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May 1983

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FLOODPLAIN DEVELOPMENT IN AND THE VEGETATIONAL HISTORY OF THE SUSSEX HIGH WEALD AND SOME ARCHAEOLOGICAL IMPLICATIONS

by R. G. Scaife, B.Sc., Ph.D., F.R.G.S., and P. J. Burrin, B.Sc., A.K.C., F.R.G.S.

Geomorphological and palynological investigations have been undertaken of the floodplain and alluvial fill sediments of the rivers Ouse and Cuckmere, East Sussex. Results are presented from one of the sites studied, at Sharpsbridge near Newick, elucidating the nature and probable age of these deposits. It appears that valley alluviation in this area has been largely in response to anthropogenic valley side forest clearance dating back to the Mesolithic. It is of interest to note that the bulk of valley sedimentation in this part of the upper Sussex Ouse was completed by the close of the late Bronze–early Iron Age, despite later periods of forest clearance during Romano-British and Medieval times in association with the Wealden iron industry.

INTRODUCTION

From continued archaeological research in Sussex it has become evident that prehistoric man was present in this region in greater numbers and with a greater degree of organization than previously thought. Less clear, however, is the nature and impact of these people on the landscape. This results from our limited knowledge of the vegetational history of both South-East England (Smith and Pilcher 1973, Scaife 1982) and more specifically, the Wealden district (Sheldon 1978).

Consequently, it is of relevance to present some initial results of a continuing geomorphological (PJB) and palynological (RGS) research programme into the floodplain and alluvial fill deposits of the rivers Ouse and Cuckmere. These investigations build upon the earlier studies in the Vale of the Brooks, Lewes, by Jones (1971, 1981) and Thorley (1971, 1981). The three objectives of this paper are first, to discuss briefly the nature of the floodplain deposits; second, to provide some information concerning the vegetational history of the Sussex High Weald and the probable age of the floodplain sediments; and finally, to focus attention on the archaeological implications of these findings.

FLOODPLAIN ALLUVIUM

Detailed investigations of the alluvial fill sediments within the floodplain tracts of the Ouse and Cuckmere have been undertaken at twenty sites, utilising both Macintosh and Hiller augers. Litho-stratigraphic cross profiles have been constructed from interpolation of the data between adjacent boreholes across the floodplain. Attention is focused here on the results of subsurface investigations at Sharpsbridge (TQ 444 208), a site located on the southern margins of the High Weald, in the upper Ouse valley. Augering has revealed (Fig. 1) a complex, polycyclic, sub-alluvial surface cut into the Lower Cretaceous Tunbridge Wells Sand formation of the Hastings Beds. Two, small, bench-like features at approximately 8 m O.D. flank a deeper, channelised form, whose minimum surface elevation is 3.8 m O.D. The rockhead is partly mantled by a thin, residual clayey

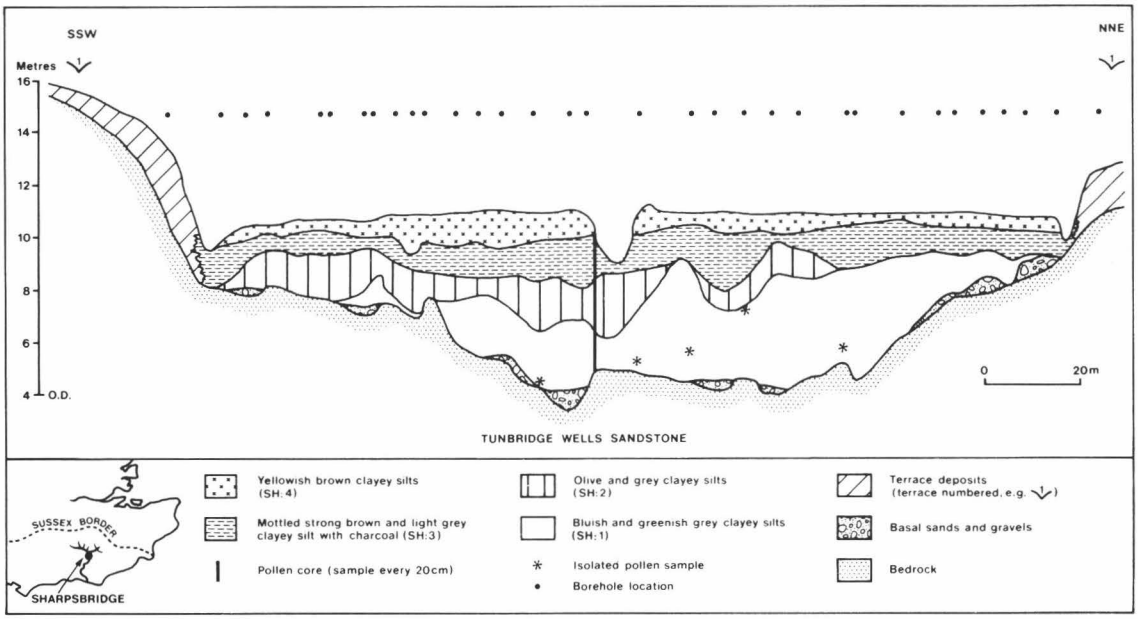

Fig. 1. The Sussex Ouse Valley Fill at Sharps Bridge.

sand and gravel deposit, which is buried by up to 7.0 m of relatively inorganic silts, clayey silts and silty clays, with some fine sandy inclusions and occasional very thin interbedded lenses of peat. These fine-grained sediments can be sub-divided into four litho-stratigraphical units (Fig. 1):

Unit	Description
1.	A bluish and greenish grey (5 Y 4/1, 5 GY 4/1, 5/1), mottled with grey (2.5 YN 7/0), dark grey (2.5 YN 4/0) and greyish brown (2.5 Y 3/2) clayey silt with occasional very thin laminations of interbedded peat. Maximum proven thickness 5.0 m.
2.	An olive (5 Y 5/4), olive grey (5 Y 4/2, 4/4) and olive brown (2.5 Y 5/4, 5/6) clayey silt, with occasional small charcoal fragments and a maximum thickness of 2.8 m.
3.	A mixed and variable deposit with a maximum proven thickness of 2.3 m. It is generally a strong brown (7.5 YR 5/6, 5/8) and light grey (2.5 YN 7/0) silt, often mottled with dark brown (10 YR 3/3) dark yellowish brown (10 YR 4/4, 5/6), pale yellow (2.5 Y 7/4) and reddish yellow (2.5 Y 6/8). It frequently contains a considerable amount of charcoal litter in its upper parts.
4.	Yellowish brown (10 YR 5/4, 5/6), dark yellowish brown (10 YR 4/3, 4/4), dark brown (10 YR 3/3) and brownish yellow (10 YR 6/6) fine sandy clayey silts with a maximum thickness of 1.8 m.

Normally these fine-grained alluvial deposits would be interpreted as reworked locally-derived sediments, the Wealden bedrocks having a high, though variable silt content (Gallois 1965). Detailed and extensive sedimentological analyses, however, have indicated that not only is it impossible to differentiate between these four litho-stratigraphic units, but also that there are significant differences between the relatively homogeneous, fine-grained, alluvium and the bedrock deposits. The repeated finding of sediments with loessal (i.e. aeolian, wind-blown), rather than the more variable locally-derived bedrock, characteristics suggest an origin external to these catchments (Burrin 1981). Such reworked loessal-derived sediments can be found within the alluvium of all Sussex rivers (Burrin, *in press*) thereby providing some indication as to the formerly, more widespread distribution of loess in Sussex.

PALYNOLOGICAL ANALYSIS

A palynological investigation was carried out in order to confirm the litho-stratigraphy of the alluvial fill deposits and to attempt to establish the age and evolution of the deposits. The predominantly inorganic nature of the alluvium precluded the possibility of obtaining an accurate chronology using radiocarbon dating.

Sequential samples of alluvium for pollen analysis were obtained (Fig. 1) using a standard Hiller auger in preference to a Russian/Jowsey corer, which was unable to penetrate the highly tenacious sediments. The valley fill was sampled at 20 cm intervals, 1–2 ml being taken for analysis. Isolated spot samples were also taken from a number of locations (Fig. 1) within the Sharpsbridge section. Standard techniques were used for extracting the sub-fossil pollen and spores (Faegri and Iversen 1974, Moore and Webb 1978). While the calculation of absolute pollen frequencies would have been desirable, facilities were not available to do so at the time of preparation. Proportional calculation was carried out, with pollen taxa being calculated as a percentage of the total pollen counted (TP) at each level. The pollen sum was largely dictated by the numbers of pollen grains present. Wherever possible a minimum sum of 150 arboreal pollen grains per level was recorded, together with all extant taxa. Pollen of *Alnus* was included in the arboreal pollen sum because it was regarded as being part of the total plant community and, therefore, relevant to any interpretation of the development of the floodplain. Overrepresentation of this taxon in the pollen spectrum is likely because of its high pollen productivity, anemophily and autochthony.

Spores of Filicales and Bryophytes were calculated as a percentage of total pollen plus spores. Attempts to quantify the numbers of pollen grains having exine degradation were made in order to assess those pollen grains of secondary derived origin. Unfortunately, pollen degradation was apparent in many levels, perhaps due to fluctuating water tables or the occasional drying out of the floodplain and alluvial fill during parts of the Flandrian. Consequently, such efforts proved unsuccessful. Pollen sampling was not undertaken in the upper 80 cm of valley fill because the alluvium had been appreciably disturbed by anthropogenic activity.

The palynological results are presented in Fig. 2, 3 and 4. Four biostratigraphical assemblage zones have been recognised and designated Sharpsbridge (SH:) 1–4. These are characterised as follows:

SH:1 6.4–5.3 m — Dominated by *Pinus* (60–80%), *Corylus* type (31%), Gramineae (up to 9%) and *Dryopteris* type (23–40%). *Betula*, *Quercus* and *Fraxinus* are also present, whilst herbaceous pollen other than that of Gramineae are few and consist largely of marginal aquatic and fen taxa.

SH:2 5.3–2.7 m — Aboreal taxa are dominated by *Quercus* (18–32%), *Tilia (10–30%)* and *Alnus* (17-33%). Highest values of *Ulmus* (5%) and *Fraxinus* (8%) are also present, the latter declining above 3.4 m whilst *Betula* (2–9%) increases significantly from the previous zone. Pollen from shrubs is dominated by *Corylus* type which declines throughout the zone. A significant increase in pollen of herbaceous taxa (3–15% TP) also occurs and includes *Plantago lanceolata*, *Rumex*, Liguliflorae and Gramineae. The presence of pollen of cereal and Cruciferae is also significant.

SH:3 2.7–1.3 m — This zone has been delimited by a marked decline (Fig. 2) in the pollen of *Tilia*, *Ulmus*, *Alnus*, *Quercus*, *Fraxinus* and *Corylus* type. In contrast to this reduction is the notable expansion of herbaceous pollen (averaging 66% TP). Of particular significance are Gramineae (25–50%), cereal (2–3%), Liguliflorae (33.5%) and *Plantago lanceolata* (2.5%). Cruciferae and *Centaurea cyanus* can be regarded as possible indicators of arable agriculture.

SH:4 1.3–0.8 m — This zone is characterised by an increase of arboreal pollen to 42% of total pollen, with an increase in the numbers of *Alnus* and *Tilia* pollen; expansion of *Corylus* type pollen is also evident. Conversely, pollen of herbaceous taxa are less well represented.

A good correlation appears to exist between the litho-stratigraphy as described above and the bio-stratigraphy. The lowest pollen assemblage zone (SH:1) is characterised by its dominant *Pinus*

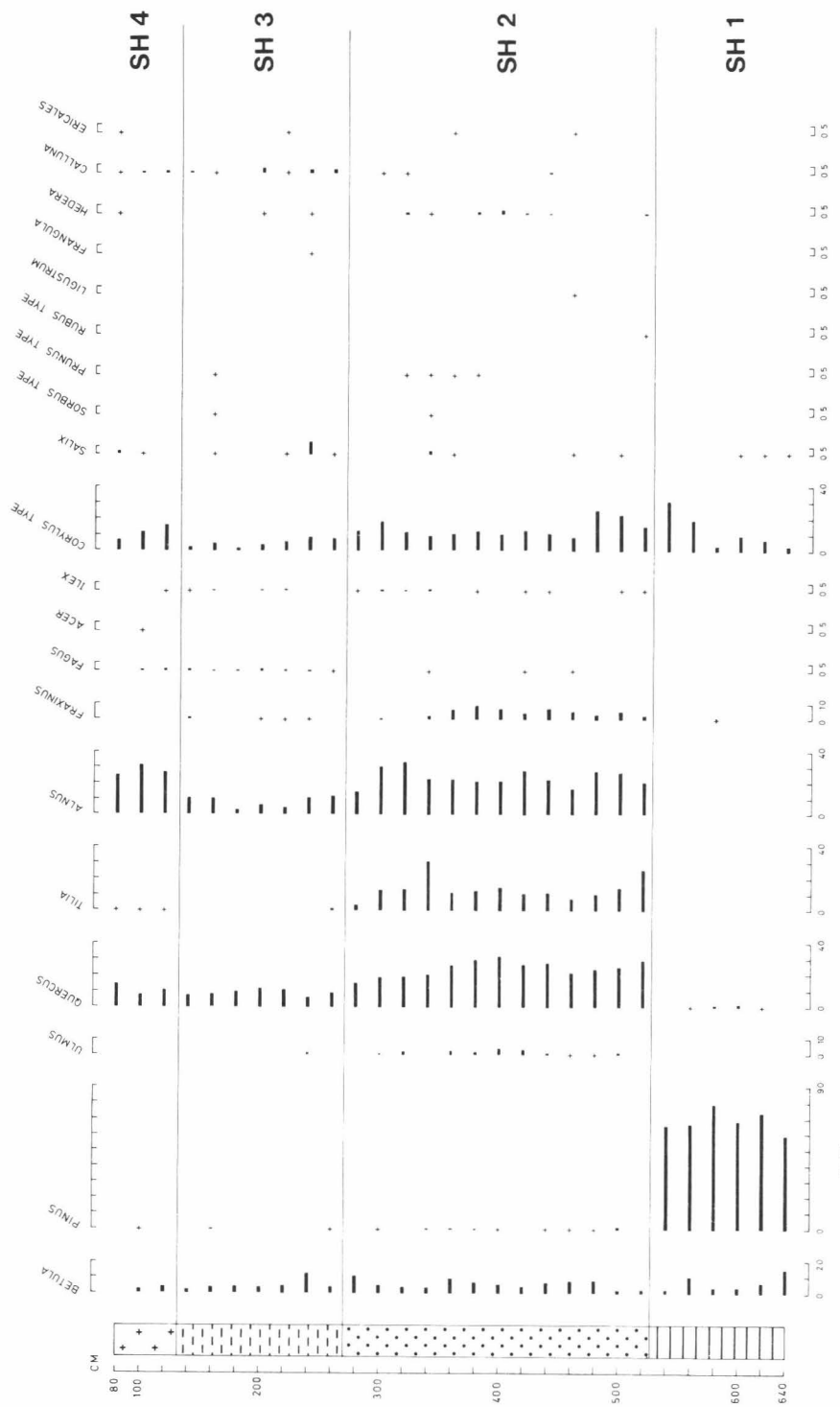

Fig. 2. Sharpsbridge biostratigraphy (arboreal and shrubs).

and *Corylus* type and by its well defined bio-stratigraphical discontinuity with the succeeding zone SH:2 (Fig. 2). From the floristic contents of this zone, it is suggested that the sediments were deposited during the early Flandrian. High values of *Pinus* pollen have been noted in sediments of this age in England for some years. Erdtman (1928) discussed the early expansion of this taxon during the Flandrian in this region, which has subsequently been verified by other researchers (Seagrief 1959, 1960, Seagrief and Godwin 1960, Haskins 1978, Scaife 1980, 1982, Kerney *et al.* 1981). The dating of this zone is dependent on the suggested time of entry of *Pinus* into southern England in the Late-Devensian or early Flandrian periods. The domination of arboreal pollen by *Pinus* (Fig. 2) and the relatively low numbers of pollen of herbaceous taxa (Fig. 3), especially those often indicative of Late-Devensian conditions (Scaife 1982), suggest that an early Flandrian age is most likely. The vegetation represented by zone SH:1 was apparently dominated by stands of *Pinus* and/or *Corylus*, this being the predominant vegetation growing during the Boreal period (Godwin 1975a, 1975b).

A sharply defined bio-stratigraphical discontinuity occurs between 5.2 and 5.4 m (Fig. 2), separating pollen zones SH:1 and SH:2. Within the 20 cm sampling interval, an hiatus of some thousands of years is present in the palynological profile and there is a notable absence of pollen of late Boreal or Atlantic age (Godwin's pollen zones VI and VIIa). On the basis of the arboreal pollen found in SH:2, it is evident that *Quercus*, *Tilia*, *Ulmus* and *Fraxinus* were the dominant taxa during this episode of sedimentation, whilst *Alnus* may have formed a substantial carr community, possibly on the floodplain itself. From the relatively high *Tilia* percentages (Fig. 2), it is suggested that this species was a dominant element in the woodland within the vicinity of the floodplain, the relatively well-drained soils overlying the adjacent sandstone lithology probably providing habitats suited to its growth. Elsewhere within the area of pollen catchment, *Quercus* and *Ulmus* might have been preferentially suited to growth on slightly heavier soils. Herbaceous pollen in this zone, including those of cereal crops and associated weeds of cultivation, is evidence that a degree of anthropogenic deforestation and subsequent agriculture took place. This, together with the absence of a 'Primary *Ulmus* Decline' which was broadly synchronous across Britain at *c.* 5000 b.p. (Smith and Pilcher 1973), suggest that these sediments were deposited in the post-Neolithic. By analogy with the *Ulmus* pollen changes seen in more complete Flandrian palynological sequences (Girling and Greig 1977, Haskins 1978, Scaife 1980, 1982, Tomalin and Scaife 1980), it is probable that the *Ulmus* profile in SH:2 represents secondary regeneration during the Neolithic period, which is also found in other pollen diagrams from southern England (Scaife 1982). It is suggested, therefore, that the sedimentation represented by pollen zone SH:2 was initiated during the immediate post *Ulmus* decline shortly after *c.* 5000 b.p. At a depth of between 2.6 and 2.8 m, a marked decline in pollen of *Tilia* is found (Fig. 2). This phenomenon, although not a synchronous occurence (Smith and Pilcher 1973), is nevertheless an important and significant feature in pollen diagrams constructed from sites analysed elsewhere in southern England (Baker *et al.* 1978, Thorley 1981, Scaife 1980, 1982, Greig 1982). Various explanations have been advanced as to its cause, including climatic change (Godwin 1956) and anthropogenic forest clearance (Turner 1962). The latter appears more plausible because of the asynchroneity noted at sites analysed across the region and from the significant associated increase of herbaceous pollen, including cultigens, in the period immediately following the *Tilia* decline. Radiocarbon dating of this phenomenon has provided a range of dates from Neolithic at Borthwood Bog, I.O.W. (Scaife 1980) to Saxon in Epping Forest (Baker *et al.* 1978), but the majority of dates fall between 1500 and 500 B.C., within the late Bronze Age or early Iron Age. Immediately after the decline in *Tilia* pollen at Sharpsbridge an increase in herbaceous pollen occurs, including taxa which are again indicative of forest clearance and subsequent agriculture.

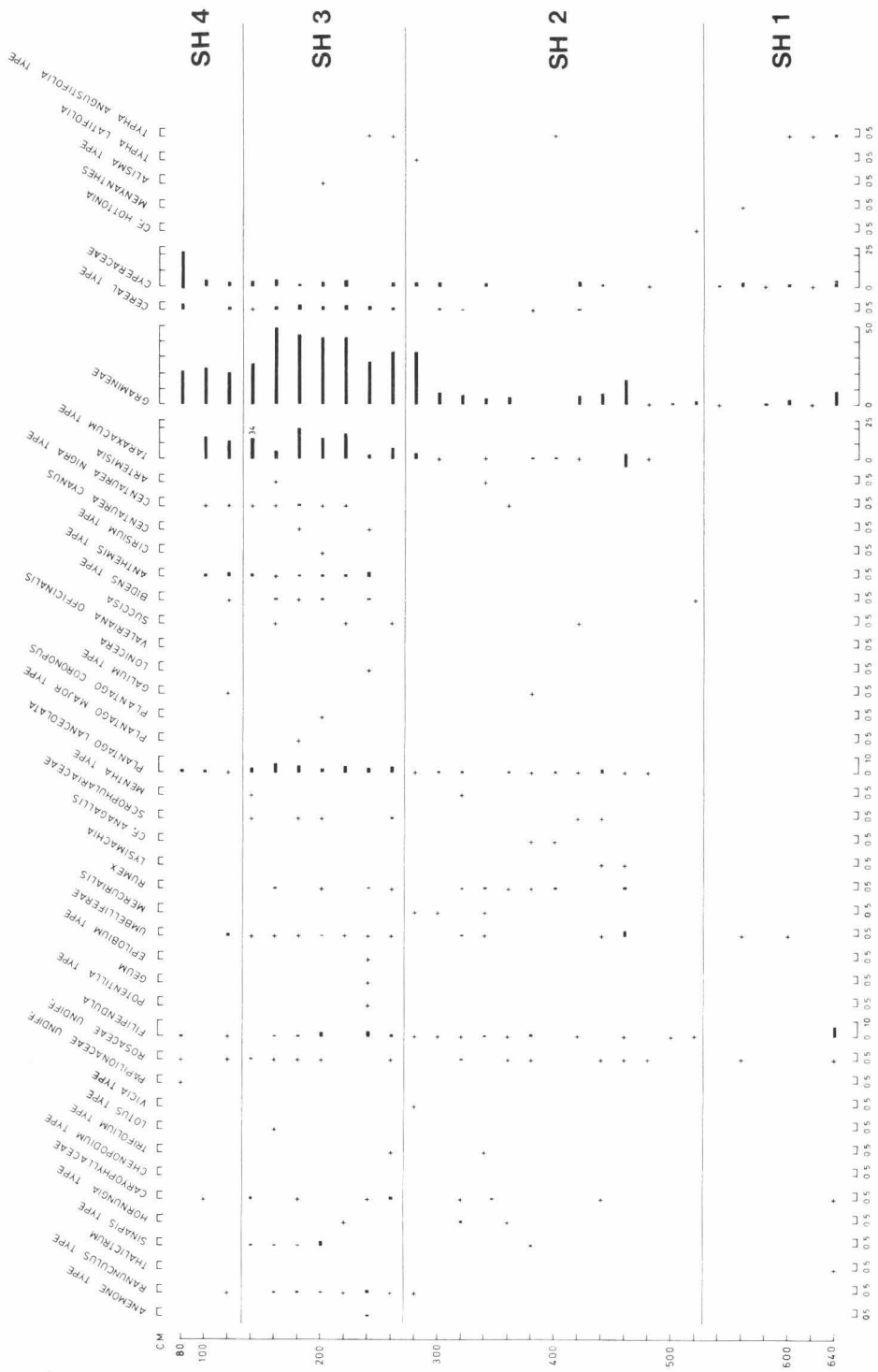

Fig. 3. Sharpsbridge biostratigraphy (herbs).

