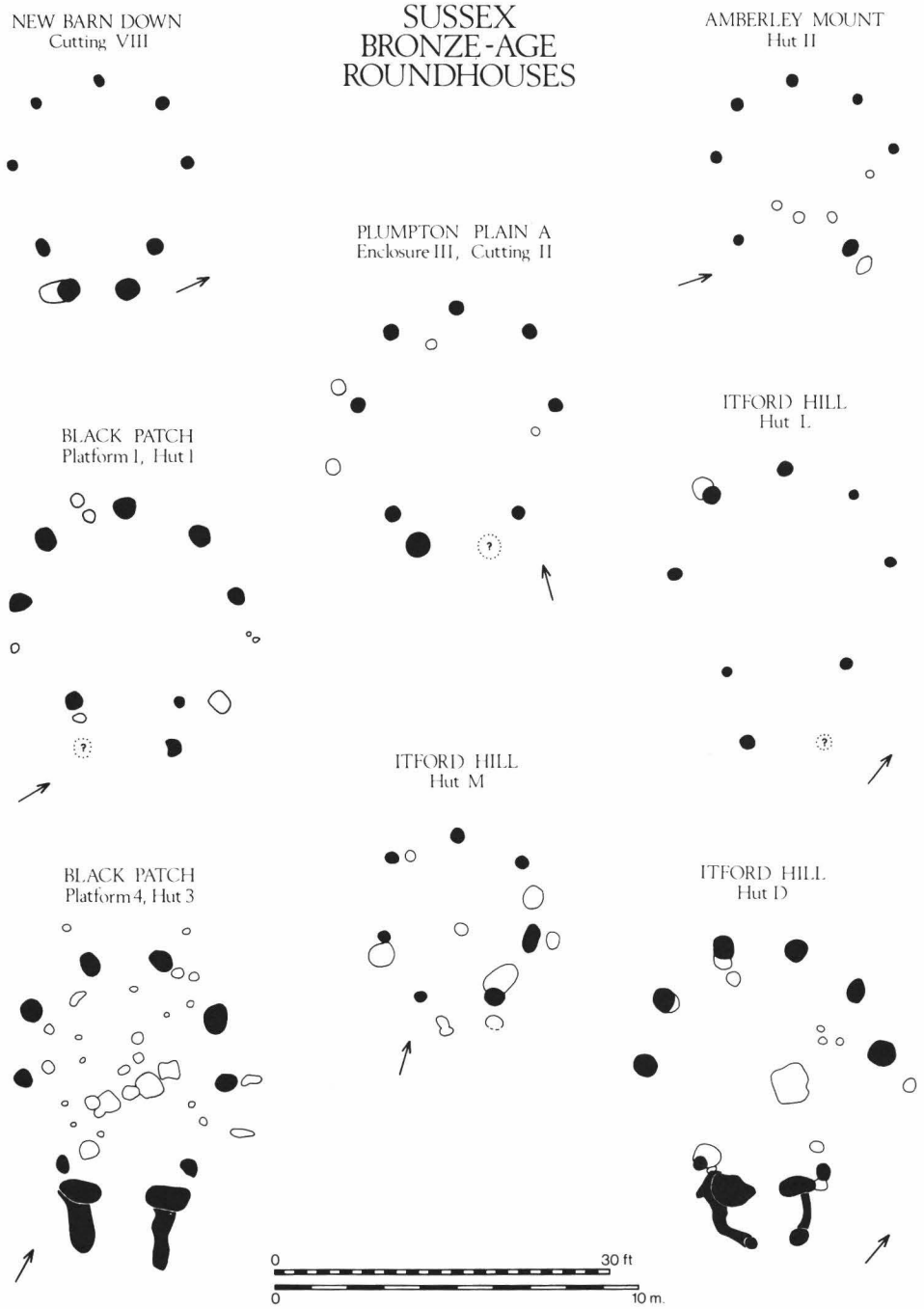


Fig. 7. Plans of the postholes of roundhouses on Deverel-Rimbury settlement sites in Sussex, at a scale of 1:200. New Barn Down after Curwen 1934, Fig. 2; Amberley Mount after Ratcliffe-Densham 1966, Fig. 3; Plumpton Plain after Holleyman and Curwen 1935, Fig. 7 and Guilbert 1981, Fig. 4; Black Patch, Alciston after Drewett 1980, Fig. 5, and 1979, Figs. 1 and 4; Itford Hill after Burstow and Holleyman 1957, Figs. 15, 16 and 8, and Musson 1970, 268).

Hut 1 on Platform 1 at *Black Patch,* near Alciston, which also appears to include a seven-post circle, this time about 5.9 m in diameter (Drewett 1980, Fig. 5). Despite these deficiencies, the essential similarity of these five building-plans is evident in Fig. 7, each being related to the New Barn Down exemplar, not only bisected from front to back but also having interspaces shorter at the back than the front of the ring. In the latter respect, it may be noticed that Itford Hut M, as interpreted here, differs from the others in that only three, instead of five, of its seven postholes are relatively close spaced around the back of the slightly oval ring of up to 4.6 m diameter, and not greatly so at that; it is a marginal case, scarcely distinguishable from the more general run of symmetrical post-rings defined in Guilbert 1982. As for the rest, the proportions of the ring-plans may vary a little from one to another, and it may seem that not all exhibit the high measure of concern for precision shown by the New Barn Down builders, but the mutual affinity of these structures is plain to see. To extend a metaphor I have employed before (ibid.), we appear to be dealing with a distinct breed within the species 'symmetrical' of the genus 'post-ring roundhouse'.

A similarly balanced pattern of posthole-spacing may hold good for the other structures illustrated in Fig. 7, Hut D at *Itford Hill* and Hut 3 on Platform 4 at *Black Patch.* There is a difference, however, insofar as these two roundhouse-plans both have eight postholes in the ring, six of which are ranged around the back half. Nevertheless, tolerable symmetry is maintained about a diameter drawn from the mid-point of the post-interval at the back of the ring to the mid-point of that at the front, next to the entry. No obvious reason for the extra post is apparent; with diameters of 6.6 m and up to 6.3 m respectively, these post-rings do not seem significantly larger than the largest examples of the seven-post variant, but it just could be that a threshold occurs at 6.0 m or thereabouts.[2] Burstow and Holleyman (1957, 174–6, 190–1) observed the resemblance between Huts D and B at Itford, and, apart from the curving side 'channels' of the porch, all that B seems to lack in comparison with the version of D presented in Fig. 7 is the pair of ring-postholes situated close to the inner, elongate pair of the porch (ibid., Figs 6 and 8; Musson 1970, 268).

It is evident, however, that not all Deverel-Rimbury roundhouse-plans, in Sussex and elsewhere, involve the breed, or style, of post-ring layout under discussion here. The best of those revealed by the Ratcliffe-Denshams at *Cock Hill,* i.e. Hut II, shows meagre signs of doing so (1961, Fig. 2), but that which they disclosed at the other *Blackpatch,* near Patching, shows none (1953, Fig. 2; Guilbert 1981, 309–10, Fig. 5); and nor do Structure 1 at Newark Road, *Fengate,* Peterborough (Pryor 1980, Fig. 35) or House II at *Bishops Cannings Down* in Wessex (Gingell 1980, Fig. 2). On the other hand, House I at the latter site is a possible (ibid., Fig. 3), and there can be no assurance that this particular post-ring pattern is to be found solely at sites on the chalk of Sussex, or, for that matter, exclusively at settlements of Deverel-Rimbury date. I have previously noted a 'tendency towards tighter spacing around the back of the post-ring' in some, though certainly not all, of the analogous structures in the stockaded-camp phase, roughly datable to the mid-first millennium bc or the Bronze Age/Iron Age transition, at *Moel y Gaer* in North Wales (Guilbert 1981, 315, note 19; 1982, Fig. 3.2). Also, kindred eight-post examples may occur both at *Rams Hill* on the Berkshire Downs, where the building-plan in question, B, has been ascribed to a post-Deverel-Rimbury stage of the Bronze Age, late in the second or early in the first millennium bc (Bradley and Ellison 1975, 36–7, 54, 64, 95–8, 101–6, Fig. 2.23; Guilbert 1981, 315, note 19), and, on interim indications, at *Down Farm,* a Deverel-Rimbury settlement-site on Cranborne Chase (Barrett and Bradley 1980, Fig. 4; Barrett et al. 1979, 242–4).[3] All the same, the prime examples are known from sites in Sussex, and we may reasonably dub this the 'Sussex style' of post-ring layout.

Graeme Guilbert

Notes

[1]Postholes 1–6 in Enclosure II, Cutting I at *Plumpton Plain A* might bear a similar interpretation if a seventh hole is assumed missing at the east, in the gap between 1 and 6 (Holleyman and Curwen 1935, 21, Fig. 5). If so, nos 1–5 would constitute the more closely spaced, back part of the post-ring, which would approximately match that in Enclosure III, Cutting II for size, and would also appear to be slightly oval. It would have to be conjectured that all postholes belonging to the entrance lie beyond the limit of excavation, to the south-east.

[2]At Moel y Gaer, Clywd, where excavation has revealed the ground-plans of numerous post-ring roundhouses (Guilbert 1982, with reff.), the seven-post rings range from 4.3 m to 6.2 m in diameter, while those with eight or nine posts measure 5.0–6.4 m (with less clear-cut cases both smaller and larger). Moreover, instances like Structure 1 at Newark Road, Fengate, a nine-post ring averaging 5.6 m (Pryor 1980, 53–9, Fig. 35), and Hut II at Cock Hill, Sussex, probably an oval eight-post ring up to 5.7 m across (Ratcliffe-Densham 1961, Fig. 2), are bound to cast doubt upon the validity of such a supposed threshold, for these roundhouses were broadly contemporaneous with those depicted in Fig. 7.

[3]Given the arguments in favour of a double-ring interpretation of many, possibly all, of the structures under review — arguments which cannot be reiterated here but which have been expressed most recently in Guilbert 1981 — one additional point worthy of notice is that most of the roundhouses with an eight-post ring mentioned above — at Itford Hill, Black Patch, Rams Hill and Down Farm, but perhaps not at Cock Hill — appears to have had a projecting porch, whereas none of the 'Sussex-style', seven-post examples has yet been proved to have been so equipped. However, it should not be forgotten that the entrances of some of the latter could have been incompletely excavated, inadequately recorded, or incorrectly interpreted (see above; also ibid., 308–9 and 315, note 19). Anyway, we should have to await the excavation of a considerably larger sample of building-plans before attaching too much confidence, or indeed significance, to this seeming correlation.

References

Barrett, J. and Bradley, R. 1980. 'Later Bronze Age settlement in South Wessex and Cranborne Chase', in J. Barrett and R. Bradley (eds), *Settlement and Society in the British Later Bronze Age* (Brit. Archaeol. Rep. 83), 181–208. Oxford.