These pollen types include Gramineae, Cerealia type, *Plantago lanceolata*, Cruciferae and Compositae species including *Centaurea cyanus*. Without absolute dating evidence from this site, it can only be postulated that anthropogenic deforestation caused the *Tilia* decline, probably during the late Bronze age—early Iron Age. Such an interpretation offers tentative support for the work of Ellison and Harriss (1972) in that major land apportionment and agricultural activity took place in Sussex during this period. The presence of *Calluna* pollen in this zone may be indicative of a degree of soil deterioration, with small areas of heathland being initiated as a result of forest clearance on areas of poorer soils. Such deterioration in parts of the western Sussex Weald has been shown by Dimbleby (1962) to have resulted from Bronze Age activity.

The recognition of the uppermost zone SH:4 is based on the expansion of arboreal taxa, with the re-establishment of *Tilia* and *Alnus*, the latter possibly colonizing the floodplain. Whether or not this zone is a distinct unit with an hiatus between SH:3 and SH:4, or a continuously deposited sedimentary sequence is not clear. However, the irregular boundary between the two units (Fig. 1), the more variable litho-stratigraphic nature of SH:2 and the sharp discontinuity in the *Alnus* pollen profile (Fig. 2) indicate that the existence of two distinct units is more probable. As pollen sampling was not carried out in the uppermost parts of the alluvial fill, possible increases in the pollen of *Ulmus* or *Pinus* caused by local afforestation during the last 200 years have not been found. It seems probable, therefore, that the older sediments of zone SH:4 pre-date *c.* 1700 and may date from the late Iron Age or Romano-British times. It is also possible that alluviation of SH:4 was partly in response to forest clearance and charcoal production for the furnaces and forges associated with the Wealden iron industry, during both Roman times and the Middle Ages (Straker 1931, Sweeting 1944, Tebbutt 1981).

DISCUSSION

There are important limitations in the palynological analyses of mineral sediments of similar character to those described here. These are well known and have been discussed elsewhere (Faegri and Iversen 1964, Burrin and Scaife, *in press*). It seems clear from the palynological analysis that units SH:2, SH:3 and SH:4 have accumulated largely in response to the increase in sediment supply within parts of the Ouse catchment, as a result of episodes of anthropogenic deforestation since at least Neolithic times. It is of interest to contrast Thorley's (1971) inference that the South Downs in the Lewes area were still wooded in the Neolithic, with primary clearance not beginning until the Middle Bronze Age. Conversely, Drewett (1978a) provides evidence of extensive, but local, clearance from three Neolithic sites at Alfriston (Cuckmere), Offham and Bishopstone (Ouse). It is suggested that the Sharpsbridge alluvial fill is indicative of a more widespread Neolithic impact within Sussex. This is tentatively supported by the common occurrence of similar alluvial deposits to those comprising unit SH:2 elsewhere within the upper Ouse and Cuckmere valleys.

The causal mechanisms responsible for the alluviation of unit SH:1 are more difficult to account for, given the apparent lack of anthropogenic indicators in the pollen record (Figs. 2, 3 and 4). Changing environmental conditions from the more rigorous conditions of the Late-Glacial to the temperate early Flandrian would, almost inevitably, have induced a natural change within fluvial regimes (e.g. from braided to meandering channels) and a new sedimentary equilibrium would probably have been established as a direct result. When considered in isolation from other environmental factors, this argument would appear to explain satisfactorily this early Flandrian aggradation. Yet, when a more complete environmental reconstruction is considered, the situation becomes more complex. During the pre-Boreal *c.* 10250-9450 b.p. (Goudie 1977) tree migration

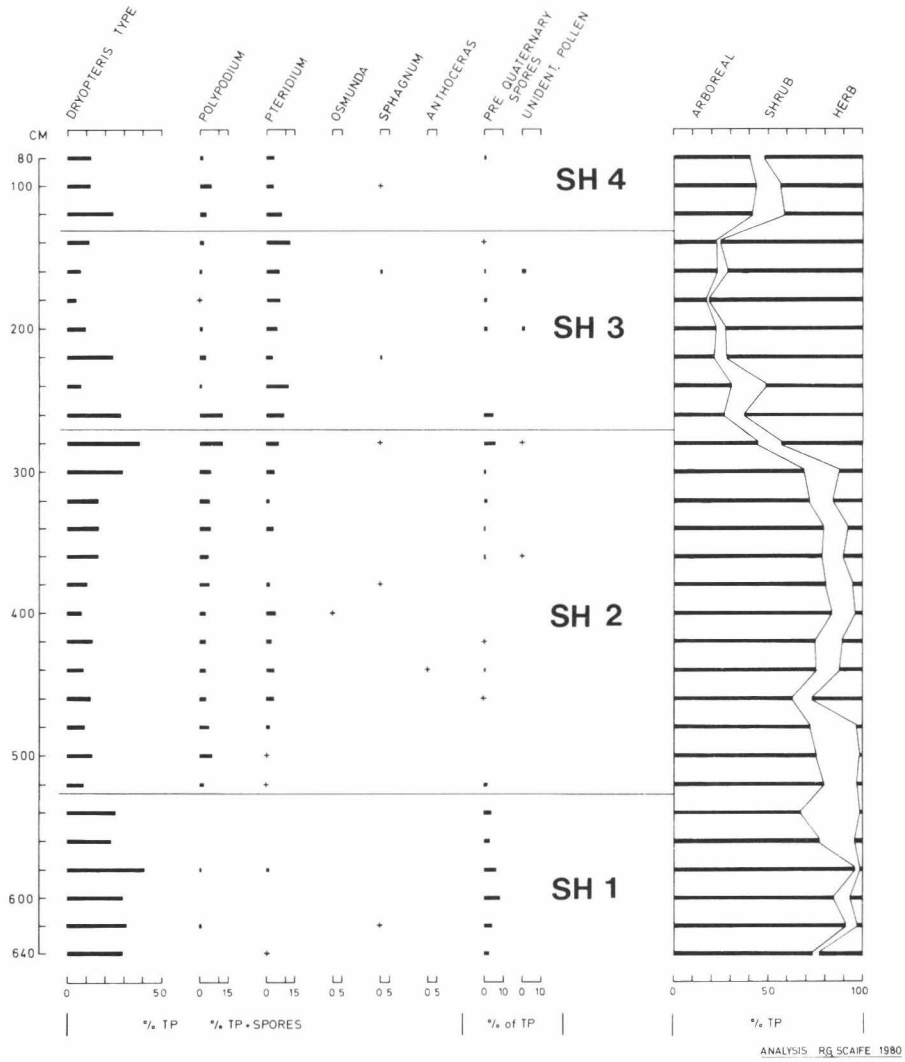

Fig. 4. Sharpsbridge biostratigraphy (spores and summary diagram).

was proceeding rapidly, so that by the beginning of the Boreal (*c.* 9450 b.p.) there was considerable vegetation cover in southern England (Scaife 1982). However, just as the valley sides become established by *Betula*, *Pinus* and *Corylus*, there occurred substantial alluviation within the Ouse valley at Sharpsbridge. This appears to be illogical, for the forest cover should have minimized surface run-off by promoting higher interception, infiltration and evapotranspiration rates. These factors, together with the binding of regoliths by root systems would consequently reduce valley side erosion and sediment supply to the valley bottoms. The early Flandrian sediment at Sharpsbridge must, therefore, have been derived from the erosion, transportation and deposition of older sediments previously deposited upstream. Unfortunately, there is no evidence in the pollen record of this having taken place. The question arises, therefore, as to why the vegetation cover was unable

to restrict the sediment supply to the valley bottom during the early Flandrian and yet was apparently able to do so during the late Boreal and Atlantic (middle Flandrian). Two possible hypotheses can be ventured:

(a) The early Flandrian alluviation took place at Sharpsbridge prior to valley side stabilization by the Boreal forest, i.e. during the pre-Boreal or possibly very early Boreal. The difficulty with this interpretation is that it is refuted by pollen evidence from across southern England and by general palaeoecological argument (Scaife 1982).

(b) It is possible that the vegetation cover may have been locally removed or significantly disturbed by Mesolithic man. Although Thorley (1971) noted *Pteridium* inclusions in the Atlantic-age sediments in the Vale of the Brooks, which suggested possible local influence of Mesolithic man, no evidence of similar anthropogenic activity can be found in the Sharpsbridge pollen record (SH:1, Fig. 2, 3 and 4). However, if the view is accepted that the evidence for Mesolithic activity represents the movements of essentially mobile hunting and gathering peoples, then these archaeological records may represent only transitory settlement sites. In consequence, little if any record of their activities might be expected in the pollen record.

As localised forest clearance has been demonstrated elsewhere in Sussex during this period (Keef *et. al.* 1965, Scaife—West Heath study, *in press*), it would appear reasonable to argue for a similar occurrence within the vicinity of Sharpsbridge.

From these geomorphological and palynological results, it can be suggested that prehistoric man was able to make a significant impact on his environment to the extent that it caused local floodplain sedimentation and alluviation within the upper Ouse valley. Initial results from other sites within the Ouse and Cuckmere floodplain valley tracts provide further evidence for these findings and will be discussed more fully at a subsequent date. It would appear increasingly probable that Sussex prehistoric cultures were not necessarily as constrained by their environment as was once believed (Curwen 1954), but rather, they were able to make a considerable environmental impact, a view supported to some extent by more recent Sussex archaeological studies (Drewett 1978b).

CONCLUSIONS

Research into the nature and age of the floodplain sediments of the Sussex Ouse has indicated that episodes of sedimentation and floodplain construction therein appear to have resulted largely from anthopogenic forest clearance at intervals dating back to the Mesolithic. This provides support for a more widespread and significant impact by man on his environment than previously envisaged, particularly during the early and middle Flandrian. It is suggested that cultivation of interdisciplinary studies, involving archaeologists, geomorphologists, palynologists and other related interests, may prove to be of increasing value in helping to identify evidence of anthropogenic-environmental inter-relationships.

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THE EXCAVATION OF A NEOLITHIC CAUSEWAYED ENCLOSURE ON BARKHALE DOWN, BIGNOR HILL, WEST SUSSEX

by Peter E. Leach
with reports by I. F. Smith, J. Clipson, C. R. Cartwright and K. D. Thomas

Barkhale was first noted by Professor Ryle in 1929 and was identified by him as a Neolithic causewayed enclosure in the Windmill Hill tradition. Excavation took place in 1958–1961 under the direction of Dr. Seton-Williams, and in 1978, on a limited scale, under my direction, prior to clearance work in order that the site may be permanently protected and displayed to the public.

INTRODUCTION

Barkhale is sited on Bignor Down (SU 976 127) four miles northwest of Arundel, West Sussex. The site, between the two summits of Bignor Hill, slopes gently to the south with a distant view of the sea. The name derives from the O. E. 'beorc halk' meaning the corner where birch trees grow. In 1420 Court Rolls referred to the area as Berkehale (Glover, 1975,10).

The enclosure, first noted in 1929 by Professor Ryle was surveyed in 1930 by Dr. E. C. Curwen and Mr. G. P. Burstow and the line of a single interrupted ditch was established by auger boreholes round the northern segment of the site. The southern part was not accessible because of dense undergrowth. Severe plough damage occurred during and after the war to the northern segment above the trackway and excavation was therefore undertaken by Dr. Seton-Williams from 1958–1961. Her reports, unpublished, have been collated by J. Clipson, 1976 in an M.A. Thesis on which this account of the excavations is based.

The southern segment, used as part of a conifer plantation, was later cleared by the owners, the National Trust, and in 1978 the Sussex Archaeological Field Unit was asked by them to investigate features within the enclosure and to establish the line of bank and ditch before final clearance and display. These excavations were in September 1978 under my direction. The site is now scheduled; all finds and site records are in Barbican House, Lewes, Sussex.

EXCAVATIONS 1958–1961

In 1930 Professor Ryle excavated a small trench 'diagonally across one of the ditches' but no records survive other than a comment that 'no worked flints, no pottery, no bones or shells were found'. In 1958 work resumed, with Dr. Seton-Williams undertaking the work as training excavations for extra-mural students from London University. Twenty trenches were dug in the four seasons of excavation on the perimeter or in the enclosure. A trench was dug into one of the nearby barrows but is not included in this report. The trenches were generally very narrow, making later interpretation exceptionally difficult; their designation in alphabetical order reflects roughly the order of excavation (Fig. 2). Clipson's re-assessment does not follow this sequence but considers similar trenches together. His drawings, on which those printed here are based, were his interpretation of the original site

drawings, but using common conventions and metric scales; the descriptions on these drawings are necessarily those of the excavator.

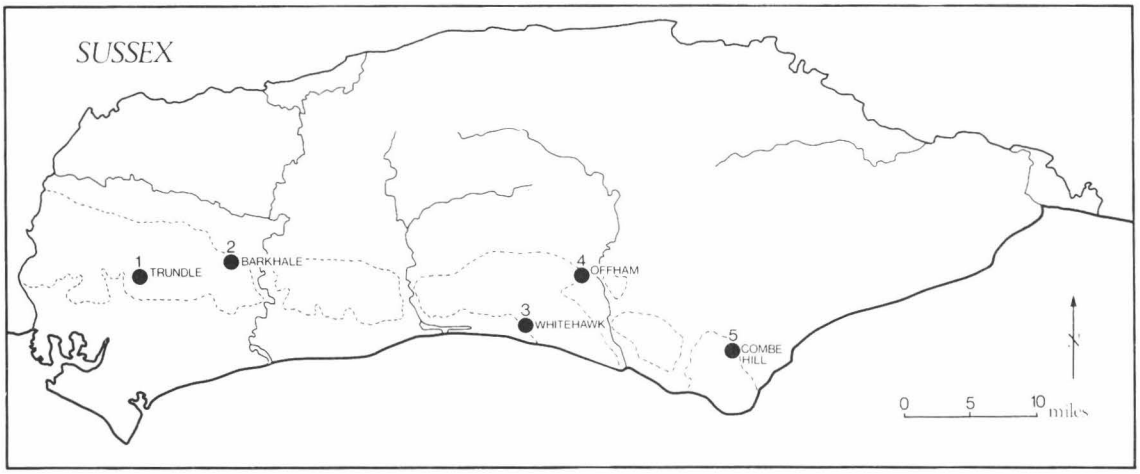


Fig. 1. Barkhale 1958–61 and 1978. Location of Barkhale in relation to other causewayed enclosures.

Trenches through ditch and bank

Trench K (Fig. 3)

The following layers were found in the ditch fill.

1. Topsoil.
2. Sandy loam and chalk rubble.
3. Sandy loam.
4. Clay.

The ditch, 4.87 m wide and 1.52 m deep towards the northern end of the trench was largely filled with sandy loam. A clay lining on the trench side may be due to the slumping of the bank. The fill contained four possible hearths set one above the other, described by the excavator as 'circles of packed flints cracked by fire set in dark burnt earth and covered with scattered charcoal'. The modern trench seen in the section may be that dug by Professor Ryle in 1930. The plough-damaged bank contains a preserved rise in the chalk capped with thin layers of clay suggesting an original width of the bank here of 4.60 m.

Trench T (Fig. 3)

The fill of the ditch and the formation of the bank are similar to Trench K above, with solution holes in the ditch bottom and under the bank. The trench seems to have been extended down into the natural shattered chalk making it difficult to assess dimensions of the features; the ditch was probably *c.* 4.00 m wide and 1.20 m deep. The excavator referred to a 'flint floor' in the lee of the bank but no precise description is given. It could be either an occupation layer or merely a layer of compacted flints created by other causes.

Two small trenches (T1 and T2) were dug to the northwest to establish conditions outside the ditch. Natural chalk only was found below *c.* 30 cm of topsoil which contained a few waste flakes.

BARKHALE CAUSEWAYED ENCLOSURE

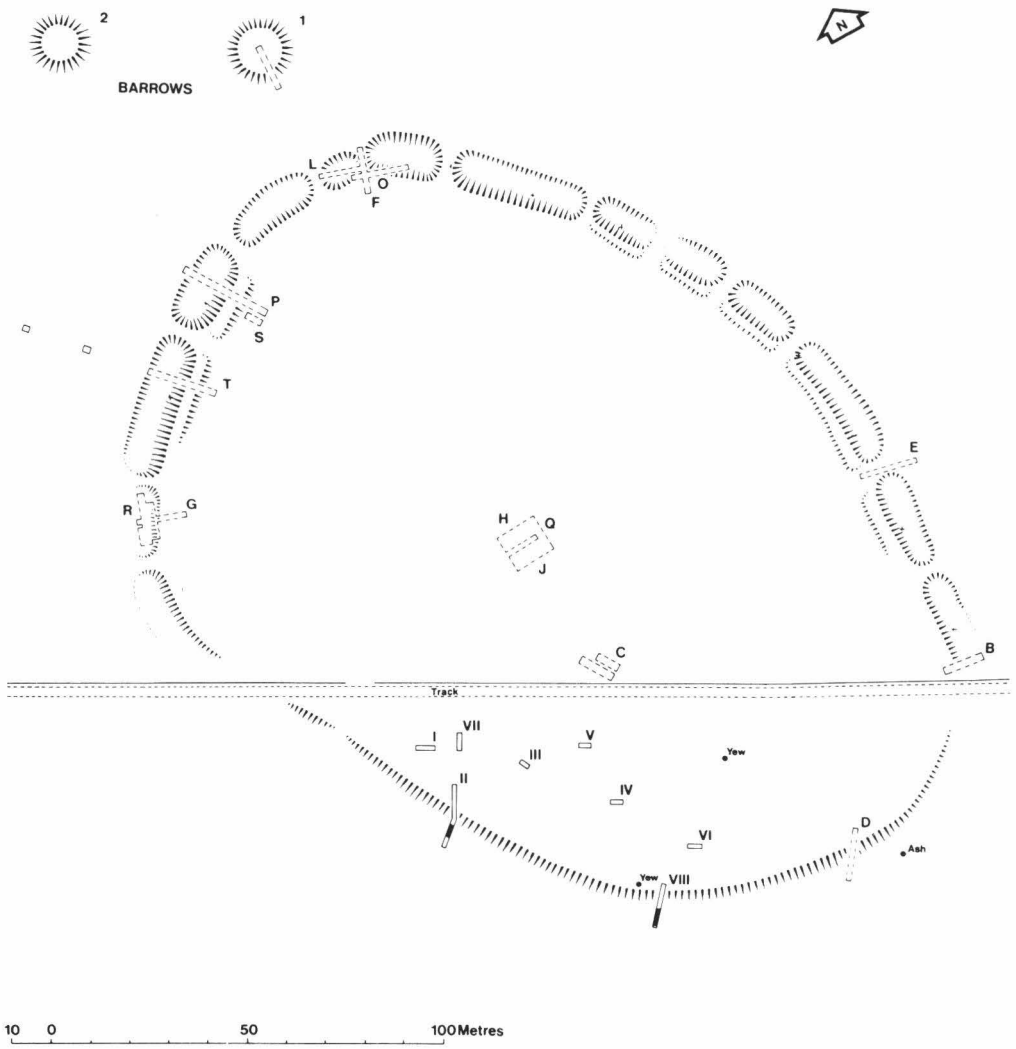


Fig. 2. Barkhale 1958–61 and 1978. Site plan. Survey by F. G. Aldsworth. 1958–61 excavations are shown in broken line, 1978 in continuous.

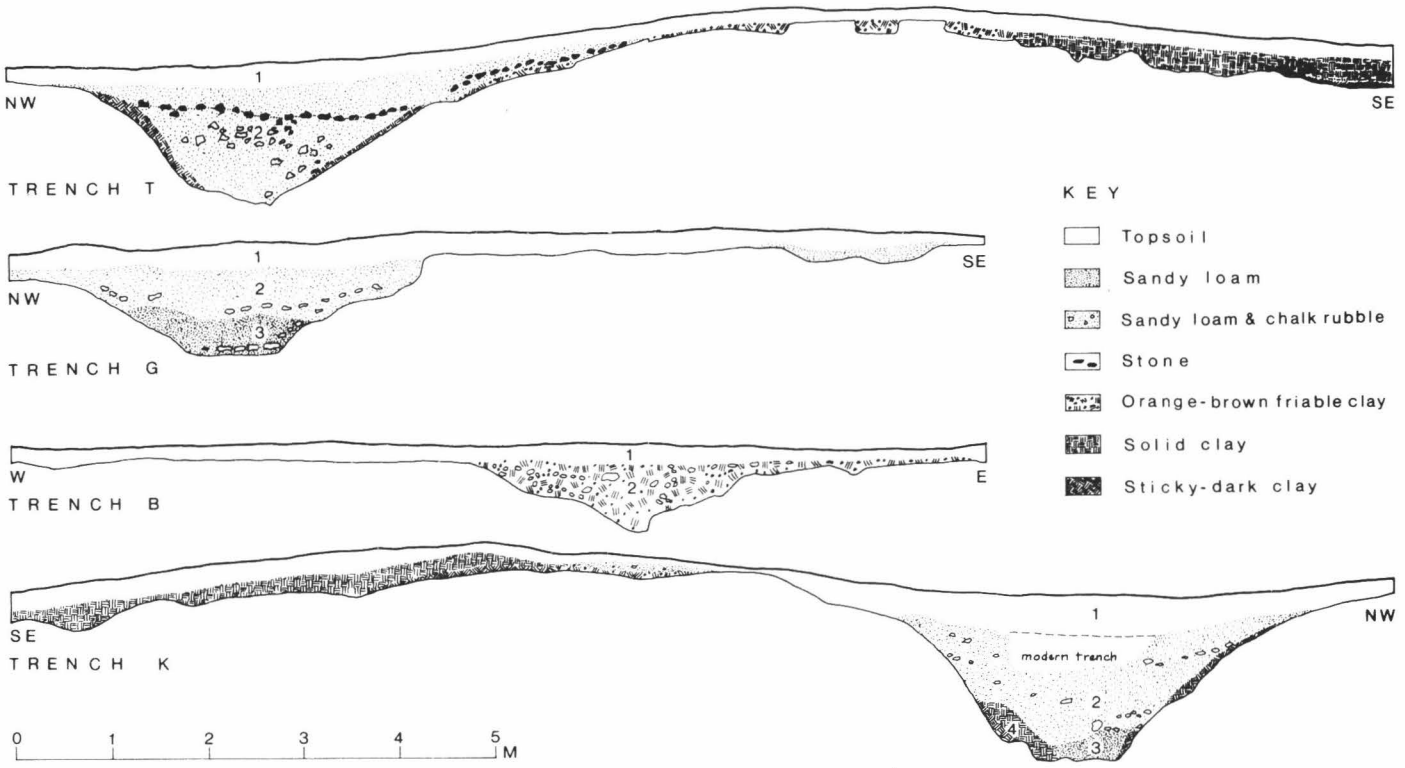


Fig. 3. Barkhale 1958–61. Sections of trenches through ditch and banks.

Trench G (Fig. 3)

The following layers were found.

1. Topsoil.
2. Red-brown loam.
3. Black silt.

The ditch was 3.96 m wide by 0.91 m deep with an apparently stepped profile. The black silt layer suggests a rapid initial fill of the ditch. No trace of a bank was found. The large numbers of struck flakes found in this trench, particularly in the fill, may indicate the presence of a working area. The trench was extended as R (Fig. 2) to expose the complete ditch seen in section in Trench G. This was 10.05 m long by 3.65 m wide by 0.91 m deep with a fill of homogenous brown loam. No clay was found, but natural solution holes occurred as elsewhere.

Trench B (Fig. 3)

The following layers were found.

1. Topsoil.
2. Orange-brown clay.

The ditch 2.74 m wide and 0.62 m deep had a shallow U- shaped profile. In its base were 57 small circular holes of varying sizes and depths; interpreted as solution holes (Miss J. Sheldon- pers. comm.). Gullies were found at the sides of the ditch but no reasonable explanation can be found for these.

Trench A.

This was dug in the conifer plantation in the southwest corner of the site to expose a possible bank and ditch there. These were not found. The site notes refer to gullies running east-west which may be caused by modern ploughing. Worked and waste flint and a possible hearth were found but no further record of these exist.

Trench D.

This was sited to locate the southern perimeter, but most of the area opened was badly disturbed by tree roots making interpretation difficult. A slight rise and dip was seen, possibly being the bank and ditch. The fill was yellow clay with chalk rubble being possibly slumped bank material.

Trenches across causeways.

Trench E. (Fig. 4)

This was intended to establish the nature of a causeway identified by Curwen but its purpose was hampered by the narrowness of the trench. Chalk was found at a depth of *c.* 30 cm and the section drawing shows this to be overlaid by a layer of flint in the eastern half.

Trenches O and F.

These showed a causeway *c.* 6.10 m wide of flint and clay layers on natural chalk and to the west a ditch 1.62 m deep, with another to the west which was only partly excavated. The fill of these, yellow clay and flint, being possibly slumped bank material.

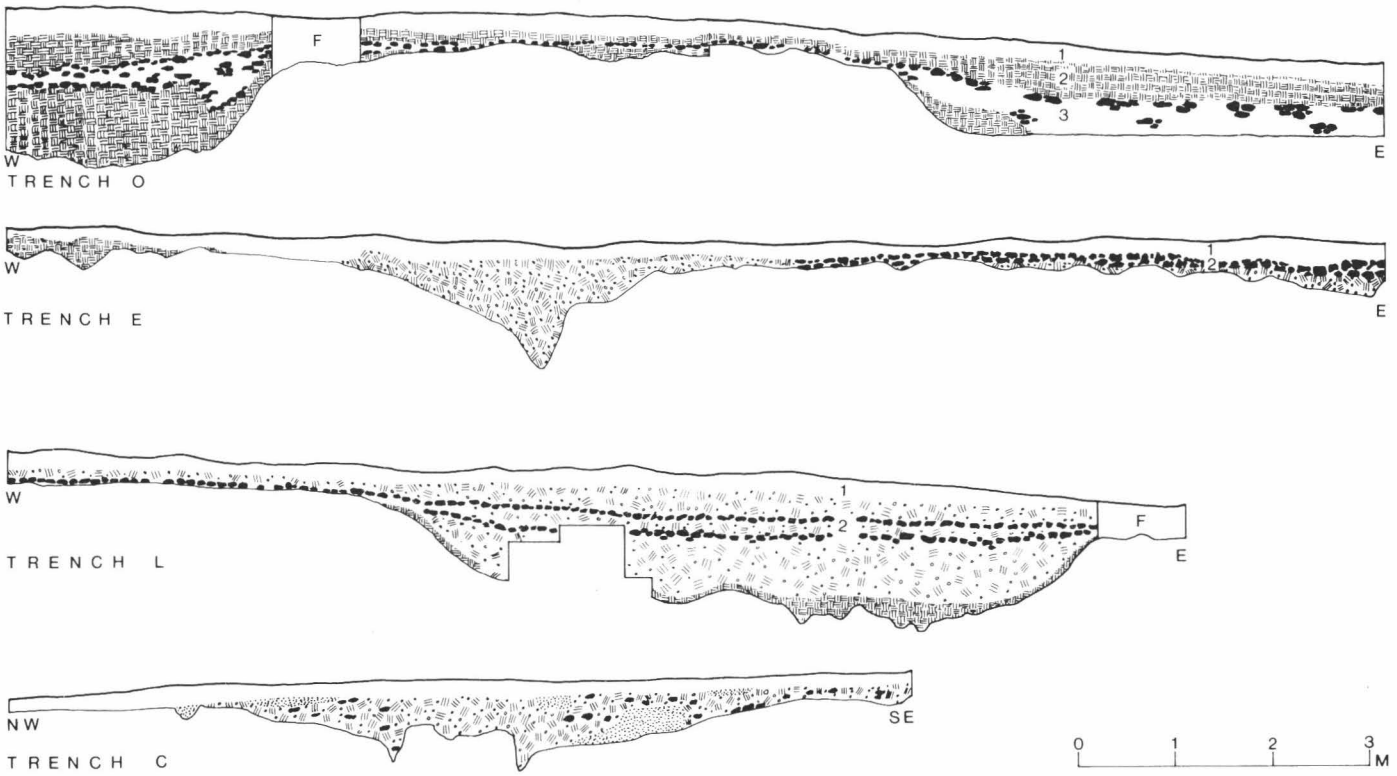


Fig. 4. Barkhale 1958–61. Sections of trenches through causeways, ditch and interior. Key as on Fig. 3.

Trenches along ditch

Trench L (Fig. 4)

This sections the full length of a ditch between two causeways, 11.27 m long and 1.52 m max. depth. The layers are

1. Topsoil.
2. Compact yellow clay with two layers of flints.

The layers of flints were seen by the excavator to have been deliberately placed. The regularity shown on the section drawing is not supported by the photographs and a natural origin may be more likely. The numerous pottery and flint finds in this area may suggest a habitation site in the vicinity.

Trenches in interior

Trench C (Fig. 4)

The trench was too small for any conclusions to be drawn from the features found. These were a gully, a layer of flints, and some small holes all of which could be natural. Some waste flakes were found.

Trenches H and J.

The chalk surface exposed was so pitted with small holes and gullies that no interpretation is possible. No evidence for structures was identified although the large number of finds suggest a settlement area in this central position.

Trench O

Evidence for occupation here too is inconclusive, consisting of pottery and worked flint, and also two pits and some possible post holes. These were not sectioned and may be natural features. Finds of iron, and a buried turf line, indicate modern disturbance.

Miscellaneous trenches.

Seven other trenches were dug but for varying reasons provided no evidence of value.

THE FINDS

(i) Pottery by Dr. I. Smith

A total of approximately 200[1] sherds was recovered during the excavations, most of them nondescript and undatable body fragments, often very small. Fourteen or fifteen vessels are represented by rim sherds, a further six or seven by base sherds, and two by ornamented body sherds. Most of them relate to activity on the site in the Bronze Age, Iron Age and the Romano-British period; very few Neolithic pieces can be identified.

The sherds are described below in order of provenance. Featureless prehistoric sherds are not noted unless they come from apparently significant stratigraphical positions. For brevity, flint inclusions, where present, are classed as fine (no particles over 1 mm in size), medium (particles range from 1 mm–3 mm), and coarse (some particles exceed 3 mm).

The Romano-British pottery was kindly identified by Mrs. V. G. Swan.

(a) *Sherds from the enclosure bank*

Apart from a single body sherd from trench A, layer 3, pottery is recorded only from bank trenches P and S which yielded together some 30 sherds from layers 1–3. The fragments are generally in weathered condition and all but four are indeterminate. Fig. 5, No. 12 is from the rim of a vessel otherwise represented by three fairly large and thick body fragments, two of them possibly from a round bottom. The severely weathered surfaces are reddish buff in colour with brighter red patches; the clay contains abundant coarse flints as well as sparse pellets of marcasite.

(b) *Sherds from the enclosure ditch*

Trench R, Layer 2

(i) (Fig. 5, No. 13), depth 0.31 m, part of the angle of a thick, flat base; brown surfaces; soft, greasy fabric, no hard inclusions.

(ii) (Fig. 5, No. 6), depth 0.28 m, fragment of a flattened rim with marked external projection; surfaces light brown; compact fabric containing abundant fine flints as well as marcasite pellets.

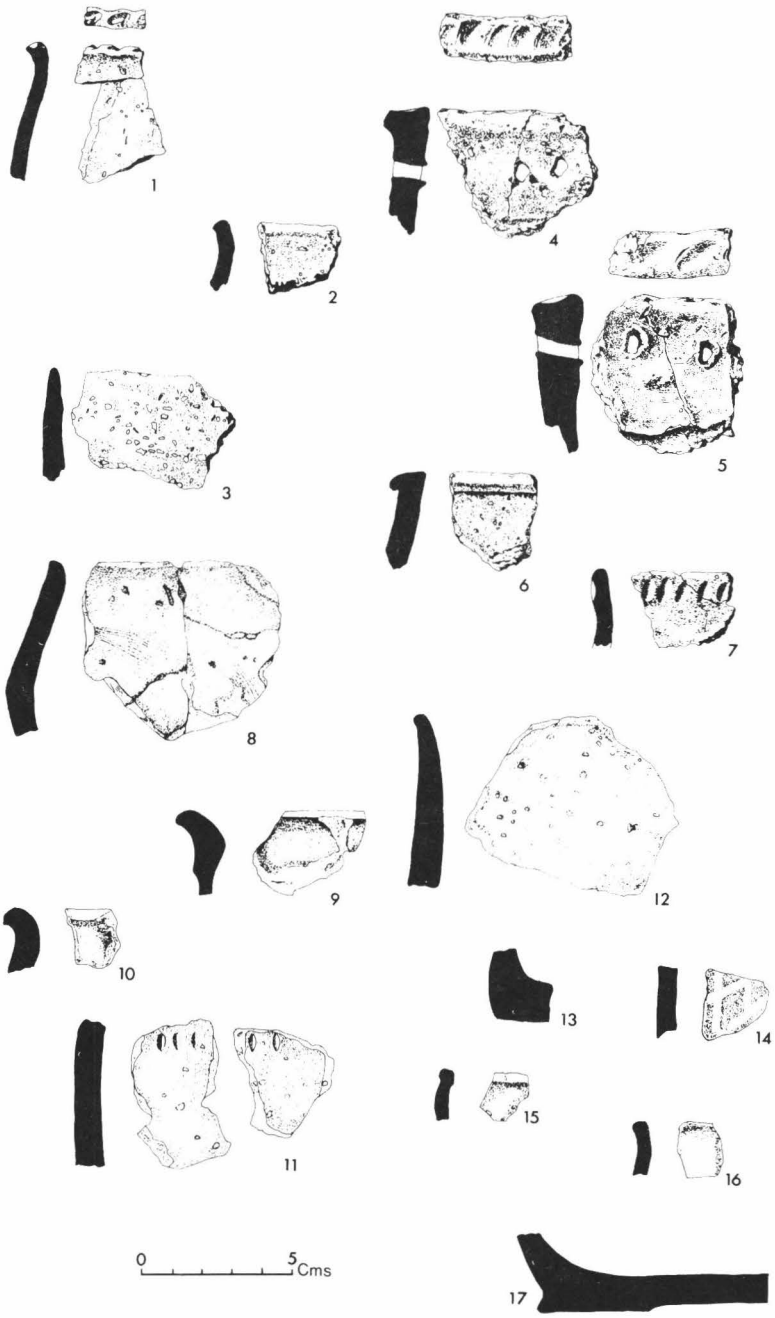


Fig. 5. Barkhale 1958–61. Pottery.

(iii) (Fig. 5, No. 9), depth 0.31 m, part of a sharply everted rim; smoothed grey-brown surfaces; compact fabric with medium flints.

(iv) fragments from the angle of a flat base (P160), depth 0.28 m, and both may come from the same pot.

(v) (Fig. 5, No. 8), shows two joining rim sherds, one found at a depth of 0.56 m (P137), the other (P157) at a depth of 1.14 m under a flint nodule. Together these sherds represent a pot with a prominent rounded shoulder and contracted mouth (rim diameter about 16 cm); dark exterior, reddish brown interior; irregular surfaces; medium flints.

(vi) (Fig. 5, No. 10) is one of eight small sherds, all apparently from a vessel with rolled-over rim and weakly marked shoulder; their recorded depths range from 0.23 m–0.53 m. One of the body sherds (P90), depth 0.46 m, joins another (P194) from layer 3, where it was found in a hole in the chalk rock at a depth of 1.19 m. Surfaces dark and well burnished; compact fabric; sparse fine flints.

Trench R. Layer 3

(Fig. 5, No. 14), depth 0.95 m, body sherd with a lattice pattern lightly drawn with a blunt point on its outer surface; brown exterior, black interior; compact fabric; sparse fine flints.

Trench T. Layer 1

(i) P1a, sherd of Hadrianic/Antonine date.

(ii) P1b, sherd from a cooking-pot, a local imitation of 'Black Burnished Ware', datable from the second century A.D. onwards.

Trench T. Layer 2

P206, depth 0.15 m, small fragment from the angle of a flat base; grey-brown surfaces, abundant fine flints and some sand.

Trench T. Layer 2A

P213, minute fragment from top of a rim comparable in form and fabric with Fig. 5, No. 16 and Fig. 5, No. 2.

Trench T. Layer 3

(Fig. 5, No. 17), depth 0.31 m, large fragment of a flat base 0.15 m in diameter; brown exterior, dark interior, abundant coarse flints, especially on the underside where they form a distinct layer, now partially split away.

Trench K.

All the sherds from this cutting (seven from layer 2, depths 0.23 m–0.75 m; five from layer 3, depths recorded as 0.67 m, 1.78 m and 1.86 m are small, indeterminate body fragments.

Trench L. Layer 2

(i) (Fig. 5, No. 7), depth 0.28 m, sherd from an everted rim with a row of fingernail impressions applied to a slight external thickening; grey-brown surfaces, rather rough; medium flints.

(ii) (Fig. 5, No. 1), depth 0.41 m, sherd from an everted rim with diagonal fingernail impressions along the top; exterior reddish brown, interior dark; well smoothed; medium flints.

(iii) (Fig. 5, No. 11), depth 0.31 m–0.44 m, two body sherds with a row of vertical fingernail impressions apparently set below a slight shoulder; twelve plain sherds, including probable flat base fragments, belong to these; pale brown surfaces with reddish tones; sparse coarse flints and some marcasite pellets.

Trench L. Layer 2B

P29, depth 0.54 m, small fragment from the angle of a flat base; reddish-brown exterior, dark interior; soft greasy fabric, no hard inclusions.

Trench L. Layer 2D

P57, depth 1.24 m. featureless body sherd.

Trench B.

The only ceramic find recorded from this cutting is part of a post-Roman ?jug handle in hard red sandy ware from layer 2.

(c) *Sherds from the causeways*

Pottery finds were recorded only from the contiguous causeway cuttings F and O; all came from layer 2.

(i) P109, body sherd of dark brown wheel-made ware of Roman date but Iron Age tradition.

(ii) (Fig. 5, Nos. 4 and 5), sherds probably from the rim of one vessel; on the flattened rim top, large fingernail impressions with some rustication; below the rim a row of irregularly spaced perforations made before firing; thick reddish brown ware with very coarse flints up to 7 mm.

(iii) (Fig. 5, No. 2), fragment from an everted rim; grey-brown surfaces, rather uneven; medium flints.

(iv) (Fig. 5, No. 16), fragment from an everted rim; pale brown exterior, dark interior; well smoothed; sparse medium flints. flints.

(v) (Fig. 5, No. 15), sherd from a vessel of very small diameter with bead rim; brown surfaces, well smoothed; sparse fine flints.

(vi) P122, P124a, P126, fragments from a flat base; reddish brown exterior, dark interior; well smoothed; medium flints and marcasite pellets.

(d) *Sherds from the interior of the enclosure*

Pottery was recovered from cuttings H, J and Q; only three pieces require comment.

(i) P131 is a fragment from a pot similar in form to Fig. 9. i., but with a more pronounced eversion of the rim; brown surfaces; thin gritty fabric.

(ii) P92, sherd from the angle of a flat base; red exterior, buff interior; well smoothed; sparse medium flints.

(iii) P144, very small fragment, possibly from the base of a collar; brown surfaces, greasy fabric, no hard inclusions.

(e) *Sherds from the 'barrow'*

Layers 2, 3 and 4 produced nineteen sherds (P7, P8, P10a, P16, P226a), including fragments of rim and base, of undatable grey pottery, possibly Romano-British. From layers 3 and 4 were recovered four indeterminate prehistoric body sherds (P10b, P226b). From layer 5, the buried surface under the mound, came (Fig. 5, No. 14) a sherd from a simple upright rim and two body sherds belonging to it, one of them possibly from a round base; light red exterior, grey interior, abundant medium flints and pellets of marcasite.

Discussion

The Roman and post-Roman fragments noted above require no further comment. The difficulty in distinguishing between plain flint-filled prehistoric pottery of different periods is especially acute at this site, where the finds are so fragmentary. The following classifications take into account both morphology and stratification. The profiles of some of the undecorated rim sherds here classed as Iron Age may seem equally appropriate to Neolithic vessels, but the circumstance that they came from superficial deposits has been taken to weight the balance in favour of an Iron Age date.

Iron Age

Eight of nine rim sherds, together with fragments of flat bases in similar fabric, appear to fall within the 'Park Brow-Caesar's Camp' group defined by Cunliffe (1974, 38). Close parallels may be found amongst the earlier Iron Age pottery from the Trundle for the fingernail-decorated rims (Fig. 5, No. 7) and (Fig. 5, No. 1), as also for the plain rims (Fig. 5, No. 2) and (Fig. 5, No. 16) (Curwen, 1929, pl. XI:125, and others; pl. X:84-86). Pottery from a settlement at Fareham, Hampshire, includes, in addition to fingernail-impressed rim-tops, forms comparable to the undecorated sherds (Fig. 6, No. 6), (Fig. 5, No. 10) and (Fig. 5, No. 9) (Hughes, 1974, Fig. 15). The more complete profiles shown by (Fig. 5, No. 8) and P131 indicate that they too most probably belong to this group.

Bronze Age

The soft, greasy, stone-free fabric of (Fig. 5, No. 13), P29 and P144 is reminiscent of that commonly found in collared urns; as mentioned above, P144 may come from the base of a collar. The fingernail-impressed rim top and the row of perforations beneath the rim of (Fig. 5, No. 4 and 5, No. 5) are attributes which, though not usually combined, occur separately on bucket urns (Calkin, 1962, 33 and Fig. 12:6 and 11). The two sherds (Fig. 5, No. 11) seem likely to come from a sub-biconical or bucket urn with fingernail impressions applied directly to shoulder or body (Calkin, 1962, Fig. 12:2, 4, 15), and the thick gritty base fragment (Fig. 5, No. 17) might also be placed in this group.