Barrett, J., Bradley, R. and Green, M. 1979. 'South Lodge Camp and Down Farm', *Curr. Archaeol.* **6.8**, 242–6.
Bradley, R. and Ellison, A. 1975. *Rams Hill: a Bronze Age Defended Enclosure and its Landscape* (Brit. Archaeol. Rep. 19). Oxford.
Burstow, G. P. and Holleyman, G. A. 1957. 'Late Bronze Age settlement on Itford Hill, Sussex', *Proc. Prehist. Soc.* **23**, 167–212.
Curwen, E. C. 1934. 'A late Bronze Age farm and a Neolithic pit-dwelling on New Barn Down, Clapham, near Worthing', *Sussex Archaeol. Collect.* **75**, 137–70.
Drewett, P. 1979. 'New evidence for the structure and function of Middle Bronze Age round houses in Sussex', *Archaeol. J.* **136**, 3–11.
Drewett, P. L. 1980. 'The excavation of a later Bronze Age settlement at Black Patch, Alciston, East Sussex', *Bull. Inst. Archaeol. Univ. London* **17**, 15–20.
Gingell, C. 1980. 'The Marlborough Downs in the Bronze Age: the first results of current research', in J. Barrett and R. Bradley (eds), *Settlement and Society in the British Later Bronze Age* (Brit. Archaeol. Rep. 83), 209–22. Oxford.
Guilbert, G. 1981. 'Double-ring roundhouses, probable and possible, in prehistoric Britain', *Proc. Prehist. Soc.* **47**, 299–317.
—— 1982. 'Post-ring symmetry in roundhouses at Moel y Gaer and some other sites in prehistoric Britain', in P. J. Drury (ed), *Structural Reconstruction: Approaches to the Interpretation of the Excavated Remains of Buildings* (Brit. Archaeol. Rep. 000), 00–00. Oxford.
Holleyman, G. A. and Curwen, E. C. 1935. 'Late Bronze Age lynchet-settlements on Plumpton Plain, Sussex', *Proc. Prehist. Soc.* **1**, 16–38.
Musson, C. 1970. 'House-plans and prehistory', *Curr. Archaeol.* **2.10**, 267–75.
Pryor, F. 1980. *Excavation at Fengate, Peterborough, England: the Third Report* (Northants Archaeol. Soc. Monog. 1).
Ratcliffe-Densham, H. B. A. and M. M. 1953. 'A Celtic farm on Blackpatch', *Sussex Archaeol. Collect.* **91**, 69–83.
—— 1961. 'An anomalous earthwork of the Late Bronze Age on Cock Hill, Sussex', *Sussex Archaeol. Collect.* **99**, 78–101.
—— 1966. 'Amberley Mount; its agricultural story from the Late Bronze Age', *Sussex Archaeol. Collect.* **104**, 6–25.

An enamelled bronze terret from Arlington, Sussex.

Mr. Eric Holden has kindly brought to my notice an Iron Age bronze terret or rein-ring from Arlington, Sussex. A letter of 1853, held by the Society of Antiquaries[1], shows that it was found 'by a labourer digging flints just above the Long Man on Wilmington Down'. Curwen's photograph of the Long Man (1954, Pl. XXXII) shows the flint diggings just above the track which forms the parish boundary between Arlington and Wilmington, *c.* TQ 543 033. Windover Hill is an area prolific in prehistoric sites, including flint mines, barrows and lynchets. Although there is no evidence of an Iron Age settlement site, some of the lynchets and fields may be Iron Age in date. The terret was presented to the British Museum in 1853 (Accession no., 53.12–12.1) and incorrectly registered as coming from neighbouring Alfriston parish.

Terrets were used on chariots to control the reins (Fox 1946, Fig. 13, shows the use of terrets on chariots, though his positioning is now questioned: a revised drawing has been issued as a poster by the National Museum of Wales). The Arlington terret (Fig. 8) consists of a straight rectangular-sectioned bar, which would have been fastened to a chariot yoke, and a circular-sectioned loop through which the reins of the chariot would pass. On either side of the bar is a circular stop, each adorned with a groove. The loop is decorated with three large double wings, standing well out from the loop and at right angles to it. The top pair of wings is slightly asymmetrical. The terret has a red 'enamel' decoration, set into cavities in the bronze: on the wings are two joined triangles surrounding a circular dot; on the loop six triangles are set in an elongated pattern. The triangles are not even in size or shape and have the curving edges typical of Celtic decoration. On the top pair of wings the cavity for one of the triangles was omitted during manufacture. The 'enamel' used for the Arlington terret should technically be termed glass as true enamels fuse to the surface of the metal (Hughes 1972, 98). In this case, as in other Iron Age examples of enamelling, the red glass was used in small lumps, softened by heating and then pressed into the inlay cavity.

The terret is not in particularly good condition. It had been well-used before its loss and the grooves on the bar stops are worn on the inner edge. The 'enamel' is chipped in places, although it still retains its bright red colour. The terret has also been damaged: there are various deep gouges through both the bronze loop and the 'enamelled' decoration. Since its discovery the terret has been badly cleaned with abrasive cleaner, so that much of the original bronze surface has been removed and in places the bronze is bright and shiny. Some scratches are the result of this polishing.

Originally the terret was cast using the *cire-perdue* (lost-wax) casting method, just like those cast at Gussage All Saints (Spratling 1979; Foster 1980). This casting is flawed, with several deep irregular holes on the wings and one at the side of the bar. It is interesting that the terret was finished, even decorated, and used in this condition. It is not often easy to see whether the cavities for the 'enamel' were cast or chiselled after casting, but in this case the casting flaws cut through the 'enamel' cavities, proving that they had been cast. After casting, bronzes are finished by filing rough edges and removal of casting flashes. Due to the terret's treatment, it is not possible to detect any original filing marks.

The Arlington terret is one of a series of Iron Age and early Roman winged terrets. Leeds divided the winged terrets into two types (Leeds 1933, Types 3 and 4): the first, like Arlington, with three pairs of wings at right angles to the loop; the second, like those from the Polden Hill hoard (Brailsford 1975), with wings parallel to the loop. This typology does not appear to have a chronological significance, as the two types are found together in hoards (e.g. Polden Hill; Stanwick, MacGregor 1962). The wings on Leeds Type 3 terrets vary in size, Arlington being among the largest, but all the terrets have only three pairs spaced round the circular-section loop. The bar is generally rectangular in section. Many of the terrets are decorated with inlaid

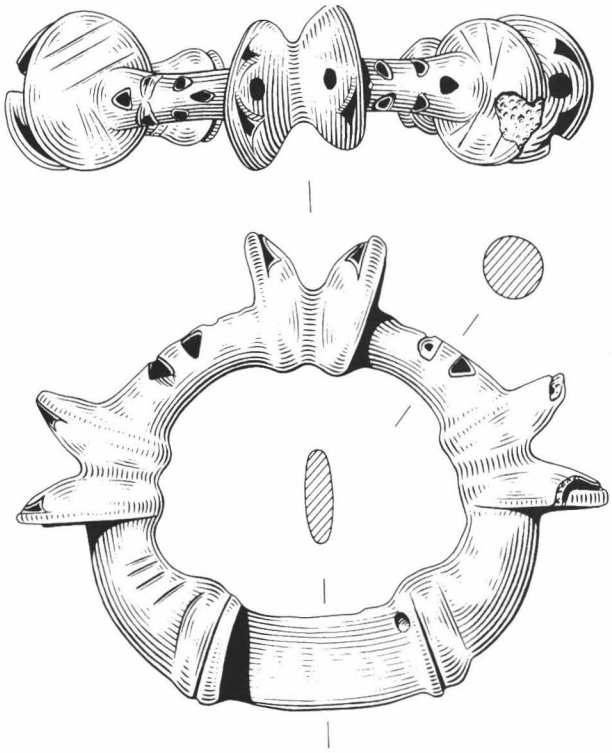


Fig. 8. Enamelled bronze terret from Arlington, Sussex. Drawing by Robert Pengelly, British Museum. Scale 1:1.

red glass, some more spectacular than Arlington, e.g. the splendid example from Snettisham (British Museum).

According to Davis and Spratling (1976, 137), the glass inlay technique was introduced into Britain only in the first century A.D. and the closest parallels to the Arlington terret would tend to date it to the closing years of the Iron Age (e.g. Stanwick, Polden Hill and Westhall are all *c.* A.D. 50).

Jennifer Foster

[1]The letter, from William Figg to Augustus Franks, is in a collection of papers once belonging to Albert Way, held by the Society of Antiquaries. It was discovered by Mr. J. Hopkins, their Librarian, who kindly passed the information on to E.W.H. A coloured drawing of the terret by Wm. Figg was exhibited to members of the Royal Archaeological Institute in 1853 (*Archaeological Journal* 10, 259).

References

Brailsford, J. W. 1975 'The Polden Hill hoard', *Proceedings of the Prehistoric Society,* **41**, 222–34.

Curwen, E. C. 1954. *The Archaeology of Sussex* (2nd edn.) London, Methuen.

Davis, J. L. and Spratling, M. G. 1976. 'The Seven Sisters hoard: a centenary study', In *Welsh Antiquity,* Boon, G. C. and Lewis, J. M. (eds.). National Museum of Wales, Cardiff, 121–47.

Foster, J. A. 1980. *The Iron Age moulds from Gussage All Saints* British Museum Occational Paper, No. 12.

Fox, C. 1946. *A find of the early Iron Age from Llyn Cerrig Bach,* Anglesey National Museum of Wales, Cardiff.

Hughes, M. J. 1972. 'A technical study of opaque red glass of the Iron Age in Britain', *Proceedings of the Prehistoric Society,* **38**, 98–107.

Leeds, E. T. 1933. *Celtic Ornament,* Oxford: Clarendon Press.

MacGregor, M. 1962. The Early Iron Age metalwork hoard from Stanwick, NR Yorks *Proceedings of the Prehistoric Society,* **28**, 17–57.

Spratling, M. G. 1979. 'The debris of metal working'. In Wainwright, G. J. *Gussage All Saints* 125–49. H.M.S.O.

The Chancton hoard of Anglo-Saxon pennies

The note in the last volume of our *Collections* regarding seven Anglo-Saxon pennies from the Chancton hoard of 1866[1] reminded me that in 1965, while looking at some old copies of the defunct *Sussex County Magazine,* I noticed a letter from a Miss Z. A. Tickner concerning the accidental finding of the coin hoard, and how a ploughshare went right through the earthenware jar containing the coins.[2] What especially caught my eye was the statement that a piece of the crock had been saved in 1866 and was still existing. It is

well known that Saxo-Norman pottery changed very little in style and fabric over a period of 200 years or more: thus, a fragment of a pottery vessel buried soon after 1066 could be of interest and value to archaeologists studying that period.

I managed to make contact with Miss Tickner (who was a grand-daughter of the farmer at Chancton Farm in 1866 and sister to the Revd. J. Tickner, the recent donor of the seven coins to Chichester Museum) and was shown a few pennies (the same) but, more importantly, the 'piece of earthenware crock' was produced. I had hoped that it would be a large piece of rim, or would have some distinctive feature, but alas, it proved to be a plain body sherd a little over an inch square (30 x 30 x 6 mm). Its outer face was reddish-brown, internally pale grey, and with a dark grey core. The tempering or filler, as seen with the eye alone, appeared to be a quartz-like sand, not flint grit and/or chalk, or flint plus sand, as are often found in local Saxo-Norman coarse wares.

Had the sherd turned up on a southern mid-Sussex excavation it might well have been given a twelfth- or thirteenth-century date on fabric alone (although it is always hazardous to date a single coarse sherd without other supporting evidence), there being nothing about it to make it especially Saxo-Norman in appearance. K. J. Barton in his study of medieval Sussex pottery does state, however, that a proportion of Saxo-Norman wares has only a sandy tempering.[3]

Miss Tickner valued the potsherd as a family heirloom and did not then wish to place it in a museum, but she agreed with my suggestion that eventually it should be given to the British Museum. Miss Tickner died in 1978 and in accordance with her wishes the sherd was handed over to the British Museum by the Revd. J. Tickner. The Registered Number in the Dept. of Medieval and Later Antiquities at the B.M. is 1978, 12–2, 1.