Neolithic

The simple rims P162 (Fig. 5, No. 12) from the enclosure bank, and (Fig. 5, No. 3) from the buried surface under the 'barrow' with their possible fragments of round bases, together, perhaps, with some of the body sherds from deeper levels in the enclosure ditch now remains as the sparse ceramic evidence of a Neolithic presence. They are, however, so undistinguished as to defy further comment; the fabric and the shallow decorative tooling of the body sherd (Fig. 5, No. 16) both recall the fine ornamented bowl from the causewayed enclosure at Whitchawk (cf. Curwen, 1934, 114), but the lattice-like motif is not matched at that site. In view of the evidence from trench R for downward movement of artefacts in the ditch fill (the two instances of joining sherds separated by vertical intervals of about 0.62 m the lower member of each pair found respectively in a hole in the chalk rock and under a flint, presumably as a result of formation of solution holes), it is questionable whether much reliance should be placed on absolute depth as an indication of date.

(ii) *Flint Report* by John Clipson

The excavations at Barkhale produced large quantities of struck flint flakes, but only a few (*c.* 15) shown signs of any secondary working (retouch). No work has been done on the waste flakes because it appears that many of them have been mislaid or disposed of during the years between the excavation and the writing of this report. Thus, for the most part, only flints showing evidence of secondary working are included in the present discussion.

Group 1: Blades

Numerous small blades were discovered during the course of the excavation. They were struck from a variety of different flints, the predominant colours being grey and black. These blades rarely exceed five centimetres in length and show only slight evidence of retouch, usually at the proximal end of the dorsal surface. Two examples are illustrated in Fig. 6, Nos. 3 and 4, and a blade core is shown in Fig. 6, No. 2.

Under the general classification of blades one must also include the truncated piece shown in Fig. 6, No. 5. This piece differs from the other blades in that it shows signs of abrupt retouch along both edges and at the tip.

Group 2: Scrapers

Five implements which might loosely be termed scrapers, although this does not imply any function, were discovered. Three convex end scrapers (Fig. 6, Nos. 6, 7 and 8), are on flakes *c.* 5 × 7 cm of grey to grey/blue flint. All shown signs of abrupt retouch around the proximal edge of the dorsal surface. Fig. 6, No. 9 illustrates a similar implement, but with a concave end. A nose end scraper (not illustrated) was also discovered. This is triangular in shape and has a base 3.5 cm wide. The pointed end shows signs of semi-abrupt retouch.

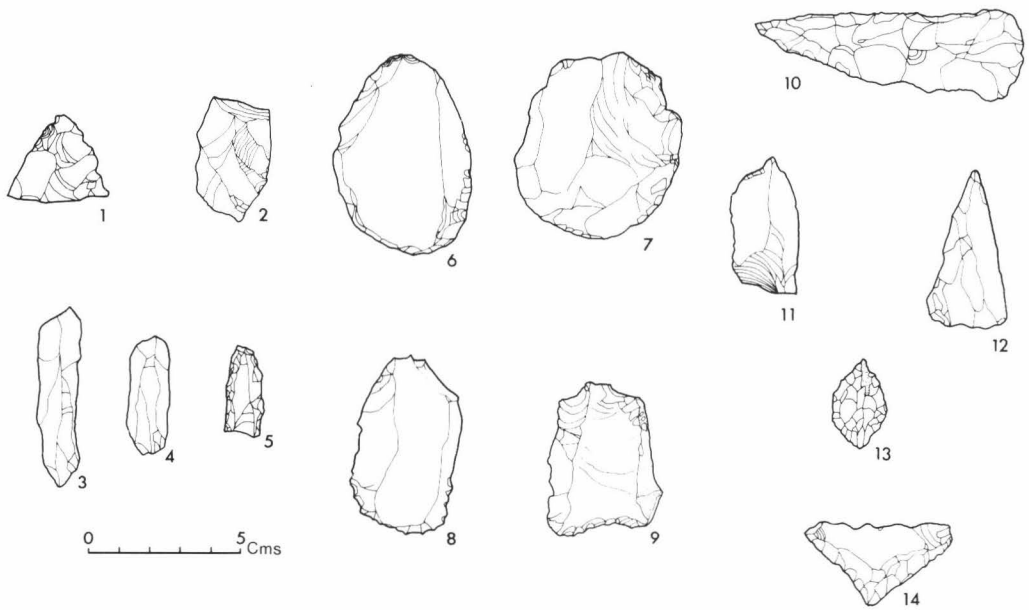


Fig. 6. Barkhale 1958–61. Worked flint.

Group 3: Points

This is a very loose group heading and encompasses a variety of implements:

(1) Arrowheads: two types of arrowhead were discovered. A small bi-facially retouched leaf-shaped type (Fig. 6, No. 13), 3 cm long and almost totally covered with delicate retouch. And secondly a larger transverse arrowhead (Fig. 6, No. 14), worked on a flake and retouched along both sides of two edges.

(ii) Picks: only one implement which could possibly fall into this category was found (Fig. 6, No. 10). this was a small ?axe/pick, 8.5 cm long and 3 cm wide at its broadest point. Both surfaces are extensively retouched.

(iii) True points: only one piece was found in this category and is shown in Fig. 6, No. 12. This is a triangular implement 5 cm long and 2.5 cm wide at the base. It is blunted with semi-abrupt retouch along one edge, and shows signs of wear along the other.

(iv) Borers: this term implies only an accentuated point and does not infer a functional characteristic. The one example is illustrated in Fig. 6, No. 11. The only retouch is on the ventral surface around the point and at the base of the point on the dorsal side.

Group 4: Miscellaneous

Only one actual worked flint falls into this group (Fig. 6, No. 1): a truncated triangular piece showing signs of wear around its point. Additionally, mention must also be made of the several (*c.* 25) flake cores (not illustrated) discovered. These are between six-ten centimetres in diameter and show evidence of flake removal from prepared surfaces.

The flint assemblage from the excavations at Barkhale reveals a basically early Neolithic assemblage as defined by Smith (1974, 105). Even the presence of a single transverse arrowhead is not without parallel in earlier Neolithic contexts (Wainwright and Longworth, 1974, 257). Whether this implies a corresponding date for the causewayed enclosure is, however, not so clear because few of the objects are recorded as being found in stratified contexts, a majority coming from the upper plough disturbed horizons. Nonetheless, the presence of these flints in the immediate vicinity of the enclosure must lend support to the concept of the enclosure being built sometime within the earlier Neolithic period (4,200–3,300 B.C.).

CONCLUSIONS

The 1958–1961 excavations confirmed much of Curwen's 1930 survey; of his thirteen ditch segments, six were dug and in each case the existence of a ditch was confirmed, the segments varying in length between 3.90–4.90 m and in depth 0.91–1.50 m. Excavation of Trench B showed that it became shallower and narrower towards its ends.

No outlying ditches were indentified although these could have been missed owing to the smallness of the trial trenches. It had been hoped by Clipson to investigate further by a

proton-magnetometer survey but the cropping of the field prevented this. Most ditches excavated had some clay in the fill, invariably on the sides of the ditch, which may be due to the clay bank having slumped or alternatively have been deliberately pushed into the ditch. The latter theory may be supported by the homogenous fill above the clay, i.e. brown sandy loam, which suggests a one-period infilling, As Dr. Smith points out in her report, the finds may have moved owing to the formation of solution holes and cannot therefore be used in assessing any sequence of infill. The lack of silt accumulation in the sections other than R and G suggests that infilling took place not long after the ditches were formed.

The percolation of water through the acidic soil has lead to the formation of many solution holes in the chalk. Any pits or postholes dug in the chalk where this solutioning has occurred could not be identified without sectioning the fill. This was not done.

The bank has been almost completely destroyed by modern ploughing but was identified in Trenches K and T, where it remains to a height of 0.60 m. It was composed of chalk compacted with clay to a maximum width of *c.* 6.00 m. It may have been spread by ploughing and was probably narrower; it is difficult to assess its height but taking into account the material likely to have come from the ditches would not have exceeded 1.50 m. The excavations did not establish whether the bank was discontinuous as on Curwen's survey, or otherwise.

The excavations did show however that the ditches were discontinuous and that the chalk in the causeways was covered by a layer of flint and clay. This may be the remains of metalling laid down to improve access to the enclosure.

The absence of organic material in the finds make it impossible to obtain radio-carbon dates for the site, and the paucity and poor quality of the flint and pottery makes any precision in dating difficult. However, the similarity between Barkhale and other, better dated, sites suggests a date in the earlier Neolithic period *c.* 4000–3,300 B.C.

The ditch, the pottery, and the flints, provide the evidence for the presence of prehistoric man at Barkhale, but does not indicate permanent occupation in the enclosure. This would be best demonstrated by structural remains, of which none were found, other than the 'hearths' noted in some trenches. The authenticity of these features is in doubt however. There is therefore no definite evidence for occupation at Barkhale in the prehistoric period.

ACKNOWLEDGEMENTS

John Clipson, in his paper, thanked Dr. Seton-Williams for providing him with all the original material from her excavations at Barkhale. In addition, gratitude was also extended to the following: Mr. P. L. Drewett, for the initial inspiration and subsequent advice; Dr. I. Smith for her report on the pottery; Glenn Markisson for drawing the flint; and the following members of the Institute of Archaeology, London, staff who provided advice on specific problems: Dr. M. Newcomer and Miss F. Healy for their help with the flint artifacts; Mrs. S. Denford for visiting the site and commenting on its environmental archaeological potential, and Miss J. Sheldon for advice on the local geology.

THE 1978 EXCAVATIONS by Peter E. Leach

In August 1978 the Sussex Archaeological Field Unit was invited by the National Trust, at the suggestion of F. G. Aldsworth, West Sussex County Council Archaeology Officer, to investigate mounds within the southern segment prior to clearance work, and also to establish the precise line of bank and ditch on its perimeter. Excavation took place in September under my direction.

Trenches were excavated through five mounds and one hollow within the enclosure, and through the perimeter in two places (Fig. 2).

The Mounds and Hollow

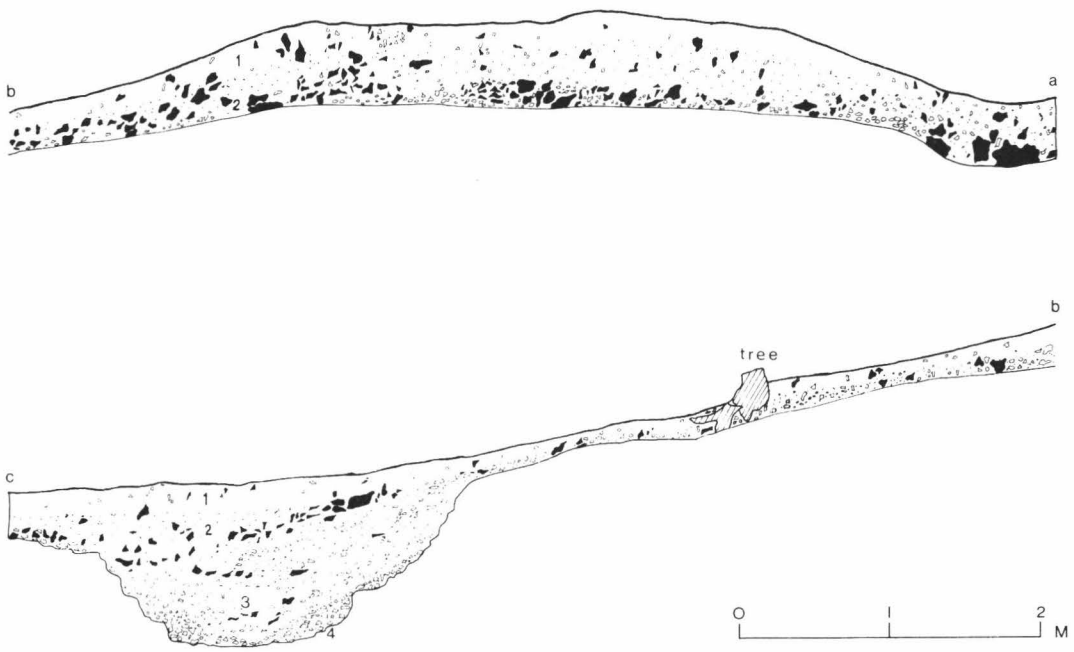
The first mound excavated, No. I, disclosed the following layers (Fig. 8):

(1) Dark brown friable topsoil.
(2) (a) Orangey-brown soil of clayey consistency with a layer of large flints at the bottom.
(2) (b) Pocket of very orangey-yellow natural clay-with-flints. This overlaid conical solution holes in the chalk.
(3) Natural chalk.

The other mounds excavated, Nos. III, IV, V and VI showed fewer layers. In some cases layer 1, of topsoil, extended down to layer 3 of natural chalk. Trench III disclosed an oak bole in good condition lying well below the surface and in the centre of the mound, and Trench V a burnt layer approximately halfway down to the natural chalk.

Although struck flint was found at all levels in the mound, it is probable that, as they consist largely of topsoil of unknown provenance, they are recent.

The trench, No. VII, excavated across a shallow hollow, disclosed only a thin layer of topsoil on natural chalk.



TRENCH II

Fig. 7. Barkhale 1978. Trench II.

Bank and Ditch

Trench II (Fig. 7)

The following layers were found:

(1) Topsoil (as for Trench I).
(2) Orangey-brown soil of clayey consistency.
(3) Chalk silting layers with light brown soil.
(4) Chalk rubble in chalk dust.

The chalk underneath the bank shows a preserved rise. It had periglacial features in its surface and was confirmed as natural chalk by sectioning just prior to backfilling. The ditch, cut into hard chalk, was approximately 2 m wide and 1 m deep. It was situated at the foot of the bank. The bottom of the ditch and the face below the bank showed no weathering, suggesting therefore a rapid silting from the bank, whereas the outer face is weathered to some degree.

Trench VIII (Fig. 8)

(1) Topsoil.
  (a) Chalky layer within Layer 1.
(2) Orangey-brown clayey soil with large flint nodules.
(3) Chalky silting layers as follows:
  (a) Irregular chalk lumps in dark brown soil,
  (b) more granulated chalk lumps than (a) in light brown soil,
  (c) small chalk lumps in chalky fill.

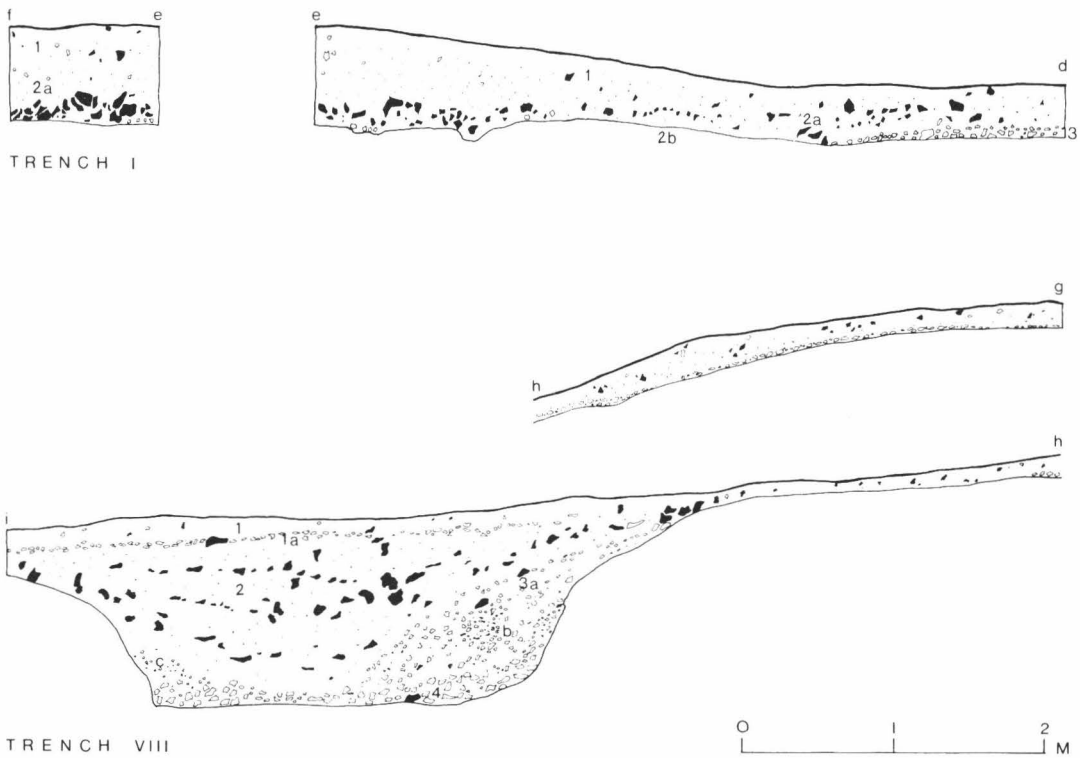


Fig. 8. Barkhale 1978. Trenches I and VIII.

(4) Platy chalk rubble above chalk natural.

The trench was not continued beyond the crest of the bank. The natural chalk revealed was similar to that underneath the bank in Trench II and it is assumed that a preserved rise in the chalk exists here also.

The ditch, cut into what is now very shattered chalk towards the bottom, is about 3 m wide and more than 1 m deep. A berm some 2.5 m wide separates the bank and ditch at this point. The appearance of the natural chalk suggests this to have been so always, although the chalky layer 1 (a) within the topsoil mentioned above shows some agricultural or forestry work within the locality.

ACKNOWLEDGEMENTS

I wish to thank Mr. P. Mansfield and Mr. G. Jones, both of the National Trust, for the opportunity to excavate, and Mr. F. G. Aldsworth for suggesting that the Sussex Archaeological Field Unit should do so. He also kindly prepared the site plan. Thanks are due also to those, especially volunteers, who dug on site.

My thanks are due to Mr. P. L. Drewett, B.Sc., F.S.A., for his guidance, and to Dr. K. D. Thomas for preparing his report on molluscan analysis in the ditch fill.

Especial thanks are due to Caroline Cartwright, M.A., not only for her section drawing on site, her help with the flint and pottery reports, and identification of charcoal, but particularly for her help and guidance during the excavation.

THE FLINT INDUSTRY by Caroline Cartwright and Peter E. Leach

The provenance of the mound soil is uncertain and the flintwork found therein cannot be definitely related to the site. All surface finds within the enclosure are also included. A total of 176 struck flints, mostly waste material, were found (Table 1). They were generally scattered through soil layers, the only exception being a concentration of 44 fire cracked flints in Trench V in a burnt layer of probable modern origin.

TABLE 1 FLINTWORK FROM MOUNDS BY TRENCH AND LAYER NUMBERS

			CORES												
Trench and Layer	*Flakes*	*Rough Waste*	*A*[2]	*B*[2]	*Core on Flake*	*Scrapers* *A*[1]	*Serrated Flakes*	*Blades*	*Blade Segment*	*Retouched Flakes*	*Retouched Blade*	*C.R.F.*	*F.C. Waste Flakes*	*F.C.F.*
Surface	7				1				1	2		1		1
I L1	6				1					2				1
I L2	7			1				1		3				
I L3	4						1			1				
III L1	8		1					1		1				
III L2						1								
IV L1	3													3
IV L3	3													
V L1	11	1											1	44
VI L1	7									2				2
VI L3	7										1			2
VII L1	29	1			1			1		3				1

Cores

Class A^2, in Trench III, layer 1. A large nodule of poor quality flint, several flakes have been removed, but much cortex remains.

Class B^2, in Trench I, layer 2. Most of the cortex remains, only a few flakes have been removed.

Class C — two were found: a surface find near Trench III is small, used for removal of small blades, with one small area of cortex remaining (Fig. 9, No. 5), and in Trench I, layer 1 was an irregular core, partially used for removal of small flakes.

Core on Flake — found in Trench VII, layer 1.

Scrapers (Fig. 9, No. 6)

Only one scraper was found, from Trench III, layer 2. It is of oval shape with deep retouch on approximately half its circumference, and is truncated at its head.

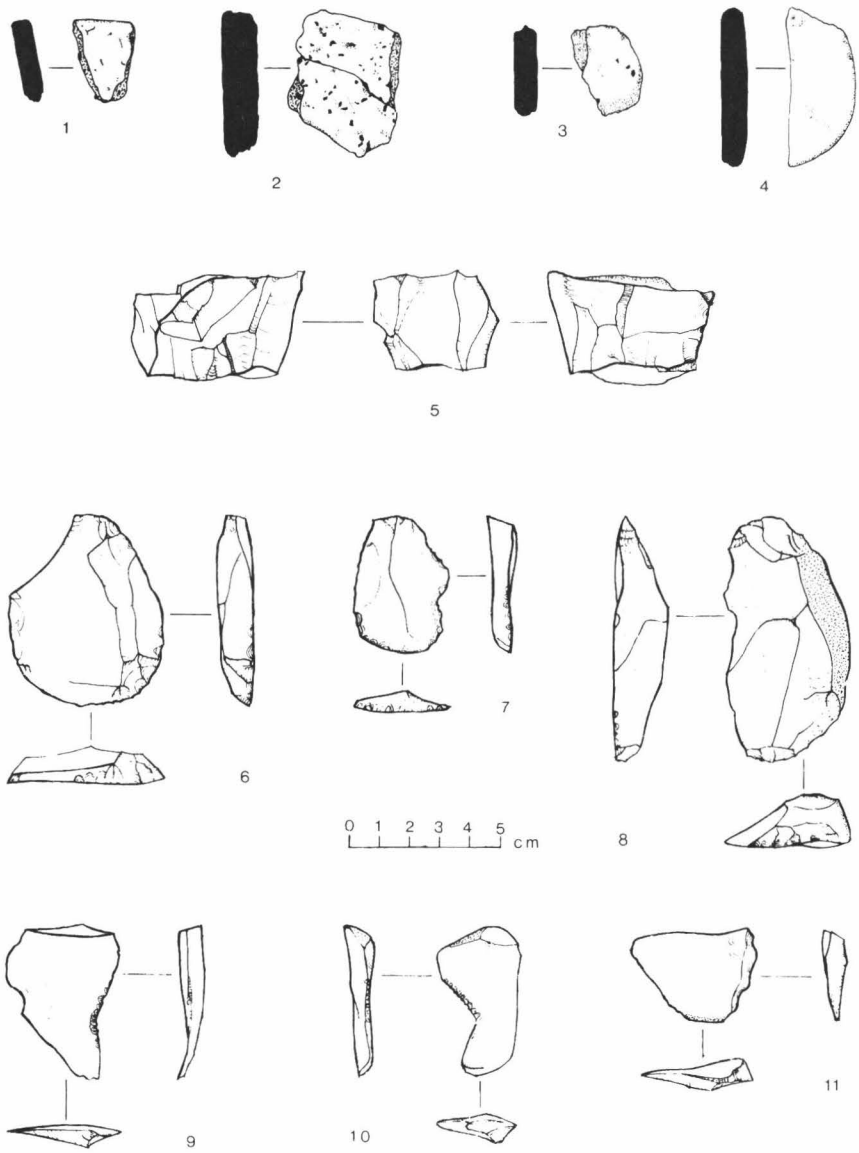


Fig. 9. Barkhale 1978. Pottery and worked flint.