E. W. Holden

[1] *S.A.C.*, 119 (1981), 216.
[2] *Sussex County Magazine*, 25 (1951), 438–9.
[3] K. J. Barton, *Medieval Sussex pottery*, (Chichester, 1979), 75.

A twelfth-century figure fragment from Lewes Priory*

Stylistic analysis of the twelfth-century figure fragment from Lewes priory preserved in the basement of the Anne of Cleves Museum suggests placement in the context of north-west European sculptures belonging to the Byzantinizing curvilinear damp-fold tradition. Specific parallels with Kentish and Parisian sculpture, and archaeological evidence, indicate a date in the 1160s for the Lewes figure which may have originally decorated the chapter house of the priory.

In the basement of the Anne of Cleves Museum, Lewes, there is displayed an interesting fragment of the lower part of a figure preserved from the knees down to the feet which rest on a sloping base (Plate I). The present height of the sculpture is 10¾ in and the maximum depth 5 in. The sides of the stone have been cut back, presumably to allow for its re-use as building material. The drapery folds are simple; double incised loops delineate the lower curve of the knee, box pleats terminate straight folds between the legs, and a ridge of multiple fine channels falls diagonally across the left shin from between the knees to just above the ankle.

It is known that the figure came from the priory for in an article on 'The relics of St. Pancras Priory, Lewes', C. T. Phillips states that 'The leg from knee to foot of (apparently) a small statuette, possibly an ornament from a tomb' was found during excavations of 1853–4.[1] The exact location within the priory is not recorded and therefore suggestions as to the original setting within the monastic complex and the date of the sculpture have to be ascertained initially with reference to related material and then checked against the archaeological evidence.

The covered feet of the figure slope down on the steeply inclined base in the manner of early column-figures of French Gothic portals from the west front of Saint-Denis and Chartres and their followers.[2] The fact that the feet are covered is important for it precludes identification of the figure as an apostle.[3] It must therefore represent either an Old Testament character or a saint. The Lewes figure could not, however, have originally decorated a column in the French manner for the base is squared off rather than being rounded, and the back is flat while the column-figures of portals have either a columnar or 90° back. Therefore if the figure came from a portal then it could only have decorated a trumeau, but given the small scale of English doorways in relation to those in France such a location does not seem very probable.[4] A rather more pertinent comparison may be made with the right niche figure on the west front of Lincoln Cathedral, which was probably added after the fire of 1141 (Plate 2).[5] Here the covered feet slope down on the squared base exactly as at Lewes. The possibility that the Lewes figure came from a facade niche like that at Lincoln seems, however, to be ruled out by the lack of weathering on the stone and its size. The overall height of the Lewes piece can have been little more than three feet, and the figures at Lincoln, and twelfth century niche figures on major monuments in general, are closer to life-size. It is therefore more plausible to suggest that our figure originally came from either a choir screen, cloister or chapter house. In this connection comparison with the column-figure of the Virgin and Child from Minster-in-Sheppey, now in the Victoria and Albert Museum, which originally formed part of a two-figure group, is most instructive (Plate 3).[6] The Minster-in-Sheppey Virgin has a flat back like the Lewes fragment. The box pleat at the hem of the garment between the legs, the economy of folds over the limbs combined with multilinear channeling of certain areas of cloth are identical, not to mention the general kinship in scale.[7] It has been suggested that the Minster-in-Sheppey Virgin and Child may have originally come from a choir screen, and if this is the case a similar location might be put forward for the Lewes fragment.[8] There is unfortunately no documentation to assist with such a suggestion, so while the possibility is quite logical, the cloister and chapter house locations must also be explored. In the north of France small scale statues frequently decorated cloisters and chapter houses.[9] The cloister setting for both the Minster-in-Sheppey and Lewes sculptures seems unlikely for exposure to the elements would surely have worn away some of the finer details of the carving, but in the chapter house this would not have been a problem. Also, the pairing of the figures as in the original Minster-in-Sheppey arrangement finds parallel in the Camera Santa in Oviedo, while the setting of the Lewes piece may be related to the caryatids in the chapter house of Durham Cathedral.[10]

Plate I. Lewes, Anne of Cleves. Figure fragment from Lewes Priory.

Plate II. Lincoln Cathedral. Figure in right niche of west front; after 1141.

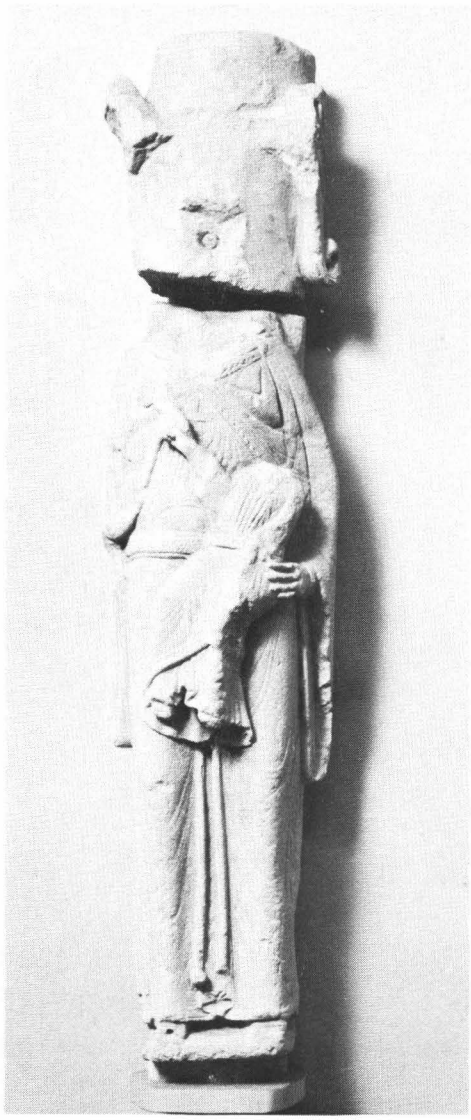


Plate III. London, Victoria and Albert Museum. Column figure of the virgin and child from Minster-in-Sheppey, Kent.

Returning to the drapery style of the Lewes figure an interesting, although indirect, parallel for the loops beneath the knees is with the Virgin and Child in York Minster.[11] The comparison gives us an important clue as to one aspect of the model used at Lewes. The connection between the York Virgin and Byzantine art has often been remarked upon.[12] Looking to the Byzantine inspired curvilinear damp-fold drapery in England numerous examples of loops beneath the knee combined with plain areas of drapery can be found, for example in the figure of Penninah in the miniature of Elkanah distributing clothes to his wives in the Bury Bible, (Cambridge, Corpus Christi College, MS 2, fol. 147v.) (Plate 4).[13] The importance of the curvilinear damp-fold style in the development of English sculpture is well known.[14] Somewhat surprisingly, however, the sculpture in the south-east of the country has been overlooked in this context. There can be no doubt that it was of great importance in the area as witnessed by comparing the figure of Christ in Majesty on the tympanum of the south doorway at Barfreston (Kent), (Plate 5), with the figure of Christ in the initial I on fol. 267 of the Wedricus Gospels (now destroyed) from Liessies (formerly Metz MS 1151), (Plate 6), which was probably illuminated by the artist responsible for the Lambeth Bible (London, Lambeth Palace Library, MS 3 and Maidstone Museum) produced at Canterbury.[15] Relating Barfreston to Lewes one notices plain areas of drapery separated by multilinear folds, and it is of further interest to compare the fine folds over the chest of the Barfreston Christ with the Minster-in-Sheppey Virgin and Child. (Plates 1, 3 and 5). The three sculptures clearly belong to the same school.[16] The cross-Channel connection between the Lambeth Bible and Wedricus Gospels has frequently been extended to other manuscript illuminations. Indeed, there can be no doubt as to the importance of the damp-fold style in miniatures from both regions even though priority of one over the other remains a moot point.[17] In north French sculpture, however, the role of the damp-fold style has not been recognised. This is not the place for a detailed analysis of its occurrence in the sculpture of Paris and the surrounding area in the early Gothic period, 1140–80.[18] We must be content with examination of just two voussoir figures from the Sainte-Anne portal of Notre-Dame, Paris (Plate 7).[19] The Elder of the Apocalypse on the left of the illustration has the same damp-fold drapery as the Barfreston Christ and it is of further interest to note that the Parisian sculpture has the 'fly-away' folds so characteristic of the Lambeth Bible Master.[20] Then the prophet to the right of the elder has the same loop beneath the knee and the spreading of the fine-line folds before the shin as in the Lewes figure (Plates I and 7).

The date of the Lewes fragment is difficult to determine in relation to the Kentish sculptures simply because the latter are not dated precisely. Both Barfreston and the Minster-in-Sheppey Virgin and Child have been put between 1170 and 1180 and it is therefore possible that our fragment also belongs to that time period.[21] However, it is important to see our figure within the broader context of the Channel school embracing the Paris Notre-Dame Sainte-Anne portal sculpture of *c.* 1165, and then in relation to manuscript illumination such as the Wedricus Gospels of 1146 and even back to the Bury Bible of *c.* 1135. In the final analysis I believe there is much to recommend a date in the sixties. Quite apart from the close parallel with the Sainte-Anne portal of this time there are indications of considerable work at Lewes Priory on the cloister and monastic buildings which is most happily placed in this decade.[22] The evidence comes from a number of Purbeck and Tournai marble fragments; capitals, bases and shafts.[23] These materials, the waterleaf and plain leaf capitals and the spur bases find precise parallel in the work of Henry of Blois at Wolvesey Palace between 1158 and 1171; and in the lavatorium of St. Nicholas' Priory, Exeter, after 1161; while the general use of marble and similar capital decoration are comparable to the nave arcade of the Temple Church, London of the

Plate IV. Cambridge, Corpus Christi College, MS2, 147v, Bury Bible: Elkanah distributing clothes to his wives. (By courtesy Corpus Christi College).

Plate V. Barfreston, Kent. South doorway; detail figure of Christ in Majesty.

Plate VI. Metz, MS. 1151, fol. 267 (destroyed), Initial I. Wedricus, abbot of Liessies (1127–47) dedicating his gospels to Christ. Written by Johannes in 1147. (After H. Swarzenski, *Monuments of Romanesque Art*, London, 1954, Plate 132, Fig. 299).

Plate VII. Paris, Notre Dame, Ste-Anne Portal, detail archivolt figures, *c.* 1165.

1160s, and the infirmary cloister at Canterbury Cathedral *c.* 1153–67. [24]

In summary, the Lewes figure was probably carved in the 1160s and may have originally decorated the chapter house of the priory. It admirably demonstrates both the importance of the Byzantinizing curvilinear damp-fold style in English sculpture of the twelfth century and the close stylistic links across the Channel at this time.

Malcolm Thurlby

Footnotes

*I should like to thank Andrew Rudebeck from drawing my attention to this sculpture and for his help in answering many questions on Lewes priory.

[1] *Sussex Archaeological Collections,* XXXVIII, 1892, 205.

[2] For French early Gothic portals see W. Sauerlander, *Gothic Sculpture in France 1140–1270,* 1972, especially 11–18, 42–48, 379–406.

[3] Matthew X 10.

[4] On the small-scale, decorative nature of English twelfth century sculpture see G. Zarnecki, 'The Transition from Romanesque to Gothic in English Sculpture', *Acts of the Twentieth International Congress on the History of Art,* Princeton, 1963, 152ff; G. Zarnecki, 'English 12th Century Sculpture and its Resistance to Saint-Denis', *Tribute to an Antiquary: Essays* presented to Marc Fitch by some of his friends, 1976, 83–92.