Retouched Flakes
Fourteen retouched flakes were found, with small areas of retouch.

Core Rejuvenation Flake
Only one core rejuvenation flake, a surface find near the trackway, was recovered.

TABLE 2 FLINTWORK FROM TRENCH II BY LAYER NUMBERS

		CORES						*SCRAPERS*				
Layer	*Flakes*	A^2	B^1	B^2	B^3	C	*Core on Flake*	A^2	B^1	*Notched Flakes*	*Retouched Flakes*	*F.C.F.*
1	16							1			6	3
2 Bank	17		1				1		1	1	3	
2 Ditch	32										3	
3	24	1					1			1		3
4	22	1	2	1	1	1						2
5	1										1	1

Struck flints found (Table 2) total 149, of which 51 were found in layer 1 and bank layer 2 which showed some disturbance. Ditch layer 2 contained 35 struck flints, and layers 3, 4 and 5, of primary fill and relating presumably to activities associated with the causewayed enclosure, contained 63.

Cores
Of the ten cores found, two are on flakes with no cortex. One, of Class A^2, is small with little cortex remaining, used for striking of small flakes, and the remaining seven are rough and irregular with heavy white patination. Most have some cortex remaining with a few large flakes removed. That six of these were found in layer 4 is indicative of flint knapping in the vicinity.

Hammerstone
One hammerstone was found, in layer 1. It is a round nodule with complete cortex, but signs of utilisation at one end.

Scrapers (Fig. 9, Nos. 7 and 8)
Class A^2 found in layer 1 is a small end scraper with steep retouch. Class B^1, found in bank layer 2, is double ended with steep retouch at one end. Cortex remains along one side of the scraper.

Notched Flakes (Fig. 9, Nos. 10 and 11)
Two notched flakes were found, of which one (bank layer 2) is basically triangular with steep retouch along one side; the other (layer 3) is angled with small regular retouch on the inside edge.

Retouched Flakes
Thirteen retouched flakes were found, most with irregular areas of retouch down one side.

TABLE 3 FLINTWORK FROM TRENCH VIII BY LAYER NUMBERS

		CORES										
	Flakes	*Rough Waste*	A^1	A^2	B^2	B^3	*C*	*Blade Segment*	*Notched Flakes*	*Retouched Flakes*	*F.C. Waste Flakes*	*F.C.P.*
L 1	10									1		1
L 2	153	7		1	2	1	1		1	4	1	3
L 3	5											
L 4 Pit	122	5	1	1				1		5		

The bulk of the 326 struck flints (Table 3) found are waste flakes, 153 from layer 2, and 122 from a possible pit in the shattered chalk in layer 4. The general similarity of these and their concentration are suggestive of flint working within the enclosure, a view reinforced by those found in the layer 4 pit, some of which fit together and clearly form an assemblage.

Cores

The seven cores found are similar. They are large, irregular, have much cortex remaining, and have had large flakes removed.

Notched Flake (Fig. 9, No. 9)

One notched flake, angled in shape, with steep retouch on the inside angle.

Retouched Flakes

Ten retouched flakes were found, one in layer 1, four in layer 2, and five in layer 4; most have irregular small areas of retouch on one edge.

A surface scatter of struck flint can be seen within the enclosure and also in the plantation to the south. The excavated flint, although considerable in quantity bearing in mind the limited areas excavated, must nevertheless represent a very small proportion of that in the total enclosure.

POTTERY by Caroline Cartwright and Peter E. Leach

Trench VIII, layer 2—Neolithic (Fig. 9, No. 2)

Twelve body sherds of 'coarse' fabric with some large, angular calcined flint fragments and a number of small, angular, and sub-rounded crushed flint and quartz fragments and chips. The surface of the sherds varies from dark brown and reddish brown to light ochre according to the firing temperature.

Two sherds of fine fabric (including one rim—Fig. 4, No. 1) are ascribed to the Neolithic because of the rim form (rounded bowl). The large angular flint fragments characteristic of the 'coarse' fabric described above are almost completely absent. There is, however, a regular inclusion of small, angular and sub-rounded quartz and flint fragments.

Trench II Surface Find—Iron Age (Fig. 9, No. 3)

One black, well fired, sherd with generally sub-rounded flint and quartz inclusions.

Trench III, layer 1—Roman (Fig. 9, No. 4)

One abraded, and perhaps artificially rounded, undecorated Samian sherd.

CHARCOAL—identified by Caroline Cartwright, M.A.

Trench VIII, layer 2

Five grams of very fragmented *Quercus* sp. (oak) charcoal.

Trench V, layer 1

Fifty grams of recent *Taxus baccata* (yew) charcoal fragments.

Trench II (ditch), layer 1

Twenty grams of recent *Taxus baccata* charcoal fragments.

MOLLUSC ANALYSIS OF SAMPLES FROM THE DITCH-FILL OF TRENCH II by K. D. Thomas

Three bulk samples from the lowest three layers of the ditch (layers 2, 3 and 4) were analysed for land snails. Few specimens were extracted, so this report is necessarily brief.

TABLE 4 BARKHALE CAUSEWAYED ENCLOSURE: THE SAMPLES ANALYSED

Ditch Layer	*Munsell colour (moist)*	*Organic matter*	*Carbonized materials*	*Percentage by weight passing through sieves:* 6 mm	2 mm	0.5 mm	*pH** A	B
2	7.5 YR 5/6	+++	++	98.9	97.9	97.3	7.70	6.95
3	7.5 YR 5.5/6	++	+	53.4	46.7	44.0	8.50	8.25
4	10 YR 6/4	+	+	67.1	48.4	41.4	8.50	8.30

* 10 g of sieved soil (<2 mm) in 50 ml distilled water. Stirred.
(A) Left for 20 minutes, stirred, reading taken
(B) Left for a further 2 hours, stirred, reading taken

The Samples

One kilogram sub-samples were extracted for land snails, the material being washed through a series of sieves down to 0.5 mm mesh aperture. The sample descriptions are shown in Table 4.

Results

The sample from layer 2 produced no land snails and only a few carbonized and unburnt seeds, and much uncarbonised root and stem material. The soil sample from layer 3 contained a meagre assemblage of snails, as shown in Table 5. Some roots were present in this sample, as well as a few small carbonized seeds. The sample from layer 4 again contained no mollusc shells which could be identified, although three unidentifiable fragments were recovered. This sample also yielded a few carbonized seeds, a few roots, and one adult beetle (Coleoptera; Staphylinidae) with its legs and the right antenna missing. Otherwise, the insect was perfectly articulated and is almost certainly an intrusive burrower.

The presence of this beetle in the lowest deposits of the ditch, and of roots throughout the ditch profile, shows how very disturbed the sediments have been by biological activities. It is not likely that the snails are intrusive, for reasons outlined below.

Conclusions

The data are so sparse that it is not possible to draw any firm conclusions from them. However, although depauperate, the assemblage of land snails from layer 3 of the ditch fill is of some interest in that the species present are mainly shade-loving in their ecological preferences. This is not, perhaps, very surprising in view of the shaded microhabitat which can occur in ditches (as discussed by Evans 1972). What is surprising is the absence of any open-country species.

Where a ditch is dug in open-country, the sediments and snails which occur in its fill may reflect both the ditch micro-environment and the surrounding environment; as a result, the land snail assemblage will be 'mixed' in the ecological sense (e.g. Evans 1972, 328–44). Some species will have been living in the sheltered, perhaps overgrown, ditch, while others will have been living in the surrounding environment and become incorporated into the sediments of the ditch-fill.

The assemblage of species considered here is very restricted, in that it contains no decidedly open-country species, nor does it contain species which are obligate shade-lovers, or indicators of woodland conditions. All the species listed in Table 5 have been recorded in long grassland habitats on the chalk (Cameron and Morgan-Huws 1975), but usually in association with species indicative of grassland habitats (such as *Vallonia* species, as well as *Pupilla muscorum* and helicellids). The assemblage is not indicative of scrub habitats, as these mosaic environments contain micro-habitats suitable for shade-loving and open-country species, and on the chalk *Pomatias elegans* is often very common in scrub environments, but is absent from the assemblage in layer 3.

The assemblage in layer 3 closely resembles some assemblages from the ditch fills at the Offham causewayed enclosure (Thomas, in Drewett 1977). In the case of Offham, it was suggested that the assemblages of molluscs from the ditch fills, and the buried soil under the bank associated with the outer ditch, indicated that the enclosure was constructed in a temporary clearance in woodland. The data from Barkhale are so inadequate that they cannot sustain such an interpretation for this site; however, it is worthwhile drawing attention to the resemblance between the Barkhale and Offham ditch assemblages.

A quite different interpretation of the assemblage from layer 3 at Barkhale is that no shells from the surrounding area became incorporated into the ditch deposits and that the assemblage is wholly representative of a snail fauna which was living in the sheltered conditions of the ditch. This would be most likely to arise if the soils around the ditch were too acid to support a thriving community of snails. Certainly, clay-with-flints does occur in some areas on and around the site. The absence of molluscs in the soils of layer 2 may be due to soil acidity, although the pH of this layer is on the alkaline side of neutral (Table 5), so the absence of shells is not readily explained by this factor. Layers 2 and 1 are certainly derived from soil material, in the

TABLE 5 BARKHALE CAUSEWAYED ENCLOSURE: The Land Snails from a 1 kg sample from Ditch Layer 3

Species	*Number of Individuals*
Carychium tridentatum (Risso)	5
Cochlicopa sp.	1
Discus rotundatus (Müller)	3
Vitrea contracta (Westerlund)	5
Nesovitrea hammonis (Ström)	4
Oxychilus cellarius (Müller)	1
Limacidae	4
TOTAL	23

strict sense, whereas layers 3 and 4 are weathered chalk rubble from the bank and the sides of the ditch. This is probably especially true of layer 4, which appears to have rapidly slumped into the ditch from the bank. The absence of snails in this layer supports this idea of very rapid accumulation. Layer 3 probably accumulated more slowly, while layers 1 and 2 may have been produced by later ploughing. This ploughing phase may have been much later than the phase of infill represented by layer 3, but no time scale can be surmised from the available data.

The part of the enclosure excavated is adjacent to existing woodland. Is it likely that these shells from layer 3 are intrusive? I think not—firstly because they are absent from the overlying layer 2, as well as from layer 4, even though bioturbation was

active in this layer (judging by the presence of roots and the dead beetle). Secondly, the species of snails involved are not known to be active burrowers. It is interesting to note that the burrowing species *Cecilioides acicula* is absent from these deposits.

Summary

A very limited assemblage of land snails was extracted from layer 3 of the ditch fill. The species present are generally found in shaded micro-habitats. Alternative explanations for such an assemblage are considered, based on ecological and taphonomic reasoning.

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[1] Numbers assigned to separately recorded sherds in the excavation finds book run from P1 to P226, but sherds corresponding to 25 of these numbers are not now present in the collection. Some, which proved after cleaning not to be pottery, were discarded by the excavator; the remainder are not accounted for. Three of the serial numbers are duplicated, each having been given to two separate finds; seven sherds have no serial number, though provenance and stratification are recorded.

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THE DEVELOPMENT OF PREHISTORIC SETTLEMENT ON THE WEST SUSSEX COASTAL PLAIN

by Owen Bedwin

This article examines the evidence for permanent settlement on the Coastal Plain from the Neolithic to the end of the Iron Age. It is suggested that during the Neolithic much of the area was woodland and marsh, providing resources that were used by groups based on settlements on the South Downs. In the Bronze Age, the evidence indicates the beginnings of settlement, though probably on a limited scale. The possibility is raised of a setback to the spread of settlement, which may be linked to the climatic deterioration of 1000–500 B.C. The Iron Age, however, sees a considerable rise in the number of settlement sites (particularly the middle and late Iron Age). This is discussed in the context of the abandonment of the hillforts at Cissbury and the Trundle, and the establishment of a southern Atrebatic oppidum on the Coastal Plain.

INTRODUCTION AND GEOLOGICAL BACKGROUND

The soils and geology of the Coastal Plain are described fully in Hodgson's (1967) monograph. A summary is given here to provide a background to the archaeological discussion.

Hodgson defines two landscape zones, namely the *Upper* and *Lower Coastal Plain* (Fig. 1). The former lies between the 45 m (150 ft) and 15 m (50 ft) contours. These delineate a long, narrow strip running east–west, composed mainly of gravel, though with a few outcrops of Eocene clay. The northern and southern contour limits derive from the degraded remains of successive raised beaches.

The Lower Coastal Plain is a flat, low-lying area of *c.* 400 km² to the south of the 15 m contour. Its eastern and western limits are the River Adur and the county boundary, respectively. Drainage is

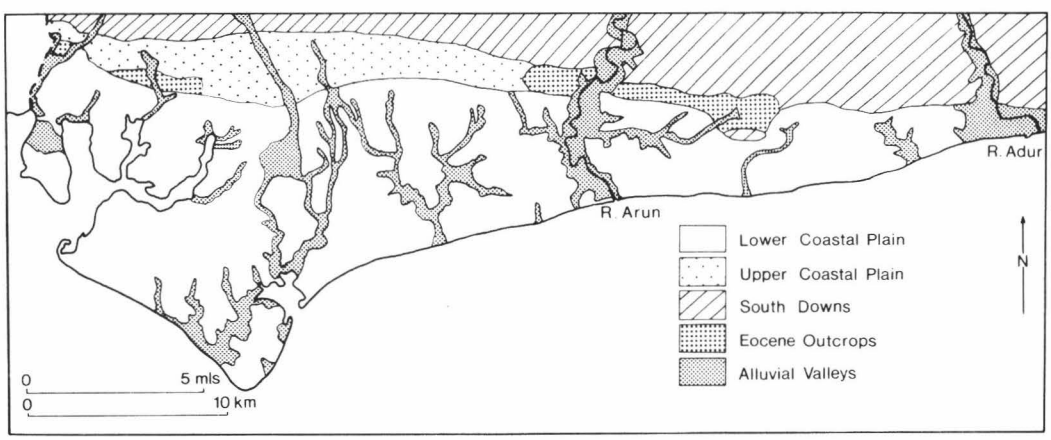

Fig.1 West Sussex Coastal Plain geology (after Hodgson 1967).

by means of small streams mostly running north–south towards the English Channel. The soils are derived from brickearths and alluvial deposits, though there is a gravel outcrop at Selsey (Fig. 1).

For the purposes of this article, these two zones will be treated as a unit, although occasionally there will be reference to, or contrast between, one or the other. For example, it is the Lower Coastal Plain which presents more of a challenge to the archaeologist. The land below the 15 m contour, no matter how potentially fertile, is bound to be vulnerable to rises in sea-level (about which very little is known for the period in question), and also to climatic change. Thus, higher rainfall, even with unaltered sea level, could cause problems if natural (and ? artificial) drainage was inadequate. On the Lower Coastal Plain, therefore, one might expect more ebb and flow of prehistoric settlement, though whether we yet have enough information to detect this, if it had occurred, is questionable, particularly for the earlier prehistoric period. It is nevertheless noteworthy that a few of the slightly higher localities on the Lower Coastal Plain do seem to be more productive of finds, e.g. at Littlehampton, there are several findspots of early Iron Age pottery (plus the unpublished Roman villa) on or just to the north of a low ridge of up to 8 m O.D. (Bedwin 1979). Similarly, at Selsey there are finds of every prehistoric period (White 1934a) from the shallow gravel quarries on the north-west flank of the slight ridge (rising to 8 m O.D.) on which the modern settlement is centred.

In general terms, the soils of the Coastal Plain, except those derived from the heavy Eocene Clays, are extremely fertile. Outside urban areas therefore, current land use is intensive arable or mixed farming (plus horticulture). The main subject to be discussed in this article is the extent to which this potentially excellent agricultural land was exploited during prehistory. The period under consideration is from the fifth/fourth millennium B.C. to the coming of the Romans, i.e. in traditional terms the Neolithic, Bronze Age and Iron Age. This fills the gap between two recently published gazetteers of material from the Coastal Plain, on the Mesolithic and Roman periods (Pitts 1979 and 1980). It should be stressed that the nature of the available evidence varies widely throughout the period under discussion. In the Neolithic, we have only a few small flint assemblages and isolated casual finds to go on, and in the Bronze Age mainly spot finds of metalwork (notably several hoards) and pottery. During the Iron Age, however, far more sites and material are known, and two settlements have recently been excavated on a large scale.

THE NEOLITHIC

The latest summaries of Neolithic Sussex (Drewett 1978 and 1983) make little mention of the Coastal Plain. The evidence of occupation of any kind is limited. There are only three findspots of pottery; Peterborough-style ware at Selsey (White 1934a) and at Oving (Drewett, pers. comm.), and one early Neolithic rimsherd from a post hole on the late Iron Age settlement at Copse Farm, Oving (Bedwin 1981). Flintwork is more widely distributed, though the range of implements is limited and interpretation not always straightforward. The majority of diagnostic types are arrowheads and flint and stone axes (Drewett 1978, Fig. 12). Although arrowheads denote hunting, the use to which the axes were put is more problematical. Many of the stone axes are of a type that would be unsuitable for cutting down trees (e.g. the stone is too soft, or they appear to have been deliberately blunted around the cutting edge [Drewett 1983]). It is consequently impossible to equate axe finds with forest clearance; many axes would be better understood in a ritual/ceremonial context.

However, excavations on the coast at Chidham (Bedwin 1980) unexpectedly brought to light an unusual flint assemblage: a total of 630 worked pieces, 133 of which could have been used as

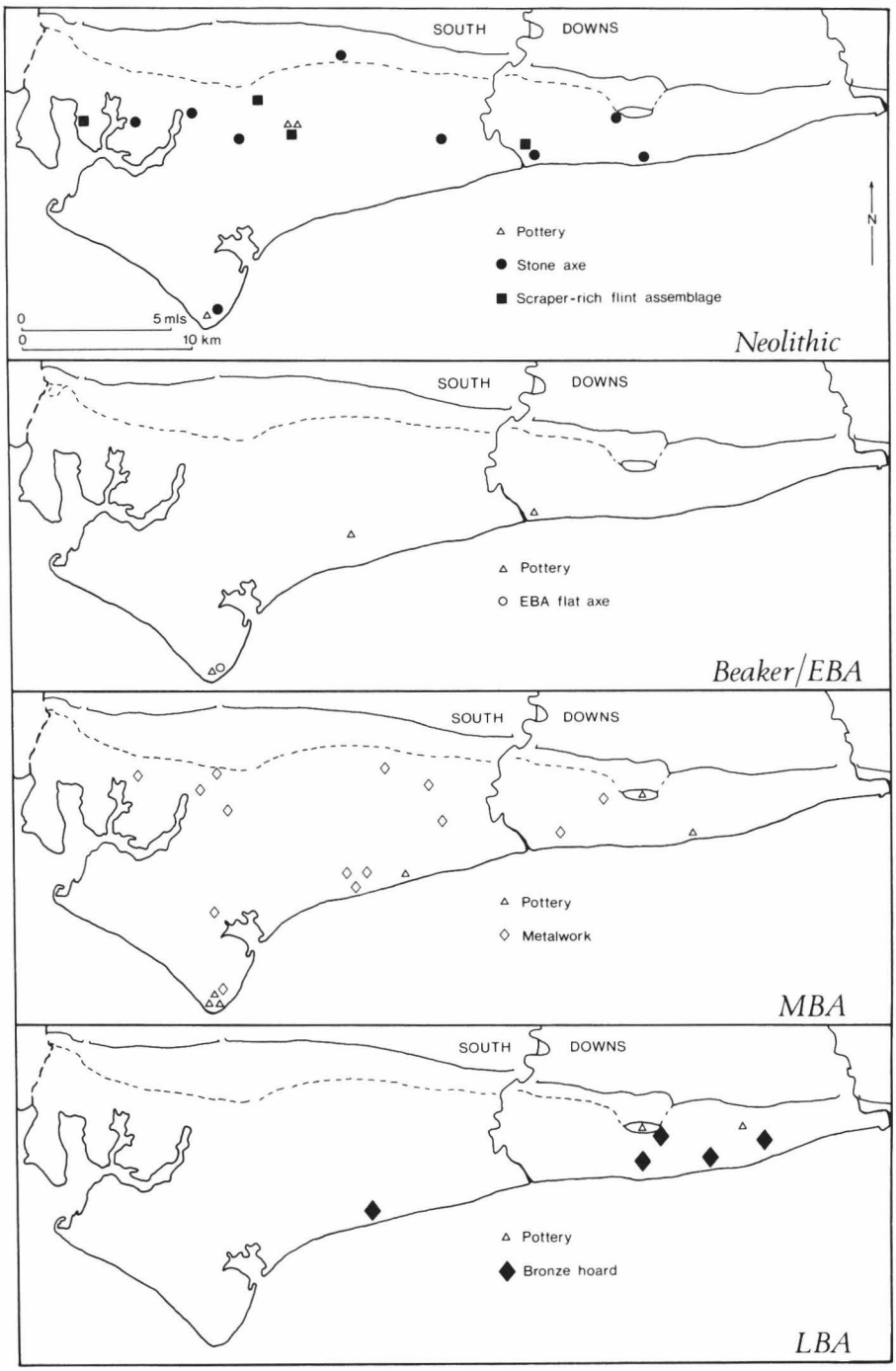

Fig.2 Distribution of Neolithic and Bronze Age finds (after Drewett 1978 and Ellison 1978 and 1980).

scrapers, particularly notched or hollow types (Drewett 1980a). The assemblage was difficult to date, but three small pieces interpreted as leaf-shaped arrowheads in the process of manufacture suggest the Neolithic. The function of this specialized assemblage seems most likely to be in the preparation of wooden arrowshafts and spearshafts, and possibly osiers for plaited fish traps. A similar assemblage has now been found during excavation of a late Iron Age enclosure at Copse Farm, Oving (Bedwin 1981; Roberts, pers. comm.). A third similar collection, in which almost the only implement types are varieties of scraper, has also been seen by the author, having been picked up from ploughed fields around Court Wick Farm, Littlehampton, just to the east of the River Arun (Fig. 2).