[5] On the Lincoln facade sculpture see G. Zarnecki, *Later English Romanesque Sculpture,* 1953, 20–28, 56–58; G. Zarnecki, *Romanesque Sculpture at Lincoln Cathedral,* 2nd. ed. Lincoln, 1970; E. C. Fernie, 'Alexander's Frieze on Lincoln Minster', *Lincolnshire History and Archaeology,* 12, 1977, 19–28.

[6] G. Zarnecki, 'A Twelfth Century Column-Figure of the Standing Virgin and Child from Minster-in-Sheppey, Kent', *Kunsthistorische Forschungen Otto Pacht zu seinem 70. Geburtstag,* Salzburg, 1972, 208–212. Professor Zarnecki informs me that the second figure of the Minster-in-Sheppey group was possibly St Nicholas. For a full discussion of the problem see M. Thurlby, *Transitional Sculpture in England,* unpublished PhD thesis, University of East Anglia, Norwich, 1976, chapter 1.

[7] Stylistically the column-figure of the Queen of Sheba on the right jamb of the Rochester Cathedral west central doorway is also related (see E. S. Prior and A. Gardner, *An Account of Medieval Figure Sculpture in England,* Cambridge, 1912, Fig. 181). The Minster-in-Sheppey Virgin and Child survives in two fragments, the standing Virgin of 25 inches, and the canopy surmounting the destroyed head of 8 inches.

[8] Zarnecki, 1972, 212.

[9] Sauerlander, 1972, 20.

[10] The parallel with the Camara Santa at Oviedo is given by Zarnecki, 1972, 209; see also P. de Palol and M. Hirmer, *Early Medieval Art in Spain,* 1967, plates 192–3. For the Durham caryatids see Zarnecki, 1953, 16, ill's. 36–7; F. Saxl, *English Sculptures of the Twelfth Century,* 1954, 64–6, plates LXXXVIII–XCI. Saxl's plate XC is a reversal of plate LXXXIX and not a separate sculpture.

[11] Saxl, 1954, plates VII–VIII.

[12]Zarnecki, 1953, 29–31; T. S. R. Boase, *English Art 1100–1216,* Oxford, 1953, 236; Saxl, 1954, 69 n.10; L. Stone, *Sculpture in Britain: The Middle Ages,* Harmondsworth, 1955, 75.

[13]For the Bury Bible see C. M. Kauffmann, 'The Bury Bible', *Journal of the Warburg and Courtauld Institutes,* 29, 1966, 60–81; C. M. Kauffmann, *Romanesque Manuscripts 1066–1190,* 1975, with bibliography to which should be added R. M. Thompson, 'The Date of the Bury Bible Re-examined', *Viator,* 6, 1975, 51–8.

[14]See the lead font at Walton-on-the-Hill (Surrey), (G. Zarnecki, English Romanesque Lead Sculpture, 1957, 5–7, 27–30); Malmesbury abbey south porch archivolt figures, (Prior and Gardner, 1912, 189); Durham Cathedral former choir screen, (Zarnecki, 1953, 32–4, 58); the Bridlington statuette in the Victoria and Albert Museum, and the York Minster Matthew symbol, (G. Zarnecki, 'Deux reliefs de la fin du XIIe a la cathedrale d'York, *Revue de l'Art,* 30, 1975, 17–20); the Lincoln Christ, (Zarnecki, 1970, plate 18); and certain figures on the north doorway of the Glastonbury Lady Chapel, (Zarnecki, 1953, ill. 129, fully discussed in Thurlby, 1976, chapter 4).

[15]On Liessies MSS see J. Leclercq, 'Les Manuscrits de l'Abbaye de Liessies' *Scriptorium,* VI, 1952, 51–62, plates 4–7. For the Lambeth Bible and the occurrence of curvilinear damp-fold in paintings across the Channel see C. R. Dodwell, *The Canterbury School of Illumination,* Cambridge, 1954, 54–6; C. R. Dodwell, *The Great Lambeth Bible,* 1959, 16–19; C. R. Dodwell, *Painting in Europe 800–1200,* Harmondsworth, 1971, 178–9; M. Rickert, *Painting in Britain: The Middle Ages,* Harmondsworth, 1965, 78; L. Ayres, 'English Painting and the Continent during the Reign of Henry II and Eleanor', *Eleanor of Aquitaine Patron and Politician,* ed. W. W. Kibler, Austin, Texas, 120–40. Ayres raises important questions regarding the direction of cross-Channel influence in curvilinear damp-fold style with specific reference to the Bury and Lambeth Bibles.

[16]The Kentish School of Sculpture is discussed in detail in Thurlby, 1976, chapter 1.

[17]Ayres, 1976, 120–40.

[18]The damp-fold style may not be without importance for the sculpture of the west front of St-Denis. For the St-Denis sculpture see S. McK. Crosby, 'The West Portals of Saint-Denis and the Saint-Denis style', *Gesta,* IX/2, 1970, I–II; S. McK. Crosby and P. Blum, 'Le portail central de la facade de Saint-Denis', *Bulletin* Monumental, 131, 1973, 209ff. Damp-fold is also in evidence in the altar frontal from Carrieres-Saint-Denis now in the Louvre, (Sauerlander, 1972, 387, plate 20 top), and the portal of Notre-Dame abbey church, Ivry-la-Bataille (Eure-et-Loire), (Sauerlander, 1972, 383, ill's 11–14). Its most consistent use is in the Ste-Anne portal of Notre-Dame, Paris (Sauerlander, 1972, 404–5; J. Cuenot, ed., *Les Rois Retrouves,* Paris, 1977, 24–29). Here it is most instructive to compare the fragmentary column-figure of St Peter (Cuenot, 1977, ill's. 78–9) with Aaron in Moses and Aaron Expounding the Law to the People of Israel, Frontispiece to Deuteronomy, Bury Bible, (Kauffmann, 1966, pl. 15), and St John in the Crucifixion miniature in the St-Amand Sacramentary, (Valenciennes MS. 108, f.58v.), (H. Swarzenski, *Monuments of Romanesque Art,* 1954, pl. 140, fig. 315).

[19]For references to the Sainte-Anne portal see note 18.

[20]Dodwell, 1959.

[21]Zarnecki, 1953, 40, 80; Zarnecki, 1972, 212.

[22]See W. H. St. John Hope, 'The Architectural History of the Cluniac Priory of St Pancras at Lewes', *S.A.C.,* 34, 1886, 71–106, especially 89, 96–7. Here reference is made to a mid twelfth century enlargement of the conventual buildings and (p. 97) 'From certain foundations uncovered in 1845, it seems that the chapter house was included in the enlargement of the range of which it forms part.' See also W. H. St John Hope, 'The Cluniac Priory of St Pancras at Lewes', *S.A.C.,* 49, 1906, 66–88; *Victoria County History of Sussex,* VII, 1940, 46–7.

[23]These are preserved in the Anne of Cleves Museum and the gardens of Southover Grange.

[24]For Wolvesey Palace see M. Biddle, 'Excavations at Winchester, 1964', *Antiquaries Journal,* 45, 1965, 260. For St Nicholas' priory, Exeter, lavatorium, see *Proceedings of the Society of Antiquaries,* 2S, XXVIII, 1915–16, 245–51. On the Temple Church, London, see R. W. Billings, *Architectural Illustrations and Account of the Temple Church,* London 1838. The date of the Temple nave is usually related to the consecration of 1185, but seeing that the move from the Old Temple to the present site was completed by 1161 and that an indulgence granted to the Temple by Archbishop Roger of York between 1169 and 1181 refers to the completed church, then a date in the 1160's for the nave seems more plausible. (B. A. Lees, *Records of the Templars in England in the Twelfth Century,* 1935, 158–60, 163–4). For the Canterbury infirmary cloister see R. Willis, *The Architectural History of the Conventual Buildings of the Monastery of Christ Church in Canterbury,* 1869. Richard Halsey kindly informs me that stylistically related fragments have recently been excavated at Battle Abbey where the cloister walks were rebuilt by Abbot Walter de Luci with 'marble slabs and columns of smooth and polished workmanship.' (*Victoria County* History of Sussex, 9, 1937, 103). A lavatorium of the same character was completed after the death of Abbot de Luci in 1172.

Investigations at Hardham Church 1978 and 1981

The Church of St. Botulph, Hardham, is thought to date to the eleventh century or perhaps a little earlier[1] and its fine series of wall paintings are considered to have been added in the twelfth century.[2] The paintings began to deteriorate in the 1970s, as the result of moisture penetration onto the internal faces of the walls, and in 1978 the Diocesan Archaeological Consultant was invited by the architect, Mr. Geoffrey Claridge, to examine the footings prior to the preparation of a scheme to improve the drainage around the building. Partly as a result of this investigation, major restoration works were undertaken in 1981 and these included repairs to the roofs, the repointing and re-rendering of all external wall surfaces, and modifications to the drainage system at ground level. Whilst this work was in hand the authors were able to undertake a close study of the external faces of the building and to record details of its construction which are unlikely to be available for close inspection in the foreseeable future.

Two trenches were excavated to underlying natural sandy gravel in 1978 (Fig. 9 Areas 1 and 2). In both cases the very disturbed loam layer (Layer 1), which is the accumulated soil of the graveyard, was up to 1.2 m

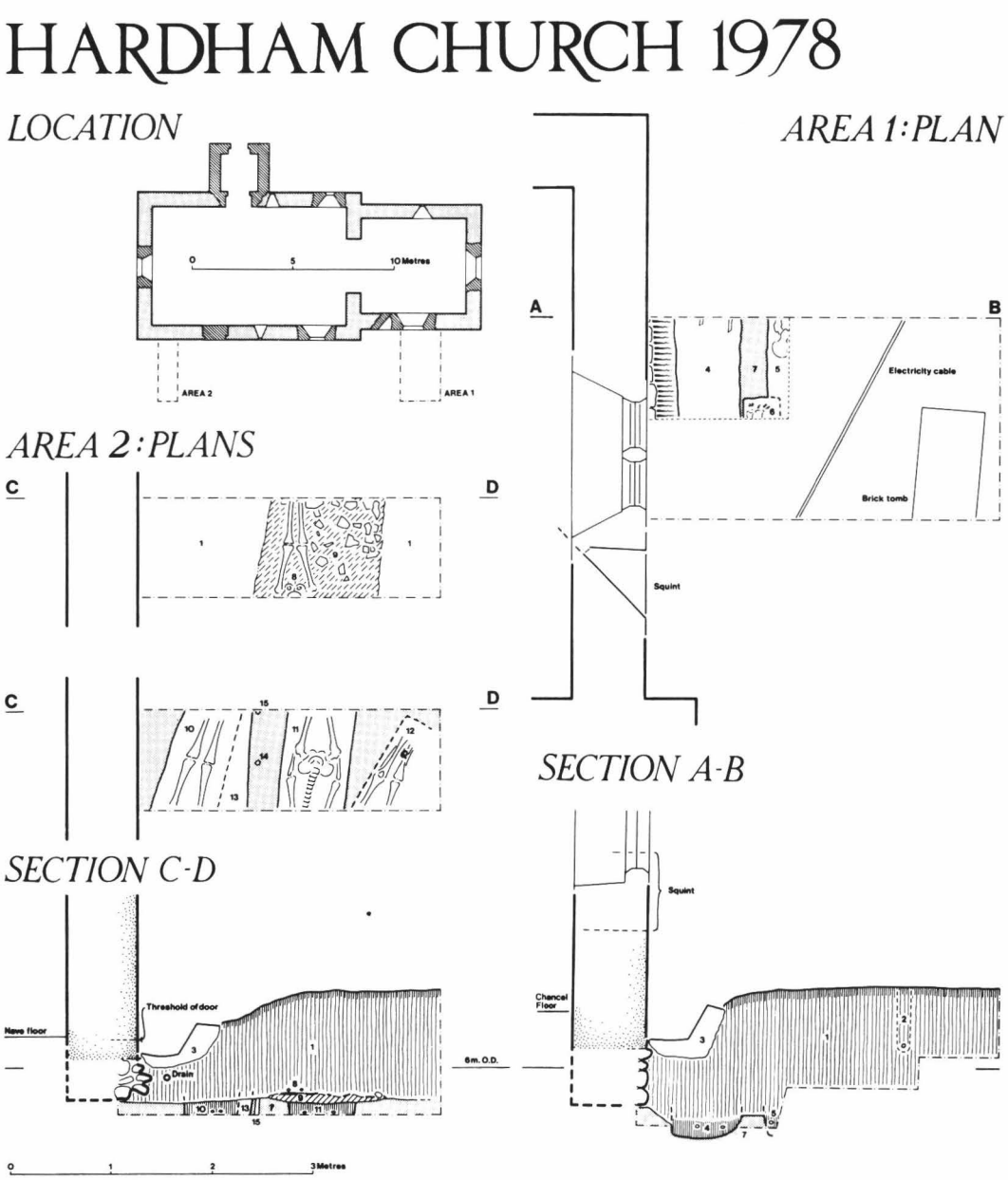
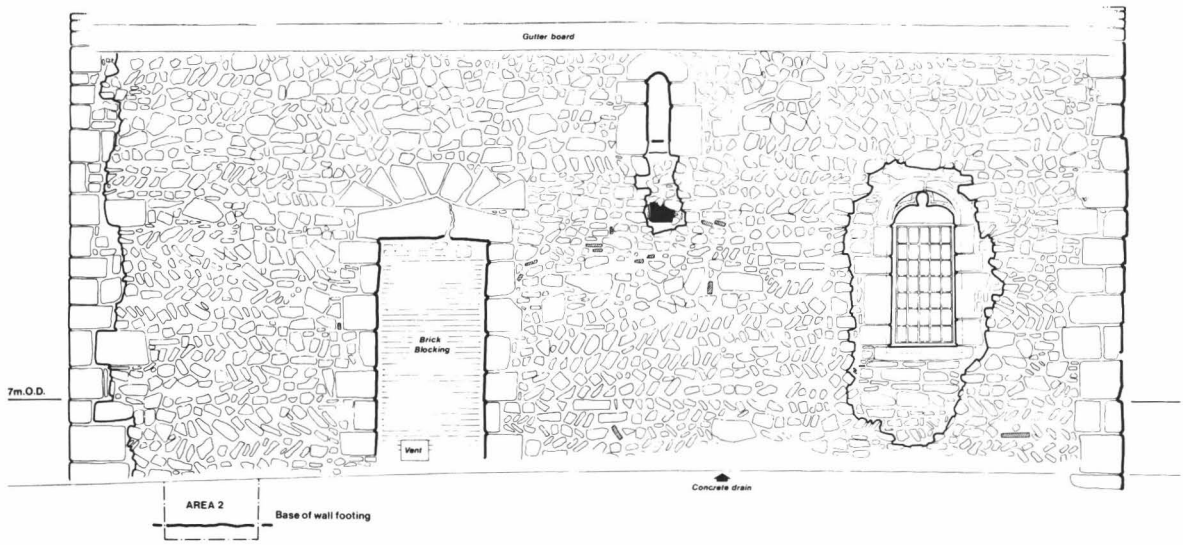

HARDHAM CHURCH 1978
LOCATION
0 5 10 Metres
AREA 2
AREA 1
AREA 1: PLAN
A
B
4
7
5
6
Electricity cable
Brick tomb
Squint
AREA 2: PLANS
C
D
1
9
8
C
D
15
10
11
12
14
13
SECTION A-B
Squint
Chancel Floor
SECTION C-D
Nave floor
Threshold of door
Drain
6m. O.D.
0 1 2 3 Metres

Fig. 9.

HARDHAM CHURCH

SOUTH WALL OF NAVE



NORTH WALL OF NAVE

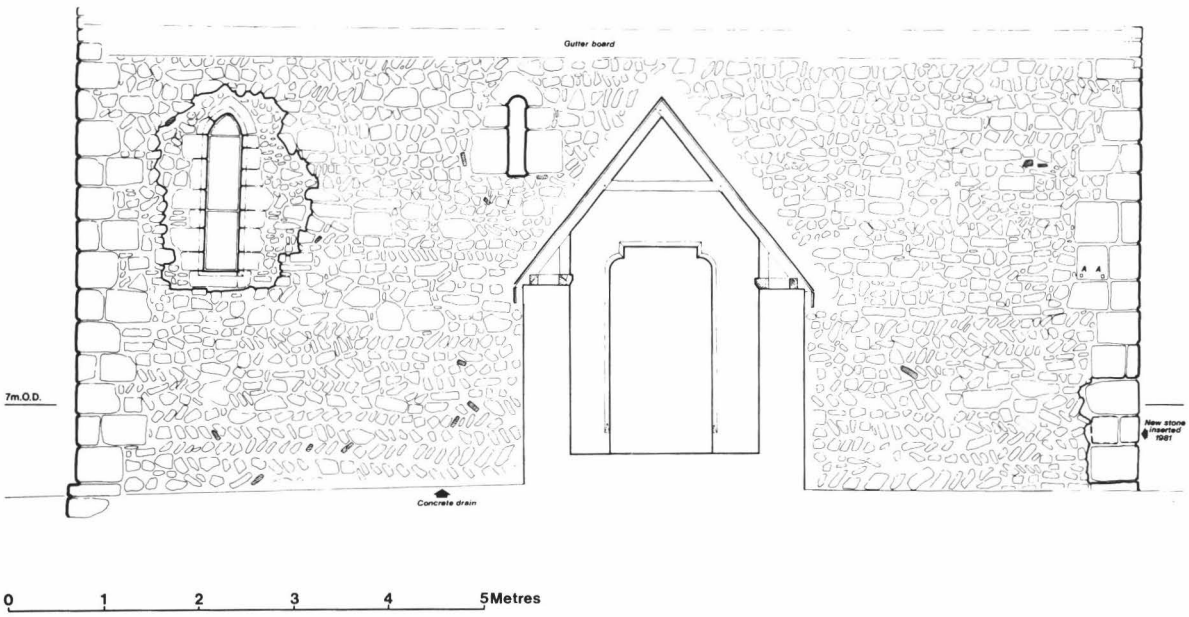
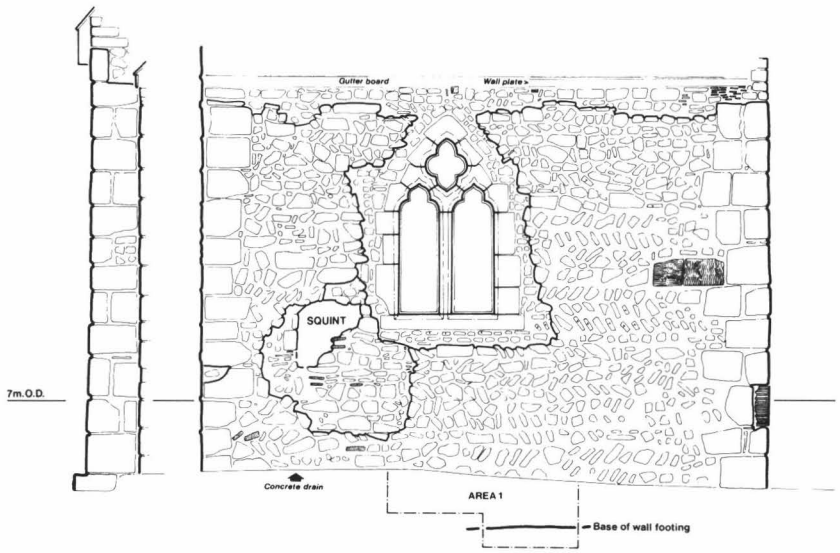


Fig. 10. Re-used Roman bricks and tiles are shown diagonally hatched.

HARDHAM CHURCH

SOUTH WALL OF CHANCEL



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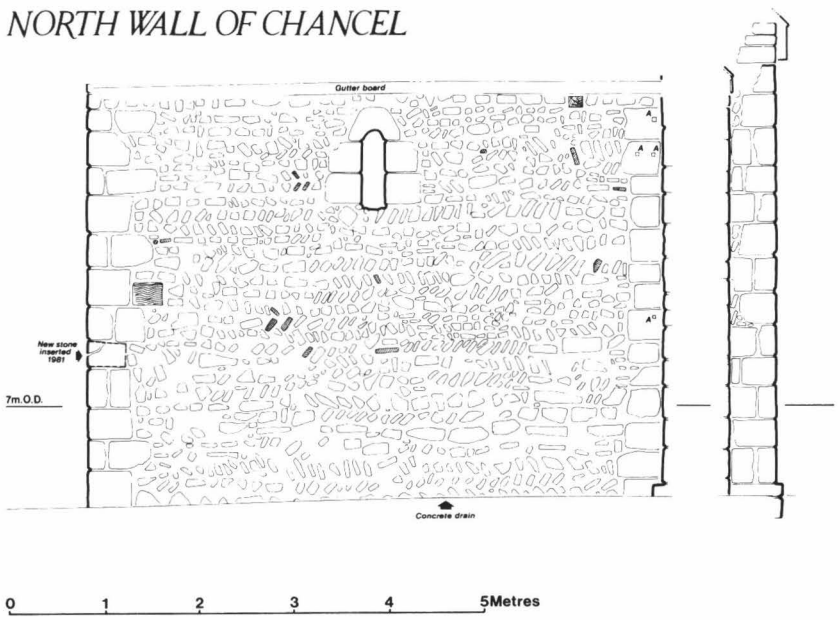

Fig. 11. Re-used Roman bricks and tiles are shown diagonally hatched.