The evidence outlined above hardly supports the notion of permanent settlement on the Coastal Plain during the Neolithic; so what do the artefacts mean? Clearly, the area is being utilised; the assemblages dominated by scrapers suggest the use of salt marsh and freshwater marsh (the Oving site is situated on alluvium thought to derive from freshwater marsh). The arrowheads indicate hunting; some of the axes indicate forest clearance, though this is likely to have been on a small scale. In other words, the Coastal Plain appears to have been primarily marsh and woodland resource, exploited, perhaps seasonally, by settled farming communities living on the chalk of the South Downs. The flintwork finds on the Coastal Plain are thus interpreted as reflecting hunting activities and the locations of temporary encampments.

THE BRONZE AGE

Evidence of Bronze Age activity consists almost entirely of chance finds, in which metalwork predominates over pottery, except perhaps for the Beaker period. Ellison (1978, Fig. 14) shows a single Middle and Late Bronze age settlement at Highdown, but this is on an isolated chalk hill top and is probably better considered in the context of the Downland settlement pattern. It is, however, difficult to envisage an important Bronze Age settlement here if the surrounding areas of the Coastal Plain were uninhabited.

Beaker pottery is known from Selsey, North Bersted and Littlehampton (Ellison 1978 and 1980). The circumstances of discovery have been such that it is impossible to know whether these vessels derive from a funerary or a domestic context. At only one site, North Bersted, has there been any methodical area excavation (Bedwin and Pitts 1978, Fig. 5), and this amounted to a mere 45 m^2. The artefacts consisted of six small sherds of Beaker pottery and 432 struck flints, including barbed-and-tanged arrowheads, a drill-bit and a variety of scrapers. No contemporary features were recognised. This is the best evidence to date for a Beaker settlement on the Coastal Plain.

Finds of Middle and Late Bronze Age (especially metalwork) are more numerous, particularly in the area between the Rivers Adur and Arun (Ellison 1978, Fig. 14; 1980, Fig. 10). Thus, '. . . the distribution maps indicate a substantial shift of settlement from the chalk to the fertile Coastal Plain the Late Bronze Age' (Ellison 1980, 34). The distribution maps which accompany this statement suggest that it might be qualified by the addition of the words 'in the region between the Adur and the Arun', as there is a marked absence of finds west of the Arun in the Late Bronze Age, though not in the Middle Bronze Age (Fig. 2 and Ellison 1980, Fig. 10). Many of the Late Bronze Age finds are bronze hoards, accidentally discovered, and these may not always be reliable indicators of settlement location. It has become widely accepted that there is a tendency for the deposition of hoards in damp, marshy areas, away from settlement sites (e.g. the Bramber hoard; Aldsworth *et al.* 1981). There has been little opportunity for large-scale excavation in the vicinity of hoards, to see

whether there may be exceptions to this. However, the recent find of a small hoard at Yapton (Aldsworth, Archaeological Notes, this volume) may indicate a settlement.

The evidence from the scattered finds of Middle and Late Bronze Age pottery adds little to that of the metalwork. The few casual finds that have been made (e.g. Wedmore 1982) provide little or no indication of their archaeological context.

To discern significant trends from this unsatisfactory material is difficult. One additional complicating factor may be a bias, in terms of casual finds, in favour of burials (with grave goods) and hoards, but against settlement sites. These latter, on the South Downs at any rate, are often remarkable for the paucity of pottery and metalwork. It is instructive to compare the circumstances of the accidental discovery of the Iron Age settlement at North Bersted, on a brickearth subsoil (Bedwin and Pitts 1978). A modern drainage trench cut through a series of substantial, though more or less invisible, ditches; however, one of these fortuitously contained so much Iron Age pottery and other domestic debris that it literally fell out of the section exposed by the modern trench, and excavation proceeded from that point. The subsequent discovery of part of a Beaker settlement nearby (already mentioned) was quite unexpected.

There is some relevant environmental evidence, namely the widely observed climatic deterioration in England from *c.* 1000–500 B.C., i.e. during the Late Bronze Age and into the early Iron Age (Godwin 1975). The evidence is provided by peat-bog stratigraphy from a number of locations throughout the British Isles, and although there is no direct evidence from the West Sussex Coastal Plain itself, it is unlikely that this region escaped the colder and wetter conditions of that period. It may be that the Beaker period/Early Bronze Age saw the limited beginnings of permanent settlement, with a further rise in the Middle Bronze Age, followed by a reduction due to the poorer climate in the Late Bronze Age.

Another factor influencing the extent of settlement on the Coastal Plain would have been changes in sea-level. Although some evidence exists for marine transgressions at the beginning of the Bronze Age (e.g. from Wingham in Kent; Godwin 1962), it is thought that sea-levels during much of the Bronze Age were lower than at present (Tinsley 1981, 217). Again, no information is available for the West Sussex coastline, but a lower sea-level would be compatible with the origins of permanent settlement on the Coastal Plain in the Bronze Age. The effect of high rainfall during the Late Bronze Age would have been felt particularly on the lower-lying areas of the Lower Coastal Plain west of the Arun and may account for the apparent reduction in the number of chance finds, compared with the Middle Bronze Age (Fig. 2).

THE IRON AGE

The evidence for Iron Age settlement is both more plentiful and more convincing (Fig. 3). Not only are there far more finds, but in addition there have been two large-scale excavations of settlement sites.

The early Iron Age (sixth and fifth centuries B.C.) is not all that well represented, though some areas are better than others, e.g. Littlehampton (Bedwin and Pitts 1978, Gazetteer sites 19, 22 and 25) and, almost inevitably, Selsey (White 1934a). One of the Littlehampton spot finds came from a substantial ditch, and another from a small pit (Bedwin 1979). The relatively few finds may reflect adverse conditions during the final part of the climatic deterioration already mentioned.

In the middle and late Iron Age (fourth century B.C. up to the Roman conquest), far more sites are known, and, for the first time, large ditched enclosures with contemporary field systems and trackways have been recognized. Examples of these are North Bersted, Bognor Regis (Bedwin and

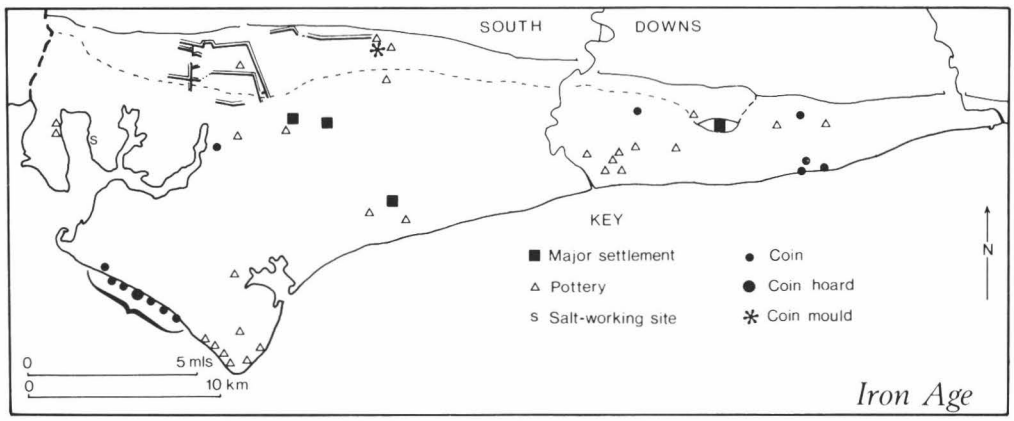

Fig. 3 Distribution of Iron Age sites and finds.

Pitts 1978), Copse Farm, Oving (Bedwin 1981) and Oldplace Farm, Westhampnett (Bedwin and Aldsworth, forthcoming).

The settlement at North Bersted (on a brickearth subsoil at 4 m O.D.) consisted of an extensive network of drainage ditches, acting as the boundaries of roughly rectangular fields, in which at least one focus of settlement (with a small round house, 6 m across) was identified. Domestic debris, especially pottery, animal bone, charcoal, burnt flint and burnt daub, was plentiful, and dated the occupation from the third to the first century B.C. The settlement area was effectively an enclosure, defined by ditches forming the inner edges of fields.

At Copse Farm, Oving (15 m O.D.), an extensive series of crop-marks has been identified by F. G. Aldsworth (1976) from aerial photographs. The crop-marks stretch over a distance of 800 m north to south (Fig. 4); they all correspond to ditches, and represent a complex series of enclosures and linking trackways. These features are not all contemporary; excavation has shown enclosure complex 1 to be a settlement of the first century B.C. and the first half of the first century A.D., occupation drawing to a close at about the time of the Roman invasion. Part of a single round house, 9 m across, was found (Bedwin 1981). Enclosure complex 2 belongs to the Roman period (first and second centuries A.D.; Bedwin 1983a). The subsoil at Oving is a variable alluvium, thought to be derived from a freshwater marsh (Hodgson 1963); the crop-marks shown in Fig. 4 appear only on this subsoil, and it has not yet been determined whether the ditches carry on into the surrounding gravel subsoil.

At Oldplace Farm, Westhampnett, just outside Chichester, another crop-mark site has been recognized by F. G. Aldsworth (Fig. 4). Again, these features correspond to ditches which define a series of enclosures, trackways and fields. Trial excavation at enclosure 1 dated it to the late Iron Age (second and first centuries B.C.). Enclosure 3 may well be Roman, judging by the presence of Romano-British pottery in the ploughsoil. These crop-marks are close to the River Lavant (at 22 m O.D.), and again their visibility seems to be related to the presence of alluvium, rather than the surrounding gravels.

It is possible to make some preliminary generalizations from these three sites. First, it is clear that there were extensive middle and late Iron Age settlements (and subsequently Romano-British ones) on the Coastal Plain. Secondly, considerable areas consisted of a 'ditched landscape', within which the main elements were rectangular/square settlement enclosures, up to 35 or 40 m across, long trackways with ditches at each side, and a series of rectangular or square fields. Within the

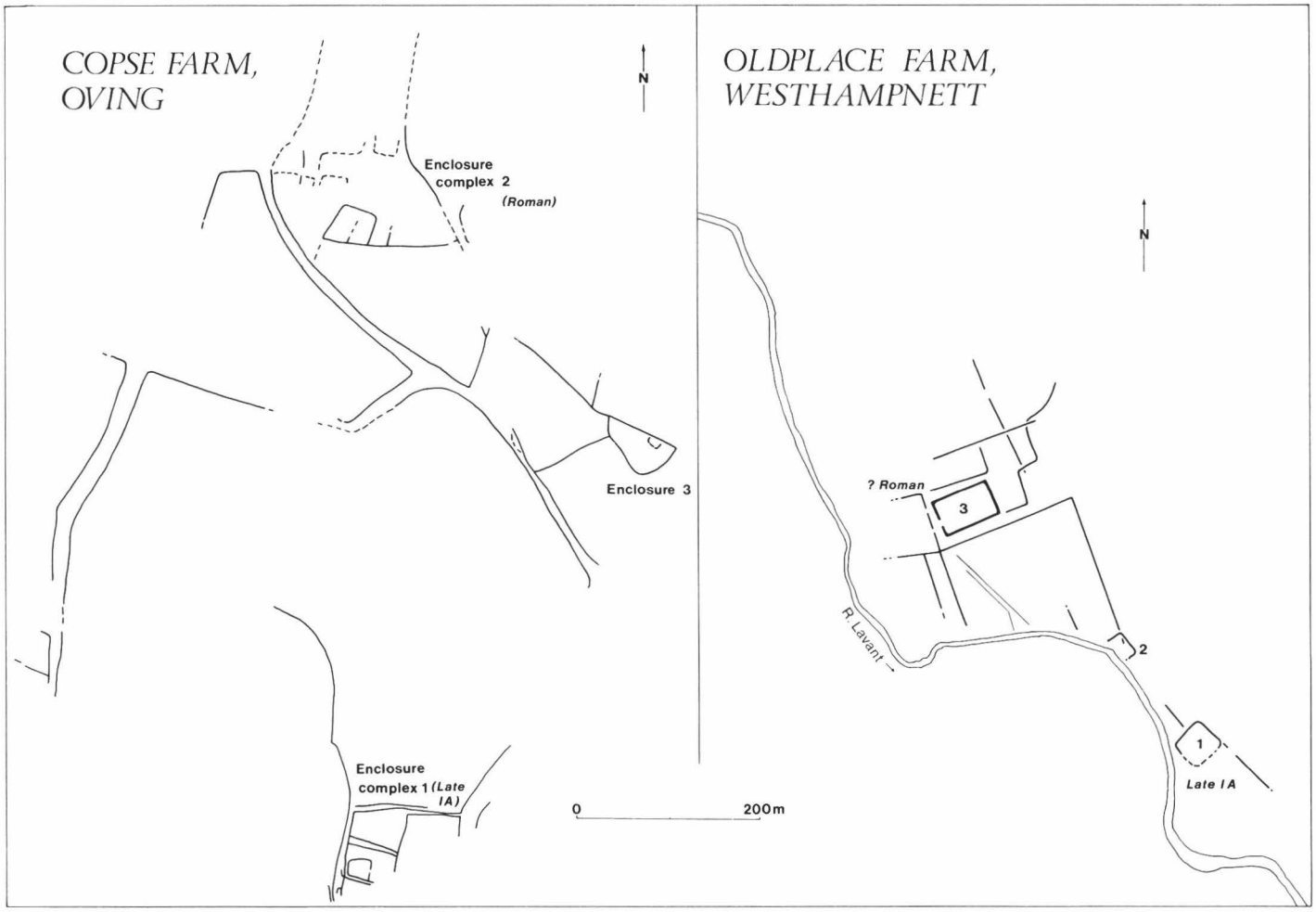

Fig.4 Comparative plans of Copse Farm, Oving and Oldplace Farm, Westhampnett (from surveys by F. G. Aldsworth).

settlement areas were round houses, defined by ring-gullies. The large storage pits familiar from settlements on the South Downs were absent; it is likely that the soil was too damp (and probably too crumbly) for proper storage of foodstuffs in this way. Small pits, up to 1 m deep, with evidence of use as hearths or furnaces, were found at both North Bersted and Oving.

The economic basis of these settlements is almost certainly mixed farming, though the relative importance of arable and pastoral elements remains to be fully clarified. At North Bersted and Copse Farm, Oving, large numbers of animal bones were present, with *Bos* being more prominent than on contemporary Downland sites. Little information has so far been obtained about the crops grown because, in spite of extensive flotation, few charred grains have been isolated.

On the basis of this evidence, we must suppose a substantial rise in the number of settlements and the population on the Coastal Plain during the middle and late Iron Age. We may also surmise a *movement* of population onto the Coastal Plain from the South Downs; it is surely significant that the two large hillforts of Cissbury and the Trundle are abandoned at *c.* 100 B.C. Although neither has been the subject of large-scale excavations in the interior, they are of the general type which has elsewhere (e.g. Danebury, Cunliffe 1976a) been shown to have been intensively occupied over a considerable period of time. Such sites have been termed 'developed' hill forts (Cunliffe 1976b); they are important social, economic and political centres in later Iron Age society. Thus the two most important sites on the south side of the Downs are *abandoned* during the period when there is a conspicuous rise in settlement on the Coastal Plain.

It may be possible to take the argument a stage further and suggest that large-scale settlement and farming on the Coastal Plain were only made possible by extensive land drainage, and that the development of drainage systems should be regarded as a communal activity. For example, the third/second century B.C. field system at North Bersted was identified by excavation over an area of two hectares (five acres), and was undoubtedly more extensive (Bedwin and Pitts 1978). The cumulative length of the ditches that could be identified totalled over 700 m (and this is a minumum estimate); by comparison, the ditch forming the perimeter of the Trundle is 800 m. In other words, the 'developed' hill forts of the South Downs are the communal monuments of the fifth/fourth centures B.C., whereas the ditched drainage systems (plus the Chichester dyke system discussed in the following section) on the Coastal Plain are the communal monuments of the period from the third century B.C. to the first century A.D.

THE LATE IRON AGE AND THE WEST SUSSEX OPPIDUM

If Cissbury and the Trundle are accepted as centres of tribal power, as defined in the section above, what happens following their abandonment? To answer this, it is perhaps easier to begin by a general consideration of southern England as a whole. Over much of this area, the fifth to the third centuries B.C. sees the emergence of large, strongly defended, developed hill forts. In the first century B.C., however, the pattern begins to change. In many areas, new tribal centres (or tribal capitals) are established away from hilltop sites. Examples are the valley-side locations of Loose in Kent (Kelly 1971) and Winchester (Biddle 1975). By contrast, some hill forts (though not many) remain in use, and their defences are refurbished towards the end of the Iron Age, e.g. Oldbury in Kent (Ward-Perkins 1944). Although the important *new* sites are not on hill tops, this emphatically does not mean that they are undefended. Substantial and sometimes extremely lengthy linear earthworks, usually known as dykes, defend these sites, and effective use is often made of rivers and streams, and also perhaps contemporary features of the landscape, such as marshes and forests, which no longer exist. In some cases, these earthworks do not closely invest the main settlement

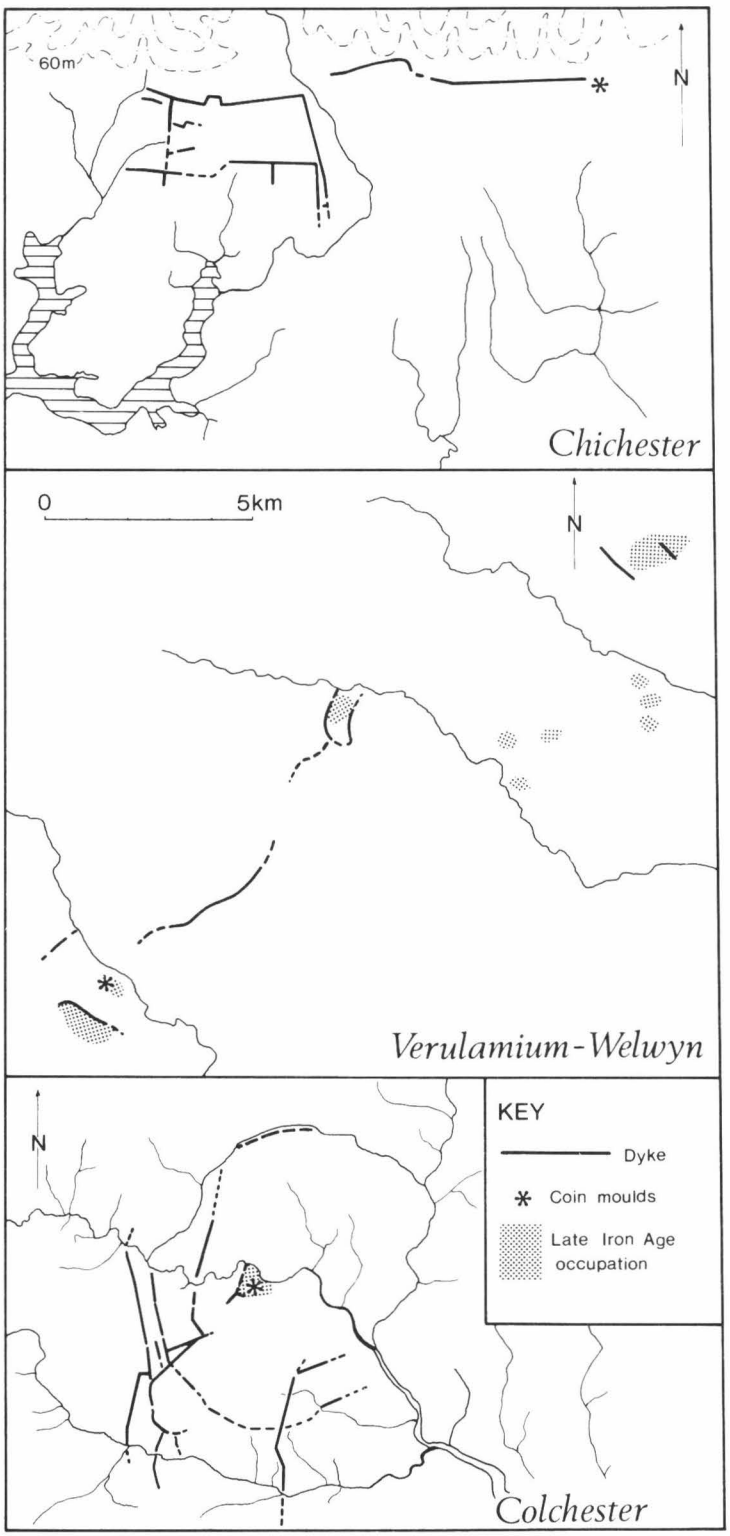

Fig.5 Map of the West Sussex oppidum, with other oppida at the same scale.

area, so that considerable tracts of farmland, and perhaps more than one focus of settlement, may be protected. The name given to the earthwork system plus the area it defends is an *oppidum*, a term taken from Caesar's *De Bello Gallico*. Some writers have used this term interchangeably for both the main settlement focus as well as the entire defended area. This is potentially confusing, and arises from the difficulty in defining oppida in terms of lay-out and siting (compared, say, with hill forts). Cunliffe (1976b) has discussed this at length and proposes sub-division on the basis of size, thus: *enclosed oppida*, e.g. Loose, Winchester—large settlement areas, usually above ten hectares, protected on all sides by natural or artificial defences; *territorial oppida*, e.g. Camulodunum—much larger areas of countryside partially defined by discontinuous lengths of linear earthworks. On this classification, the West Sussex example, defined by the earthworks shown as the Chichester dykes, is a territorial oppidum.