HARDHAM CHURCH

WEST WALL OF NAVE

EAST WALL OF CHANCEL

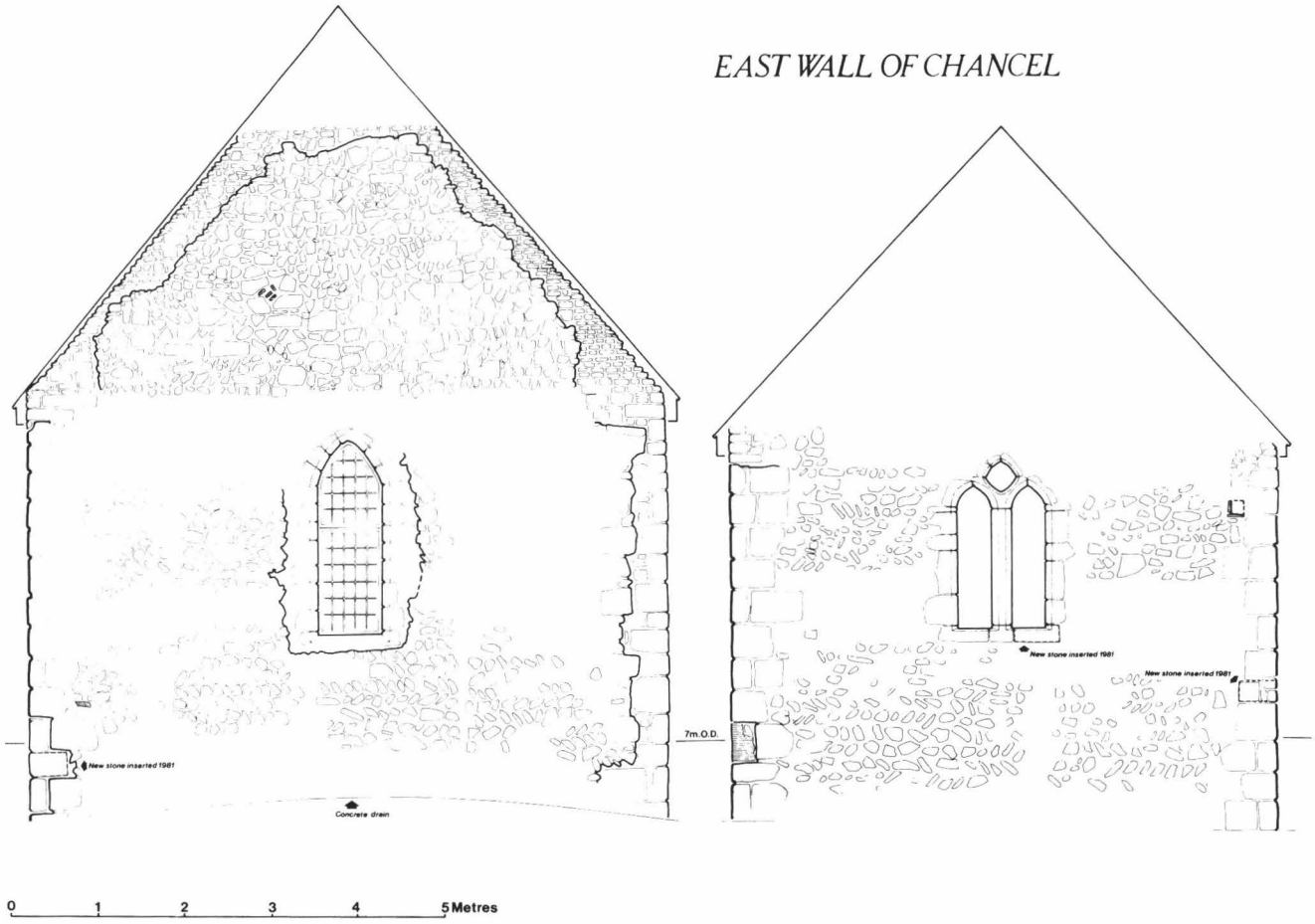

Fig. 12. Re-used Roman bricks and tiles are shown diagonally hatched.

Plate VIII. Hardham Church from the south-east during restoration in 1981.

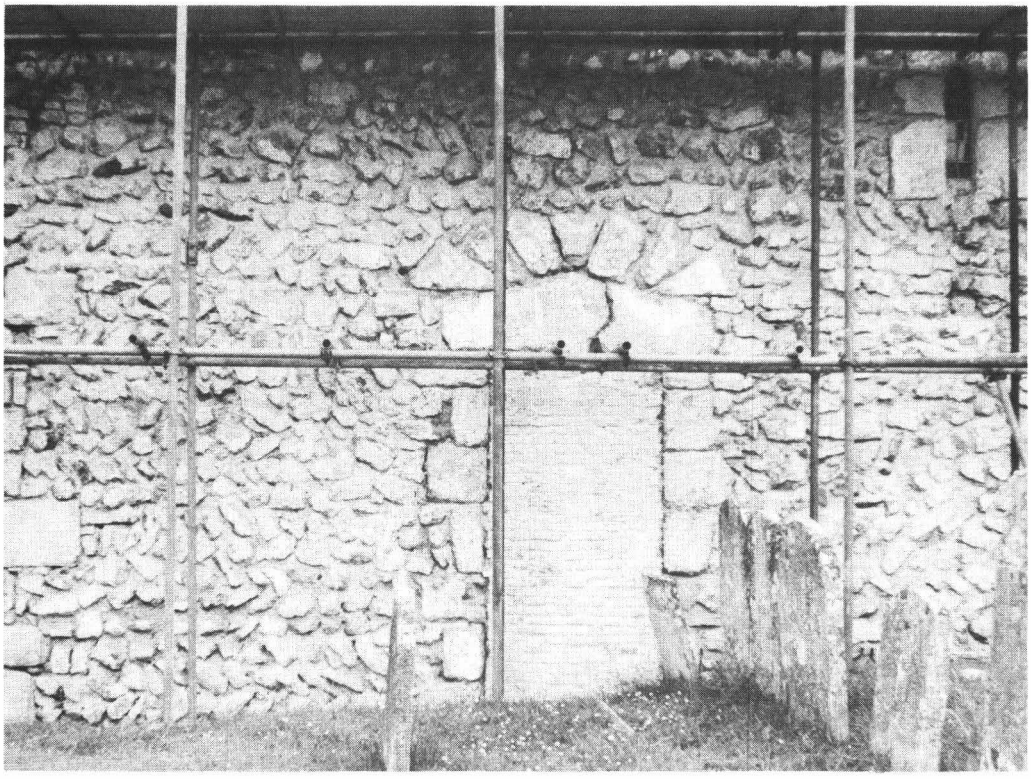

Plate IX. Hardham Church: the blocked south doorway.

deep and covered inhumation burials (Layers 4, 5, 6, 8, 10, 11 and 12) dug into the underlying soil (Layer 7). One of these (Layer 11) was sealed by clay (Layer 9). Two small stake holes were encountered (Layers 14 and 15). The base of the south walls of both the nave and chancel were encountered at around 6.1 m above Ordnance Datum and these were laid directly on unmortared footings originally placed in trenches, between 0.4 and 0.5 m deep, cut through topsoil down to the sandy gravel. No dateable evidence was recovered and the lowest graves were left in situ. No trace of the supposed anchorite's cell[3] was encountered on the south side of the chancel.

In July 1981 the waterproof rendering was removed from all the external faces to expose the stonework and mortar joints of the original building (Plate 8). The joints were subsequently re-pointed and the external faces re-rendered in a mixture of lime putty, stone dust, sharp washed Midhurst sand, and crushed brick. The exposed wall faces were closely studied and stone by stone elevation drawings were completed for the north and south walls of both the nave and chancel (Figs. 10 and 11), that for the north wall of the chancel being completed after re-pointing. The west wall of the nave and the east wall of the chancel were partially recorded (Fig. 12). The worked stone used throughout the original building is local sandstone, probably from Pulborough, with a few pieces of greensand, and the rubble infill is a mixture of sandstone with a few re-used Roman tiles, and a little flint and chalk. All this is set in a hard pink mortar. The small single-splayed windows in the north and south walls of the nave and in the north wall of the chancel were found to be part of the original structure as was the south doorway in the nave (Plate 9). The remaining openings and the squint in the south wall of the chancel are all later insertions. The inserted window above the squint may have replaced an original opening in the same position.

The south-west quoin was found to be rebuilt throughout its height but the other quoins appear to be intact with the exception of a few repairs which include, in the south-east quoin, medieval roofing tiles. On the north face of the north-west quoin and at the junction of the chancel and nave on the north side several stones have square holes cut in their outer surfaces, each measuring about 3 cm across, and each containing a wooden peg (Marked 'A' on Figs. 10 and 11).

ACKNOWLEDGEMENTS

The authors are grateful to the architect, Mr. Geoffrey Claridge, and the builders, W. Allfrey and Sons, of Pulborough, for their help and advice, and to the Sussex Archaeological Society for a grant from the Margary Research Fund to assist with the cost of undertaking the drawing of the structure. The original set of drawings has been placed in the West Sussex County Record Office.

F. G. Aldsworth
James Hadfield

References

[1]Taylor, H. M. & J. 1965 *Anglo Saxon Architecture* Vol. 2, 283–4.

[2]Johnston P. M. 1901 'Hardham Church, and its early paintings' *Archaeol. Journ.* 58, 12–92 and *Collections* 44, 73–115; and Bell, C. 1947 *The Twelfth-century paintings at Hardham and Clayton* (Lewes).

[3]*Johnston 1901* op. cit.

Archaeological finds in Dane Hill and Chelwood Gate

Starting in 1976, the Mid Sussex Water Company Ltd laid an 800 mm pipe from outside Ringmer (TQ 442 147) to an underground reservoir near Westall House, Horsted Keynes (TQ 392 286), and, in 1977, two further small branches to the same reservoir. Considerable lengths of these three lines were walked by Mr. C. F. Tebbutt; the finds are recorded in Tebbutt (1978).

In 1979, it was learnt that the M.S.W. Co's work was to be continued through Dane Hill parish and on to another reservoir near Black Hill, Ashdown Forest (TQ 474 310). The author and members of the Dane Hill Parish Historical Society took over the work within our parish. Copies of working drawings covering the whole scheme from Horsted Keynes to Black Hill were generously provided by the water company. The method of digging the pipeline was the same as that described by Tebbutt (1978).

Finds (refer to map, Fig. 13)

Section 1 to 2 (TQ 3997 2882 — 4021 2881)

Eastern part

One rim sherd of coarse unglazed pottery (cooking pot or bowl). The flattened rim is fairly common in this area and is comparable with vessels from Parrock (Tebbutt 1975) and Faulkners Farm (Tebbutt 1981). Late thirteenth and fourteenth century.

Section 2 to 3 (TQ 4021 2881 — 4056 2888)

Eastern part

One sherd frilled foot of Raeren stoneware tankard. Early sixteenth century.

Section 3 to 4 (TQ 4056 2888 — 4083 2894)

Western part

One pink earthenware sherd with dark brown surface flaking off, typical of the late fifteenth to mid sixteenth century ware of this area.

Three smooth earthenware sherds with dark brown surface. Dating of these wares difficult; probably late sixteenth century. Five glazed sherds (four pink, one dark brown); probably seventeenth century.

Middle part

Many pieces of bloomery tap slag. Roman or medieval.

One small piece of glazed furnace lining.

Eastern part

Pottery sherds and burnt flint over entire field. Seventeenth to twentieth century.

Seven small sherds (three brown, three light brown, one red) of glazed stoneware. English; probably seventeenth century.

One flint arrowhead (Neolithic or later).

Section 5 to 6 (TQ 4110 2886 — 4140 2911)

Opposite 'Sedges' (TQ 4105 2882)

A brown flint transverse or petit tranchet arrowhead. Mesolithic or Neolithic.

Near 'Rose Cottage' (TQ 4127 2890)

One small flint flake, one arrowhead and a small scraper. Neolithic or later.

'Herons Brook' — South field (TQ 4161 2913)

In the northern corner, a grey flint blade or awl. Neolithic or later.

Birch Farm — Lower Field (TQ 4168 2921)

A grey flint scraper or blade (6.5 cm long). Neolithic or later.