In West Sussex, the Chichester dykes, or entrenchments (Figs. 5 and 6) form one of the most extensive systems of late Iron Age defensive earthworks in southern England. Limited excavations by Murray (1956) and Bradley (1971) have shown that these dykes were almost certainly constructed in the late Iron Age, probably the first century B.C. (There is a question-mark over a stretch towards the eastern end of the system, where the ditch appears to be medieval; this is discussed in detail below). The River Lavant and the stream running into Bosham harbour are also to be considered part of this defensive complex. The area of the West Sussex oppidum is potentially enormous, up to 150 km^2 if all the land down to Selsey Bill is included; but where is the new tribal capital, which has replaced the Trundle and Cissbury? Although the evidence is far from compelling, many writers have suggested that it may have been near Selsey because of the number of finds of late Iron Age material, especially coins, which have been recorded from the eroding coastline there (summarized in Bedwin and Pitts 1978, gazetteer). Much of this material was found during the nineteenth and early twentieth centuries (e.g. Heron-Allen 1911), and consequently the provenance and attribution are not always precise or reliable. The evidence for a tribal capital at Selsey is examined below, under the headings:

1. The quantity of finds.
2. The quality of finds.
3. The relationship between the Chichester dykes and Selsey.

1. *The quantity of finds*

It is unquestionably true that more late Iron Age material has eroded from the shore at Selsey than anywhere else along the Sussex coast. However, it should also be pointed out that;

(a) This part of the coast has eroded far more rapidly than any other stretch of coastline over the last 200 years. Moreover, once a few finds had been made, especially gold coins, it is probable that a much closer watch would have been kept here.

(b) A comparison of finds of all periods shows that not only is the coastline at Selsey richer in Iron Age finds than elsewhere, it is also richer in Romano-British and Saxon material (information from West Sussex County Council Sites and Monuments Record). This is clearly demonstrated for the Roman period by Pitts (1979, Fig. 2a). Thus, the number of Iron Age finds could equally well be explained by arguing that, because of its high agricultural potential, the Selsey region was intensively settled throughout the Iron Age, and the Roman and Saxon periods, *without* implying the presence of an Iron Age tribal capital.

(c) Many of the discoveries mentioned by Heron-Allen (1911), and others were of 'hut floors' eroding from the low cliff. These were dark, horizontal bands containing much burnt flint, charcoal, pottery and other domestic debris. The pottery is often described as Iron Age without further

qualification. Clearly, if it belongs to the early or middle Iron Age, it pre-dates the period when the tribal capital would have been established.

2. *The quality of the finds*

Much has been made of the discovery of late Iron Age gold coins (*c.* 200–300) and other small gold objects along the foreshore west of Selsey Bill (Heron-Allen 1911). Recently, the gold objects other than the coins have been carefully re-assessed (Brown 1979). Her conclusions are that, apart from many undiagnostic scraps, the datable material can be classified as either fragments of Graeco-Roman jewellery (late Iron Age or Roman), or else Anglo-Saxon jewellery of a date centring on the seventh century A.D. This latter group fits well with the Saxon pottery discovered by White (1934b). Thus, the only objects of *definite* late Iron Age date are the gold coins; many of these, although found scattered along the foreshore, could well have come from a single hoard (Allen 1961, 289). The apparent wealth of the late Iron Age material is thus considerably less impressive than at first sight.

3. *The Chichester dykes and Selsey*

(a) The distance between the southernmost part of the dyke system and Selsey is 12 km. Comparison of other dyke systems in southern England (Fig. 5) shows much shorter distances between defensive outworks and important settlement foci. In what sense can dykes 12 km away be said to 'defend' Selsey? This is difficult to assess as it depends to a large extent on how effective the River Lavant was as a barrier. Originally, this ran south into Pagham harbour, but at some stage was diverted around the southern edge of Chichester, probably in the medieval period (Aldsworth and Freke 1976, 19). Running in its former course, it would have been the main barrier to attack from the east.

(b) In his field survey of the Chichester dykes Bradley (1971) puts forward the following three-phase sequence of dyke construction:

Phase (i) EWA(i) and EWA(ii) (refer to Fig. 6)
Phase (ii) EWA(ii), EWB, EWD(i), NS4, NS2
Phase (iii) In addition to phase (ii), NS1, NS5, EWE, EWF, EWG, EWD (ii), NS3 and EWC

To a number of authors, this sequence and configuration suggest rather a defensive system focussing on an area around the head of Chichester harbour. Certainly, there would have been suitable anchorage here, in contrast to the present exposed coast at Selsey. However, it is conceivable that two millennia of erosion around Selsey Bill have totally transformed a coastline which originally contained a sheltered harbour.

(c) There is also the problem of conflicting dating evidence for phase (i), especially from the eastern end of EWA (ii). The five published sections across the Chichester dykes have all examined earthworks of phase (i). Evidence from the only section through EWA(ii) (Murray 1956) and one of those through EWA(i) (Bradley 1971) points toward a late Iron Age date for their construction. Two other excavations near the eastern end of EWA(i), at Halnaker, suggest a late medieval date (Fig. 6; Holmes 1968 and Bedwin 1982). Bradley (1969) has interpreted the evidence from Holmes' excavation in terms of a medieval re-use of an existing (i.e. late Iron Age) boundary. Finally, investigation of the eastern terminal of EWA(i) at Boxgrove in 1982 (Bedwin 1983b) revealed a ditch containing much very early Roman pottery (*c.* A.D. 50–70; Orton, pers. comm.). However, the primary silts were sterile and this evidence is therefore compatible with a late Iron

Age date for the ditch. Further excavation is clearly needed before it can safely be assumed that the entire length of EWA(i) has its origin in the late Iron Age.

It should now be evident that the case for a tribal capital at Selsey is far from impeccable. This does not mean that there was definitely no such site here; the nature of the surviving evidence from Selsey makes a final and definitive evaluation almost impossible. But it does mean that it is important to consider alternative locations on the Coastal Plain. This is not a new approach; Frere (1972) has suggested a siting much nearer the dykes, e.g. the Fishbourne—Bosham area (Fig. 6).

One final piece of evidence to be considered is the finding of Iron Age coin moulds (or, perhaps more accurately, coin moulds of Iron Age tradition) during the 1982 excavations at

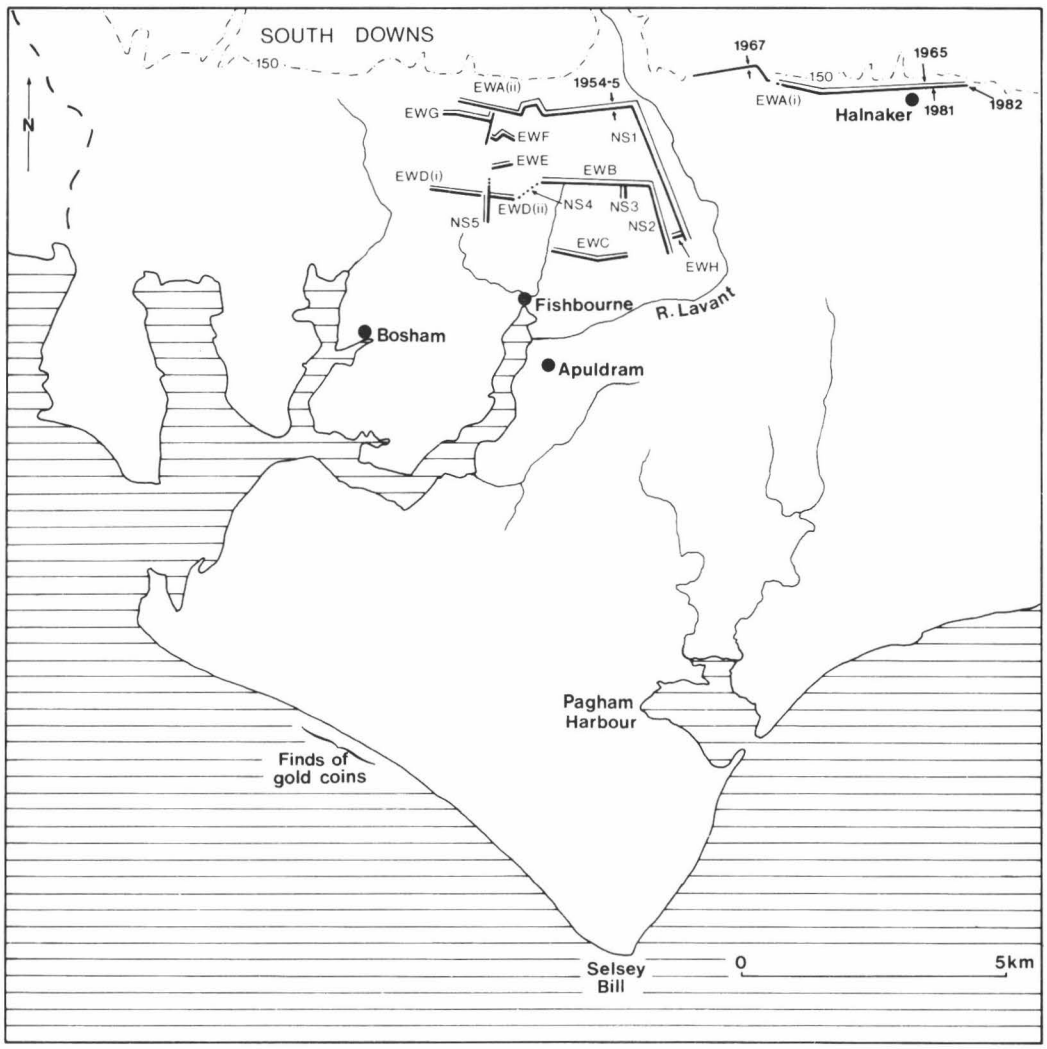

Fig.6 Plan of the Chichester dykes with location of excavations, plus other sites mentioned in the text (from survey by F. G. Aldsworth).

Boxgrove (Bedwin 1983b) at the eastern end of the Chichester dyke system (Fig. 3). Fragments of clay moulds of two module sizes (corresponding to silver and gold coins) were found, though no coins or blanks matching the moulds were recovered.

These are the only Iron Age coin moulds to have been discovered in Sussex, but other coin-mould finds in southern England have almost always come from 'oppidum' sites, e.g. Bagendon (Clifford 1961), Camulodunum (Hawkes and Hull 1947, 129–33), Verulamium (Wheeler and Wheeler 1936) and the Puckeridge–Gatesbury complex (Partridge 1981, 323–56). There are, however, two reasons why it is difficult to classify Boxgrove as a 'tribal centre'. First, the location does not appear particularly favourable. It is at, or just beyond, the end of the dyke system, and is not especially well sited for participation in trade. It is several miles inland, with no river nearby. Secondly, and more compellingly, little definitely pre-conquest material was found at Boxgrove. The coin-mould fragments themselves all came from the same early Roman context (pre-A.D. 60). This may point rather to post-conquest coin production; if this interpretation is correct, then coin production here is of limited relevance to events in the late Iron Age.

CONCLUSIONS

To summarize the evidence so far presented; the Coastal Plain during the Neolithic would appear to have remained largely forested, with considerable areas of poorly drained marshy land. Permanent settlement, initially on a small scale, probably began during the Beaker period, and increased throughout the Early and Middle Bronze Age (though without reaching the extent suggested for the later Iron Age). The Late Bronze Age and early Iron Age are envisaged as a period during which there was some setback to the spread of settlement because of climatic deterioration. The Lower Coastal Plain in particular may have been more affected than the Upper Coastal Plain.

During the middle and late Iron Age, extensive networks of drainage ditches, centred on settlement enclosures, signal a much increased exploitation of the Coastal Plain, and a corresponding rise in population. Forest clearance in the middle and late Iron Age must therefore have been extensive, though no doubt local areas of woodland were maintained/managed for the resources which they could provide.

However, it must be re-emphasized that for both the Neolithic and the Bronze Age, the evidence is limited, and discoveries from a single site could radically alter our understanding. For the Iron Age, we have both more and better information. If the hypothesis of intensive farming in the late Iron Age is correct, then this, allied with pro-Roman politics, will have provided a sound basis for the rapid development of Roman West Sussex, exemplified by the establishment of early villas at Angmering, Southwick and Fishbourne.

One weakness running through much of this article is that it is descriptive rather than explanatory, i.e. it is possible to outline a sequence of events without being able to explain why they happened. Almost the only explanatory factor invoked is the climatic deterioration of the Late Bronze Age and early Iron Age. A wider knowledge of the environmental framework in which these events occurred is required. Direct environmental evidence (i.e. from pollen or land snails) is almost wholly lacking, though it is possible to interpret, for example, the scraper-rich Neolithic flint assemblages as indicative of marshy conditions, or the extensive Iron Age ditch systems as indicative of a largely cleared landscape. Equally, we have little information about fluctuations in sea-level. There are certainly indications of late Roman or post-Roman rises in sea-level, e.g. from Fishbourne (Cunliffe 1971, 6 and 8) and also from Pagham (Gregory 1976), where post-second

century A.D. marine incursions have been suggested. As noted in the Introduction, some idea of changes in sea-level is crucial for understanding the sequence on the Lower Coastal Plain. Factors affecting settlement here may be finely balanced, with small rises in sea-level leading to marine incursions and waterlogging. A sedimentological study of the Chichester Harbour area with a view to tracing and dating marine transgressions would be valuable, for it could help to provide a chronological framework which would make the archaeological evidence more comprehensible.

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THE ARCHAEOLOGY OF LEWES: SOME RECENT RESEARCH

by David R. Rudling
with major contributions by David Freke and Fiona Marsden

The following is an attempt to draw together the results of recent archaeological fieldwork and research into Lewes' past. The article is in two parts, the first being an archaeological survey, and the other a group of reports on several small excavations, a watching-brief and Lewes Priory Mount.

INTRODUCTION

Since 1974 Lewes has been the subject of a series of excavations carried out by the Sussex Archaeological Field Unit as part of a research project entitled 'The Origin of Sussex Towns'. The project has recently been ended, and the following report, which is in two parts, is an attempt to draw together the results of the recent archaeological fieldwork (Fig. 4) and researches undertaken by the Unit and others into Lewes' past. In addition to the various excavation reports mentioned in the text the reader is also referred to several earlier surveys which are either solely about the archaeology of Lewes, or include Lewes, namely *The Implications of Planning: Redevelopment and Archaeology* (Houghton 1973); *Lewes 1974: a pilot archaeological survey defining the need for rescue archaeology in 1974* (Freke and Freke 1974); *The State of Archaeology in Lewes, East Sussex, 1975: a report and review* (Houghton 1975); *Historic Towns in Sussex* (Aldsworth and Freke 1976), 'Medieval urban archaeology in Sussex' (Freke 1978), and 'The origins of the Saxon towns' (Hill 1978).

PART A: AN ARCHAEOLOGICAL SURVEY by D. Freke and D. Rudling

INTRODUCTION

Lewes is built on a steep chalk promontory at a narrow crossing of the tidal Ouse about ten kilometres from its mouth (Fig.1). Its name is derived from *hlaew,* Old English for hill. It is in the vicinity of major east-west and north-south routes which have existed at least since Roman times, and in the Saxon and Medieval periods the strategic importance of its location, 'as with many other "gap" towns, strengthened its importance as a communications centre, and from this its growth in political, commercial and administrative terms was a natural evolution' (Houghton 1975, 2).

a *Prehistoric and Roman* (Fig. 2, plan a).

There is no evidence for a settlement at Lewes during either prehistoric or Roman times, although stray finds of both periods have been made. The prehistoric finds from inside the medieval town consist of small groups of flintwork which were found during the excavations in Brook Street (Freke 1975), North Street (Freke 1976) and Brooman's Lane (see below). From outside the town comes a Pre-Roman Iron Age sherd found near the line of a possible prehistoric track (modern

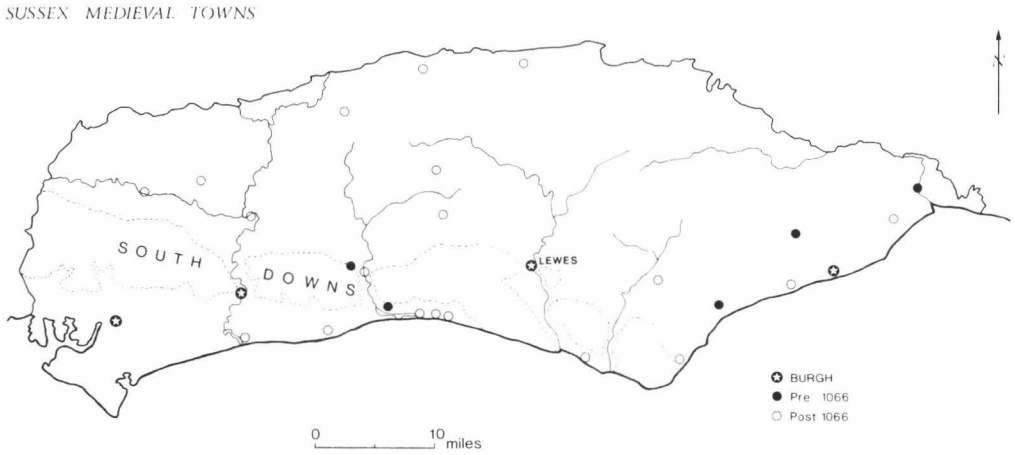


Fig. 1. Lewes. Location map.

Mountfield Road), where a coin of Gallienus (A.D. 253-68) has also been found. I. D. Margary (1965) has traced an unbroken Roman road from London to Malling where it meets an east-west track (which had a clear westwards destination to the river) and peters out on Malling Hill. The suggestion that Lewes was the destination of this road, as argued by Horsfield (1824), has been discredited, mainly by the paucity of Roman finds within the town compared with Malling. A garden in the castle ditch produced Roman coins, pottery and a quern, but these, like a coin found on School Hill (High Street) and pot sherds from Friar's Walk (Freke 1977, 194) and Brooman's Lane (see below) seem to be isolated finds. As far as can be ascertained Lewes was not the site of a Roman settlement, but archaeological evidence suggests that Malling was.

b *Saxon* (Fig. 2, Plan b).

No pagan Saxon settlements have yet been found in or around Lewes, although two nearby cemeteries are known, one in Malling (Norris 1956, 10-12), whose -ingas ending indicates a Saxon origin, the other at Saxonbury by Jugg's Road (Craddock 1979). As yet there is no known settlement site associated with either of these cemeteries.

Archaeological evidence for later Saxon settlement is limited to a piece of possible Saxon pottery from Brack Mount, fragments of an eleventh century (thus perhaps pre-Conquest) church built into the present church of Saint John-sub-Castro, and evidence from excavations on the Naval Prison site (Norris and Thomson 1963), the Green Wall site (Thomson 1967), Brook Street (Freke 1975), North Street (Freke 1976), Friar's Walk (Freke 1977) and Brooman's Lane (see below). All these excavations have produced Saxo-Norman pottery comparable to that found at Chichester, and the Green Wall excavation revealed the remains of an earth bank and ditch of possible Saxon origin.

Lewes is one of four late Saxon *burghs* in Sussex mentioned in the tenth century *Burghal Hidage,* and it is assessed at thirteen hundred hides. The number of hides given in the Burghal Hidage has been shown to be an accurate indication of the actual length of defended wall in the cases of Winchester, Wareham, Bath, Malmesbury, Wallingford, Cricklade, Lyng, Southampton and Portchester (Hill 1969). Thirteen hundred hides would indicate a wall 5,363 feet long for Lewes. This is a large area, and its importance is confirmed by it being allowed two moneyers by

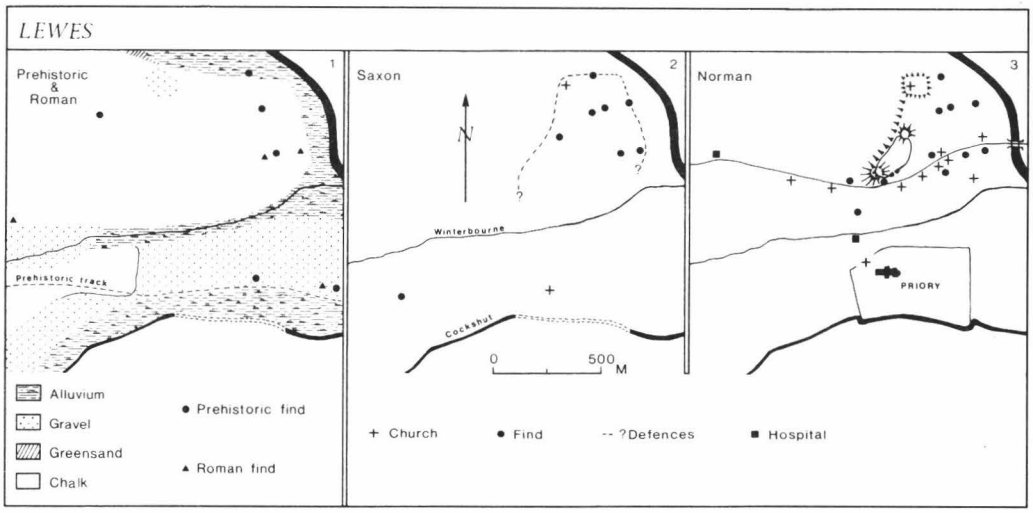


Fig. 2. The development of Lewes. Maps to show findspots/features of Prehistoric, Roman, Saxon and Norman times.