Conclusions

In spite of the inexperienced nature of the team, this survey, as far as we know the first in the parish, has

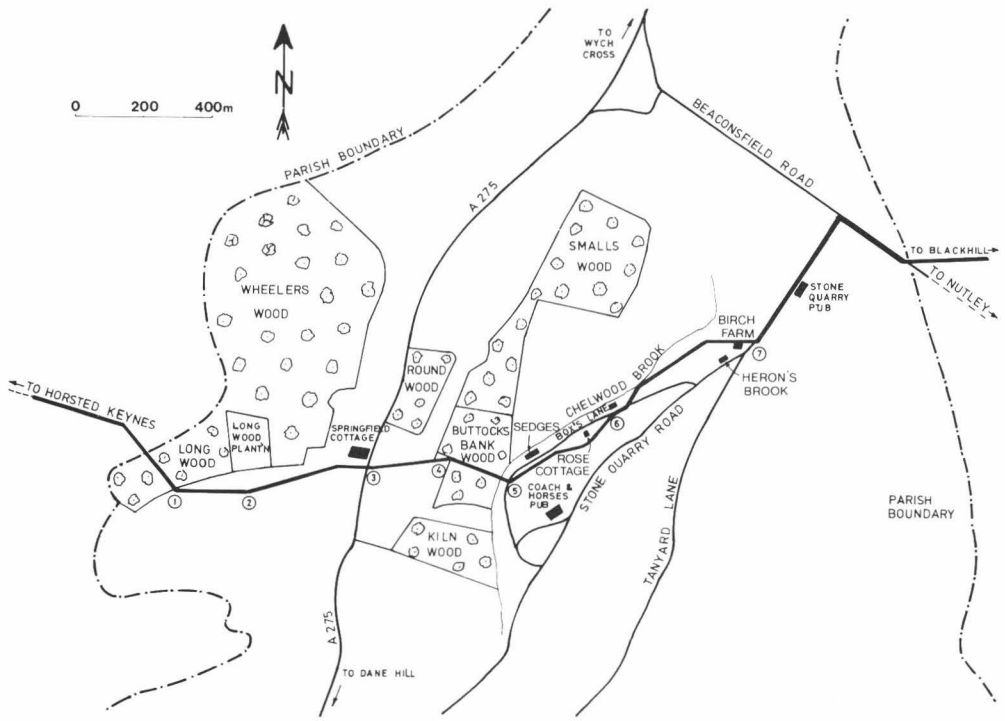

Fig. 13. Plan of pipeline at Dane Hill and Chelwood Gate.

produced a great number of sherds so far unidentified and has provided an interesting and valuable cross-section through the area. It is hoped that the results will stimulate further work.

ACKNOWLEDGEMENTS

We are greatly indebted to Mr. and Mrs. Tebbutt for their encouragement and advice, and for checking and giving first identification of our finds. We are also grateful to the British Museum for examining and commenting on the flintwork, and Anthony Streeten for identifying the medieval and post-medieval pottery. We are indebted to all the landowners for allowing us to walk their properties, to the Mid Sussex Water Company for drawings and their courteous co-operation, and to the contractors, Messrs. Maddison, and their employees, Mr. Flanaghan and Mr. Zelichowski.

The curator's selection of the finds have been deposited at Barbican House, Lewes. The remainder are retained by the author.

Leslie A. Buckland

References

Tebbutt, C. F. 1975. 'An abandoned medieval industrial site at Parrock, Hartfield', *Sussex Archaeological Collections* (hereafter *S.A.C.*), 113, 146–51.

—— 1978. 'Mid Sussex Water Company pipelines', *S.A.C.* 116, 402–4.

—— 1981. 'A deserted medieval farm settlement at Faulkner's Farm, Hartfield', *S.A.C.* 119, 107–16.

Medieval pottery found at Chelwood Gate, Sussex

In the summer of 1965, we were forming our garden from a rough, steeply sloping field at the back of Cherry Tree Cottage, Chelwood Gate (TQ 415 291), and, while using a mechanical cultivator, turned up from a depth of 25 cm two unusual pieces of pottery partially covered with a greenish glaze. Fitted together, the pieces formed a ram's head with part of its body (Fig. 14).

Having no experience of archaeological matters, we later showed the pottery to Evan Perry, curator of Horsham Museum, when he came to speak to the Dane Hill Parish Historical Society. He identified the pottery

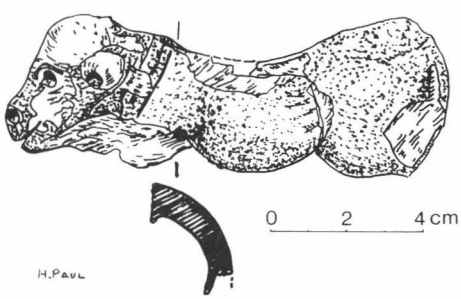

Fig. 14. Medieval pottery (ram's head) from Chelwood Gate.

as medieval and suggested that it be shown to John Cherry of the British Museum. His comments are as follows:

'Two sherds forming an applied animal. They are of fine white micaceous ware with quartz and red inclusions. The clay has been moulded by hand, since there are clear indications of thumb prints on the inside, into the shape of half an animal. The exterior has been covered by a greenish yellow glaze which is crazed and only survives in patches. The animal was presumably applied against the side of a jug as a form of relief decoration. The animal has pierced holes for nostril eye and ear and the clay is worked into a band behind the ear probably to indicate a halter or collar. In general form, the animal represented is a lamb or ram. The curved moulding above the ear probably represents a ram's horn.

'The fabric does not suggest a local Sussex origin. The nearest most likely source of white ware is Surrey and this may well be the source. Animals do occur on the side of jugs, notably the pitcher from Earlswood in Surrey, but the decoration on that is in impasto slip rather than relief. The sherds probably date from the period of highly decorated jugs in the late thirteenth or early fourteenth centuries.'

The sherds were also shown to Anthony Streeten who reports as follows:

'The fabric of this vessel cannot be attributed to any of the known medieval kilns in Sussex. White sandy wares containing mica are represented among a group of wasters from Graffham, but the sherds from Chelwood Gate are much finer than the Graffham wares. Likewise, the fabric is distinct from the products of medieval pottery industries which exploited outcrops of white-firing clay in south-west Sussex and in the Hampshire/Surrey border area. There can be little doubt therefore, that the vessel has been traded over some considerable distance.

'Small red inclusions similar to those in this fabric are characteristic of certain South-West French wares, but Mr. R. G. Thompson (Southampton City Museum) confirms that the large quantity of mica in the Chelwood Gate sherds cannot be paralleled with any of the imports so far recognised at Southampton.

'An identical fabric has, however, been identified among material from Mr. A. Barr-Hamilton's excavation of a moated site near Henfield. Only two sherds have been recognised in the sample of pottery examined so far, but the small quantity adds strength to the belief that this is an imported ware.

'The discovery at Chelwood Gate in the High Weald, of thirteenth/fourteenth century pottery, apparently derived from a source outside the region, is therefore of particular interest. Hitherto, imports of this date have not been represented among finds from excavation and fieldwork in the area. Thus it remains to be seen whether the vessel from Chelwood Gate is an exotic item, perhaps carried by an individual traveller, or whether imported pottery was indeed more widely available in the High Weald than the limited evidence has indicated up to now.'

As can be seen, no final conclusions can yet be made of the place of origin of this find. Nevertheless, thanks must be made to the three gentlemen named in this article for their help and expert opinions, and to Mr. Horace Paul of Chelwood Gate for his copy of the British Museum xerox of the animal. The pottery has been deposited in Barbican House, Lewes.

Leslie A. Buckland

HISTORICAL NOTES

This section of the *Collections* is devoted to short notes on aspects of local history. Those without previous experience in writing up such material for publication should not be deterred from contributing; the editor and members of the editorial board will be happy to assist in the preparation of reports and illustrations.

The place-name 'Cissbury'

Two points can be added to the review of evidence for the history of the name Cissbury presented by Dr. Richard Coates in *Sussex Archaeological Collections* **118**, p. 315.

(1) The 'olde byry' mentioned in a document of 1477 cannot be Cissbury Ring. The document in question (*Sele Chartulary*, ed. L. F. Salzman, p. 92) is a division of tithes in Findon parish between Sele priory and the rector of Findon; the places named are listed topographically, in a clockwise direction round the parish, and the lands near the 'olde byry' are clearly in the same area as the church and manor house (now Findon Place). The modern village is ½ mile to the east, but it is clear that the original village lay near the church and manor house, and I have suggested (in *V.C.H. Sussex*, **6**(1), p. 22) that the earthwork referred to was connected with that deserted site.

(2) A rental of Findon manor dated 1663 (East Sussex Record Office, ADA 75) refers to the hillfort as 'Cesars Bury', the rationalization presumably being due to sixteenth or seventeenth-century antiquarianism of the same kind that gave us the river name Adur.

T. P. Hudson

The May Family Vault and the Lady May Monument in the Church of St. Nicholas, Mid Lavant, West Sussex

The Church of St. Nicholas, Mid Lavant, was decribed in 1953[1] and in 1969 the Rev. T. S. Bayley drew attention to the existence of a family vault under the chancel which was thought to contain a seventeenth century monument and effigy of Lady Mary May, reputed to have been produced by the sculptor John Bushnell.[2]

The vault was rediscovered in August 1981 by Mr. D. Edwardes, of the Chichester building contractors L. W. Bettridge Ltd., when the floors were being replaced as part of a scheme of alteration and conservation. Access was found to be by a steeply inclined ramp between the two supporting pillars of the chancel arch (Fig. 1). The ramp is constructed and plastered in a way which would indicate that it originally comprised a sloping wooden floor supported on side joists, each measuring about nine inches by four inches, set partly into the underlying ground. These were set at their lower ends on a horizontal threshold, comprising a timber measuring about 6 in square. The vault itself measures 4.73 x 3.06 m and is 2.53 m high. The walls and roof are constructed of chalk blocks set in a lime mortar with the head of the entrance opening built of thin, handmade, probably seventeenth century, bricks. The floor is stone slabs laid directly on soil.

The Lady May effigy, illustrated in a drawing in the British Museum,[3] survived intact in the south-west corner of the vault together with its accompanying inscription (Plate I), but the remainder of the momunent — the horizontal bed and supports on which the effigy lay, the ornamental lamps and some of the decorative folded linen — was missing. The monument was attributed to John Bushnell by Mrs. Esdaile in her study of this sculptor,[4] on the basis of the drawing in the British Museum, and this attribution was followed by Bayley in his article.[5] The surviving pieces have been examined by representatives from the Victoria and Albert Museum who comment —

> 'The rediscovery of the monument has made it clear that the drawing is accurate and that Miss Esdaile's attribution is correct. This is confirmed by the close relationship between the reclining figure of Lady May and Lord Ashburnham's wife on the monument at Ashburnham Church, East Sussex, which is listed among Bushnell's works by the eighteenth century writer George Vertue. The cutting of both figures is quite distinctive, involving considerable use of the drill, a technique which was unusual in England at this date, and probably learnt by Bushnell in Rome.
>
> Having travelled in France and Flanders, Bushnell worked in Venice and then went to Rome where he was apparently much impressed by Bernini. On his return to England around 1670 he executed various figures for the Temple Bar and the Royal Exchange in which the drama of Bernini and the Roman baroque style appear for the first time in English sculpture. Something of this drama is apparent in the figure of Lady Mary May, particularly in the carving of the head, the deeply excavated drapery around the shoulder and the undercutting of the right hand, clutching a bunch of drapery. Although the Lavant figure differs from the Ashburnham one in some of its details the similarity is close enough to suggest that both were based on the same terra cotta model, another technique introduced by Bushnell from Italy.
>
> Although Bushnell was evidently too difficult and eccentric a person to have many followers, his contribution to English sculpture was distinctive and important. However, relatively few of his works survive, among them the monuments to Sir William and Lady Ashburnham, and that to Lord Mordaunt at Fulham. After these examples the Lady May is probably the most significant of his monuments and its rediscovery is a most welcome and notable addition to the surviving body of seventeenth century English sculpture.'

The accompanying inscription reads:

Here
Lies the Body of Dame Mary second wife to Sir-John May of Rawmere the only surviving Sister & sole Heire unto Sir-John Morley of Brooms & Daughter to Sir John Morley of Chichester Son to Sir Edward Morley a second Brother of the Family of Halnaker Place
Piously contemplating ye uncertainty of this life, among other solemn Preparations for her Funerall Obsequies, Shee erected this Monument in ye time of her life, in ye. year of our LORD 1676. She departed this life in ye year of our LORD 1681 in ye 41st. year of her Age.

Lying in the vault were remains of 16 coffin burials in three layers (Fig. 2). These had been disturbed when the Lady May monument was transferred to the vault in 1871–2 and five coffin plates were removed and placed

ST. NICHOLAS CHURCH, LAVANT

THE MAY FAMILY VAULT

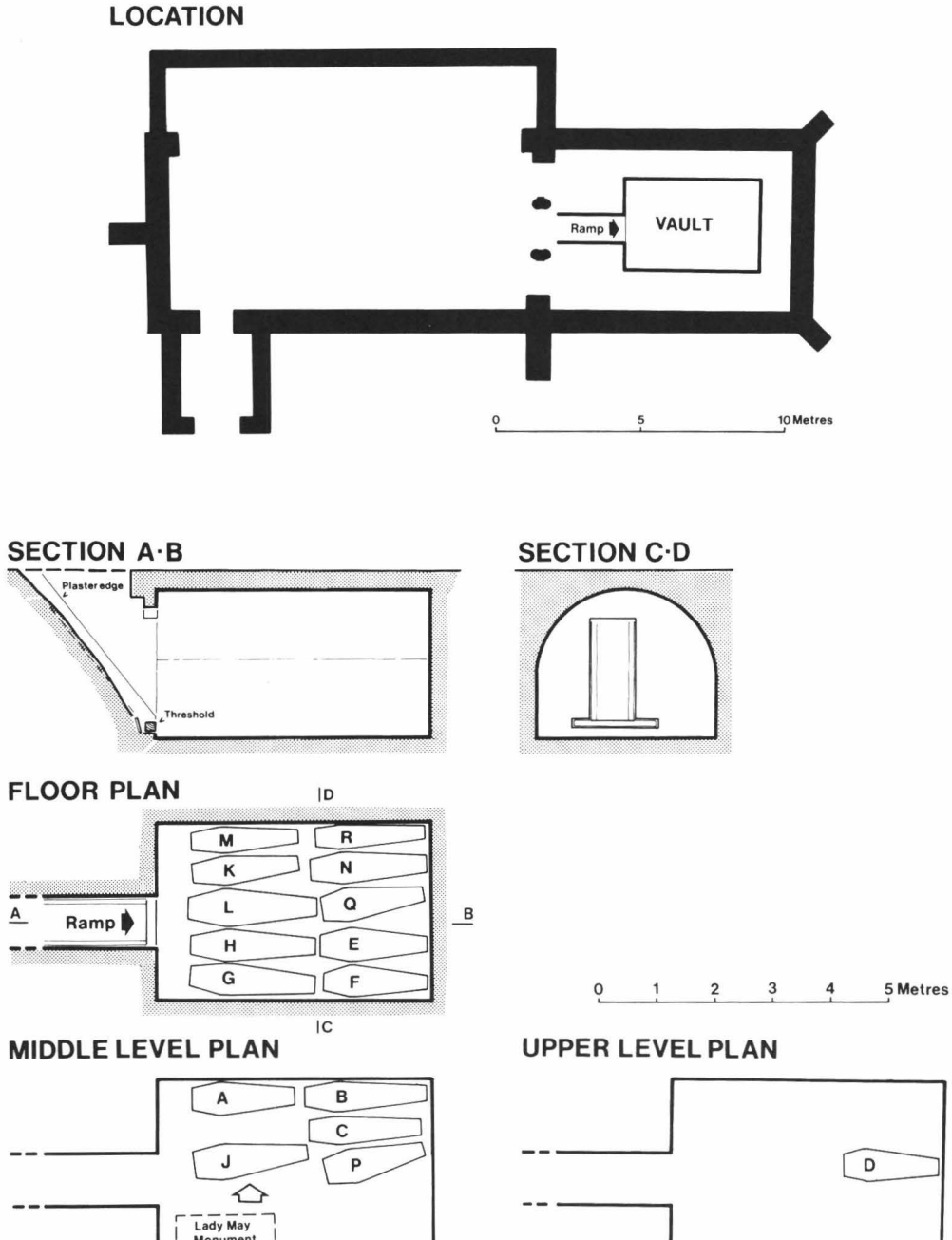

Fig. 1.

Plate 1. The Lady May effigy in Mid Lavant Church (Photo G. R. Claridge).

on the north wall of the chancel where they remain on view. It would appear that coffin J, which was separated from the underlying coffin (L) by a layer of disturbed masonry, had been moved out to allow the monument to be placed in the south-west corner of the vault. Little more remained of the coffins than fragments of very decayed timbers held together in places by coffin handles and brackets. Many of the coffins had been covered by two lids, the outer one usually being decorated with lines of bronze studs. Seven coffin plates were found in situ on the lids but one of these, coffin P, was in a poorly preserved state and was transcribed before removal. There was no evidence for the use of inner lead coffins and most of the burials had been laid on a bed of lime which had, in most cases, removed all traces of the skeletal remains. In one case, coffin Q, the body of an adult female had been wrapped in at least 10 layers of cloth before being placed in the coffin. The date 168. or 16.8 was outlined in studs on coffin E, and coffin lid F included not only a coffin plate but the initial 'H', for Hester, outlined in iron studs.

Of the 11 persons represented by the five coffin plates on the north wall of the chancel and the seven coffin plates recovered from the vault (one is a duplication),

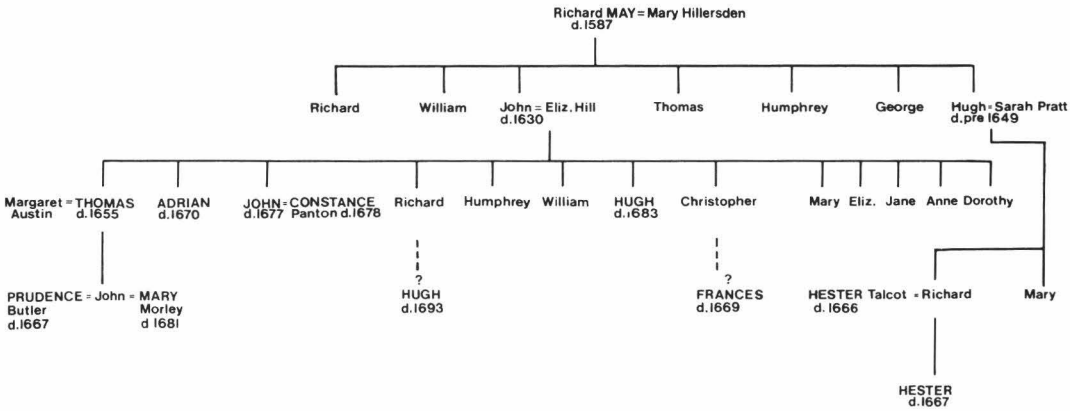

Fig. 2. An abstract of the descent of the May family after Richard May (compiled from Barry 1830).

nine can be identified on William Berry's pedigree of the May family,[6] a portion of which is reproduced in Fig. 2, but it has not been possible either from this source or from the Parish Register of Burials[7] to show which other members of the family are likely to be represented in the remaining coffins.

The newly discovered coffin plates read as follows:

Coffin F: HESTERA MAY
Vxor Richardi May Armig obijt
Nono die Jul y Anno Dom 1666

This is a duplication of one of the plates in the chancel which includes more detail. Hester was the daughter of William Talcot, of Lincoln's Inn Fields, Middlesex, and the first wife of Richard May, of Middle Temple, London. Their daughter, also Hester, is buried in the vault and is represented by a coffin plate on the chancel wall.

Coffin K: Adrianus May
Regibus Carolo primo et Secundo
privatae Camerae honorius Satelles
obyt vicessimo Sexto Aprilis
A.D. 1670

Adrian May, who died on 26 April 1670 was the second son of John May, of Rawmere, and Elizabeth Hill and brother to John (Coffin L) and Thomas (Coffin R). He was groom of the privy chamber to both Charles I and Charles II.

Coffin K: John May Esq. Son
Ne to John May
Esq. of Rawmeere
obytt ye 26 of October
1677

John May was the third son of John May,of Rawmere, and Elizabeth Hill, and brother to Adrian (Coffin K) and Thomas (Coffin R). He married Constance Panton who died on 30 March 1678 and she is represented by a coffin plate on the wall of the church.

Coffin M: Prudence May
The Wife of John May Esq.
Deceased March 4th. A° Dom 1667

Prudence Butler was the first wife of John May, of Rawmere, who died in 1672, the son of Thomas May (Coffin R).

Coffin N: Mrs Frances May the wife
of Christopher May obijt
July the j i669

Frances May has not been identified in the pedigree. Christopher, the eighth son of John and Elizabeth, is thought to have married a Dorothy Prude.

Coffin P: [Hu] gh May
[S] econd Son
of Richard May
Who Died
[–]y 16.3/4

The year of burial is unclear. It could be 1663/4 or 1693/4. Thus it is not clear which Hugh is referred to here. It cannot be the Hugh May referred to on the coffin plate on the chancel wall. It could be Hugh who died before 1649 but the position of the coffin would not support this view. The register refers to the burial of a Hugh May in 1693/4 but it is not clear in the pedigree where he fits in. He could be the son of Richard, the son of John and Elizabeth May.

Coffin R: Thomas May
De Rawmeer Armig obijt 27 die
Decembris Anno Dom: i655

Thomas was the eldest son of John May, of Rawmere, and Elizabeth Hill, and brother to Adrian (Coffin K) and John (Coffin L). He married Margaret Austin, of Shalford, Surrey.

The earliest surviving dateable burial would appear to be that of Thomas (1655) whose coffin was placed in the north-east corner of the vault. It seems likely that this was the first use of the vault implying that it had been constructed immediately before this date. The latest dateable burial appears to be either Hugh (1683/4) or the other Hugh (1693/4), although a further coffin (D) is placed on top of the latter one. It is suggested that the vault may have been built at the request of Hugh May, the architect (i.e. the one who died in 1683/4), controller of the Kings Works at Windsor, who must have been held in high esteem by his contemporaries in the parish.

Found amongst the coffin remains was a copper Nuremburg 'Rechenpfennige' (Reckoning Penny) or Jetton. These occur all over England and were probably used as small change at a time when official token-coinage of base metal did not exist. This particular example bears the name of the maker: HANS KRAUWINCKEL (*c.* 1580–1600) and the inscription: GOTTES.GAEN.SOLMANLOB on the reverse.

ACKNOWLEDGEMENTS

I am most grateful to Mr. G. R. Claridge, of Roth and Partners, and to the building contractors, L. W. Bettridge Ltd., for their help and advice.

F. G. Aldsworth

References

[1] *VCH Sussex* 4 1953 pp. 105–6.

[2] Bayley Rev. T. D. S. 1969 Lady Mary May's Monument in Mid Lavant Church *Collections* 107 pp. 1–11.

[3] *British Museum* Add.MS.5675.folio 56.

[4] Esdaile, K. A. 1926–7 John Bushnell, Sculptor *Walpole Society* 15 pp. 21–45.

[5] *Bayley 1969* op. cit. Ref. 2.

[6] Berry, W. 1830 *Pedigrees of the Families in the County of Sussex* p. 21. (Annotated copy in West Sussex Record Office).

[7] *West Sussex Record Office* Par.121/1/1/1.

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