Athelstan in the mid-tenth century, and the fact that by the time of the Conquest it was valued at twenty six pounds per annum compared with Chichester's twelve pounds. The problem of where the boundary of this major Saxon defensive position lies has been the subject of much speculation. A suggested candidate has been the churchyard of Saint John-sub-Castro, presumably because of its fort-like banks and the believed Saxon origin of the church. It is however only a fraction of the size predicted by the Burghal Hidage, its east bank may be a comparatively modern feature, and recent investigations have shown that the so-called 'Fosse' along the north side of Lancaster Street dates to the twelfth century (Freke 1975). Although the results of rescue excavations on the site of the Green Wall (an earth bank) indicate that the original structure may date to the Saxon period (Thomson 1967, 338), Houghton has pointed out that the Green Wall has not been proved to be a *defensive* structure (Houghton 1975, 5). Saxon defences have also been suggested on the west side of the town following the line of Westgate and Keere Streets, where the town walls can be seen to overlie a defensive earthwork. In 1972 the Lewes Archaeological Group made an unsuccessful attempt to reach the bottom of the outer ditch (unpublished excavation). Thus, whilst the earthwork has been assumed to have a Saxon origin there is no factual evidence for this idea (Houghton 1975, 3). It remains a *possibility* however that the Saxon defences underlie the later medieval walls, but excavation is the only means of determining if this suggestion is correct.

The regularity of a section of the town south of the castle has suggested to some an element of deliberate planning, possibly by the Saxon burgh builders, but this area is also the steepest sloped in the town and its layout may merely have been the most natural consequence of this fact. Nevertheless, the north-south 'twittens' are remarkably 'equidistant'.

c. *Norman* (Fig.2, Plan c)

After the Conquest Lewes was granted to William de Warenne and he built a castle in a commanding position at the top of the town. It had, apparently, two mottes joined by an ovoid bailey. The western motte was crowned by a keep and the whole surrounded by a wall, with a ditch on all but the naturally precipitous northern side. For further information about the castle see

Godfrey (1972), and for a report concerning recent discoveries on the western motte see below. It has been suggested that a large mound (Priory Mount) to the south of the town near the Priory was a temporary motte erected by William, but there is no archaeological evidence for this (for a fuller discussion of this mound see below).

Warenne founded the Cluniac monastery of Saint Pancras at Southover in 1077, probably on the site of an earlier wooden church. From the Chartulary of the Priory (Salzman 1932) we also learn that William granted to the Priory the tithes of nine churches in the borough of Lewes, and that this gift was confirmed by his son William, the second Earl (1091-98), who also gave to the monastery the reversion of these churches after the deaths of the existing patrons. The document mentions the chapel of Saint John 'in their own burial ground', which later became the parish church of Saint John (the Baptist), Southover.

Between 1969 and 1981 excavations under the direction of Mr. R. Lewis were undertaken in the Priory, primarily in the Rere-dorter and Infirmary Chapel. The publication of these excavations, and the general availability for study of the finds, are eagerly awaited, both in their own right, and because such things as information concerning local pottery groups related to dateable structures will probably have important benefits for the dating of material found in excavations in the adjacent town.

Also in Southover was the Hospital of Saint James, and Southover grew rapidly into one of two Lewes 'suburbs', (both however, were proudly independent of Lewes administratively and legally, until the first half of the nineteenth century). Another hospital, Saint Nicholas founded in 1085, was situated on the road out of Lewes west of Saint Anne's church, in the area now known as Spital Road.

The other 'suburb', Cliffe, was situated on the opposite bank of the Ouse and developed as a result of the importance of the river crossing.

Little is known about the Norman town proper, which was the chief town of its Rape. It had nine churches in the eleventh century, and a market is known to have been held in the High Street since Norman times (this continued to be held there until the eighteenth century). No Norman dwellings remain and no clues have yet been discovered as to the street plan (although this was probably centred on the cross roads known as 'Star Corner', near the present Town Hall and Law Courts, and spread outwards from there). Traces of Norman dwellings can be expected to underlie many of the later medieval and post medieval houses inside the town, but as most are unlikely to have been built of stone it is not surprising that whereas centuries of building and rebuilding have unearthed many traces of later medieval structures they have not revealed any definitely of Norman date (the one possibility are the cellars which were found during the late nineteenth century under the Star Inn). Careful scientific excavation in the presumed 'core' area of the town is needed to find and interpret this period of the town's history. Outside the likely 'core' area excavations at the Naval Prison site, the Green Wall site, Brook Street, North Street, Friar's Walk and Brooman's Lane all produced quantities of Saxo-Norman pottery of eleventh to twelfth century date, and in some cases rubbish pits were also discovered. None of the excavations however revealed any traces of Saxo-Norman buildings. Freke (1976, 179) concluded that there was a fairly short-lived and shifting Saxo-Norman 'suburb' in north-east Lewes which was abandoned by the fourteenth century, the area reverting to open ground until the early nineteenth century.

d. *Later Medieval* (Fig. 3).

It is in the later medieval period, when documentary evidence is growing in bulk and detail, that co-operation between the documentary historian and the archaeologist is of crucial importance,

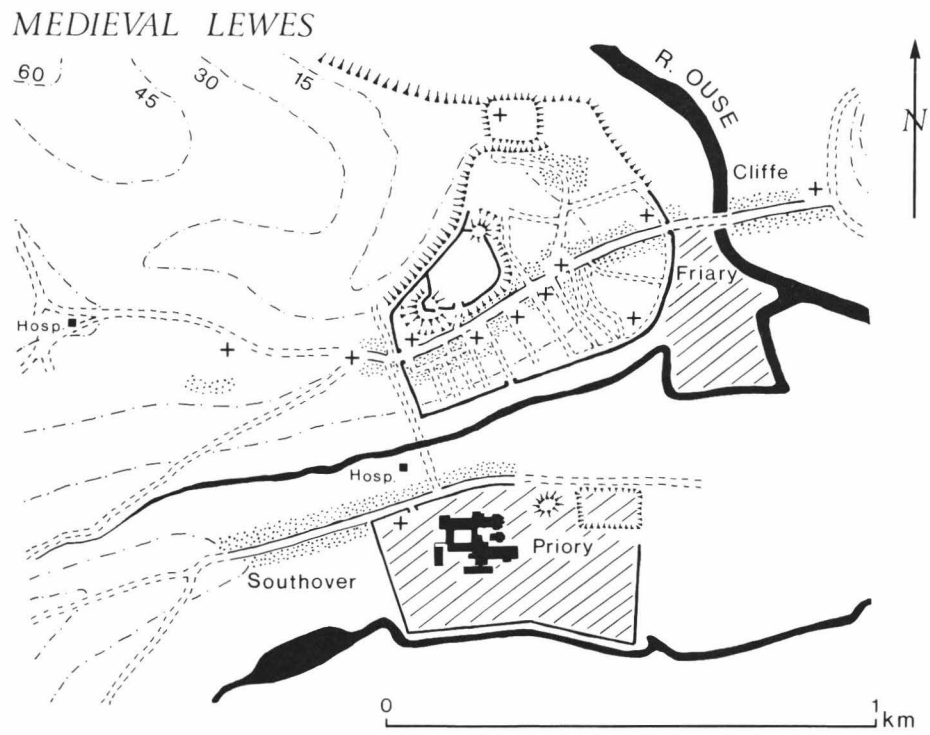


Fig. 3. Lewes. The Medieval Town.

the activities of each being complementary to those of the other, and excavations at Oxford, Cambridge, Norwich, Winchester and York, all county towns, have elucidated their early histories, particularly the street plans and local activities.

In Lewes, although the main High Street and some side streets are still marked by standing buildings, the plan of the rest of the town is unknown. The very existence of houses and streets in some areas is problematic. It is a truism that the pattern of archaeological evidence is more to do with recent human activity than with the real distribution of artefacts, and in Lewes the distribution of medieval finds coincides with the areas of redevelopment. The lack of evidence from large areas of the town does not necessarily denote the lack of habitation. The town was, reputedly, walled, levies being granted for the purpose of raising the money to 'repair' the walls (implying pre-existing defences) in 1266 for three years and again in 1334 for five years. The wall is still visible on the west, the only naturally undefended side, and its existence/position elsewhere in the town is conjectural or unknown. It must be remembered that the murage grants indicate only an intent, not a fact (Houghton 1975, 3), and that there is no contemporary documentary evidence to show that the town was ever walled on the north and east. The Randoll map of 1620 shows nothing of town defences other than the West Gate (demolished in the eighteenth century) and the castle curtain wall. The precise positions of the East Gate and the Water Gate (which probably gave access to Southover) are unknown. Despite this lack of knowledge various Ordnance Survey maps show the line of the town walls as definitive and the location of the East Gate by an antiquity mark. Thus one of the main aims of the 1974 excavations in Brook Street was to check in that area the supposed line of the town wall as shown by the Ordnance Survey. No trace of any wall or major ditch was

revealed, and its existence there now seems unlikely, although the possibility cannot be ruled out since the two excavated trenches were 13 m apart (Freke 1975, 73).

Other excavations in 1974 concentrated on the so called 'Fosse' along the north of Lancaster Street which is part of the anomalous rectangular enclosure mentioned above which is now occupied by the burial ground of Saint John-sub-Castro. The result of the investigations was very unexpected since the ditch *appears* to be of twelfth-century date and thus suggests a 'fortified position *within*—supposedly—a walled town with a strong castle' (Freke 1975, 74). Its date implies its use during the civil war between Stephen and Matilda.

The apparent absence of the town wall in Brook Street, the lack of urban structures from the excavations in much of this nothern part of Lewes, and the possibility that in the twelfth century the fortified area round Saint John-sub-Castro was *outside* the town, suggest that the northern boundary of medieval Lewes may lie south of Brook Street. This theory is possibly supported by the observation by Martin Bell in 1971 of a large medieval ditch just to the north of Wellington Street (Freke 1975, 76).

Twelve churches are known to have existed within the town proper, but the actual sites of some are imprecisely known, and the dates of their origins obscure.

An excavation in Edward Street in 1972 revealed a medieval furnace for smelting copper or bronze (Page 1973), and this, together with a possible metalworking site destroyed by the new Little Theatre building, may indicate that already in the thirteenth and fourteenth centuries the north-east part of the town was a light industrial area. Not enough evidence however has been found to justify more than this suggestion, especially as a furnace and slag have been discovered on the other side of the town in the south-west, outside the walls (unpublished finds, Barbican House).

In an attempt to investigate whether the limit of building in the medieval period was to the west of the present line of Eastgate Street and Friar's Walk (which may now lie east of its earlier line) excavations were undertaken in Friar's Walk in 1976. The investigations showed that the area was occupied in the medieval period, but as no medieval structures apart from a well could be certainly identified the problem of the eastern limit of medieval building could not be solved (Freke 1977, 183).

Another religious house, the Grey Friars, was established at Lewes in this period. For further information about this religious establishment see Part B.

An activity of medieval Lewes about which there is no archaeological evidence whatsoever is shipping. The Ouse was navigable up to Cliffe Bridge, and there should be medieval wharves and warehouses along the river bank, but none have so far been discovered.

e. *Post-Medieval*

The sixteenth century in Lewes as elswhere saw a great reduction in the power and property of the church. The priory was suppressed in 1538 and sold as building stone, and the Greyfriars' buildings were converted into stables and a house. Eleven churches in and around Lewes were contracted to the present four parish churches. Randoll's map of 1620, the earliest known, shows the basic spine of High Street and School Hill with ribs extending only a short way on either side, and Saint John-sub-Castro isolated in the fields to the north. It is possible however that Randoll's map does not show ephemeral or slum buildings.

The town seems to have grown quite slowly in this period, and from about 1700 onwards there are an increasing number of maps, more or less accurate, which can help in the reconstruction of the town plan, as well as a flood of well-written records from 1500 onwards. Many members of the Sussex Archaeological Society and the Sussex Record Society have made invaluable contributions to the

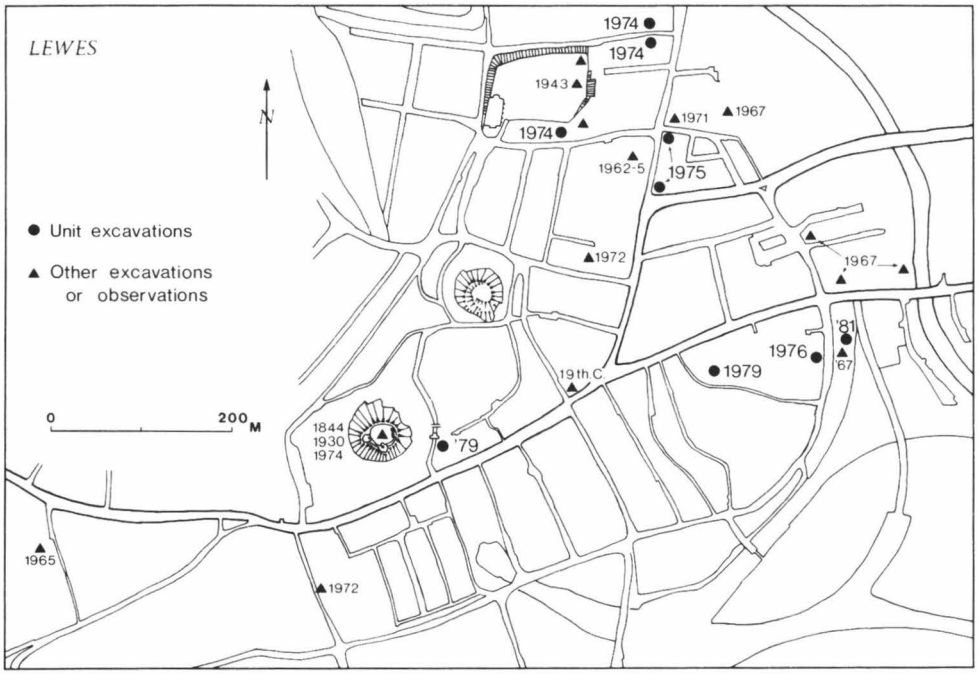


Fig. 4. Lewes. Map to show the locations of archaeological investigations in the town.

recording of the documentary history of Lewes, notably L. F. Salzman (1945) and Miss. V. Smith (1973 and 1975) in their Town Books of Lewes. This period however has only recently gained archaeological respectability, and the integration of written records with archaeological evidence is in an embryonic state. Traces of post-medieval Lewes and early industrial monuments are rapidly disappearing.

f. *Modern*

Significant expansion occurred in Lewes during the late eighteenth and early nineteenth century, when the north part of the town between the High Street and Saint John-sub-Castro started to be built up. Expansion continued following the coming of the railway in the mid-nineteenth century. This development has naturally been the occasion for several consequential discoveries, such as the two Saxon burial sites near Lewes. Most modern development in Lewes however took place before the need for *medieval* urban archaeology (as opposed to *Roman*) had been identified, so no strategy was evolved to deal specifically with urban rescue until the formation of the Lewes Archaeological Group in 1969.

g. *The Future*

With the exception of the proposed sale and redevelopment of the disused railway land in Lewes it now appears that large scale building and redevelopment in Lewes has, at least temporarily, stopped or considerably slowed down. As and when smaller scale developments occur it is to be hoped that watching briefs, and in some cases limited, planned excavations, will be undertaken by, hopefully, the Archaeological Adviser of East Sussex County Council and/or the

local archaeological group. It is felt that large scale, government funded excavations will only be appropriate and possible where:

a. large areas are being redeveloped slowly.
b. enough is known about the site for the excavator to be reasonable sure of answering specific research questions.
c. the sort of information expected will be of more than local interest.

Such a situation requiring large scale investigations may shortly arise with regard to the redevelopment of the disused railway land mentioned above. Here in addition to the Grey Friars complex, areas of possible medieval water frontage, industrial activity and undocumented suburban growth, may be threatened.

ACKNOWLEDGEMENTS

We should like to acknowledge our debt to individual members of the Lewes Archaeological Group, especially John Houghton and Jock Knight-Farr, for their help in the compilation of local information.

PART B: A GROUP OF REPORTS ON VARIOUS ASPECTS OF LEWES ARCHAEOLOGY

INTRODUCTION

Due to limitation of space it was impossible to publish all the excavation/watching brief plans and sections, and in some cases specialist reports have had to be shortened. The unpublished drawings and the full length specialist reports, together with field record sheets/notebooks, have been 'archived' and, along with all the finds, are available for study at Barbican House Museum, Lewes.

ACKNOWLEDGEMENTS

I should like to thank Fiona Marsden and the various specialists for their reports, and Lys Drewett who drew all the finds. All the plans and sections were prepared by the writer.

1. *Trial Excavations in Brooman's Lane, Lewes, 1979* by D. Rudling

INTRODUCTION

During November 1979 the Sussex Archaeological Field Unit undertook trial excavations in a garden in Brooman's Lane, Lewes, which was threatened by proposed development. The main objective of the investigations was to establish the existence of any Saxon occupation in the vicinity.

Brooman's Lane itself has 'one of the most ancient of Lewes street names', first appearing in 'the early fourteenth century' (Davey 1970, 16). About 1600 the present lane was 'described as "Broomemanstreet, lying on the west side of the almshouses on Schoole Hill and bending down towards the friars wall". Over the centuries the name has contracted to "Brooman's".'

THE EXCAVATIONS

Problems of access to the site meant that it was impossible to use machinery to strip a larger area, and three trial trenches (Fig's 5 and 6) were therefore excavated by hand.

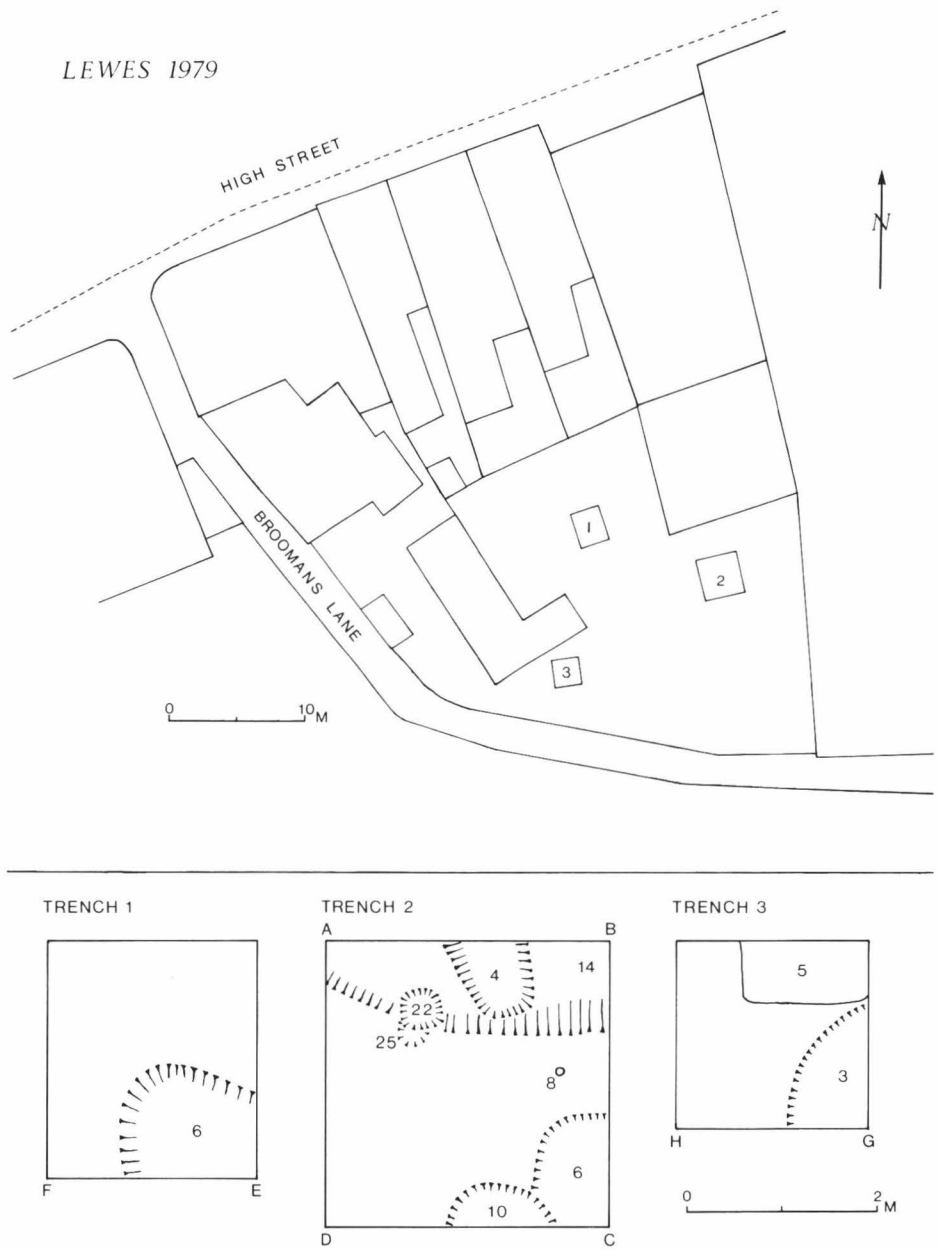


Fig. 5. Lewes. Brooman's Lane, 1979. Site and trench plans.

Trench 1

A seventeenth century cess-pit *6* (containing layers: 7, 8, 9 and 10) was found cut into the chalk. The chalk itself exhibited several periglacial stripes running approximately north west–south east. Other periglacial features were found in North Street, Lewes, and these have been described in detail by Martin Bell (Freke 1976, 187–9).

Trench 2

Over a metre of build up/garden soil had to be removed before deposits of archaeological interest were reached. Layer 3 appeared to be fairly free of recent intrusive material and yielded finds of the medieval and early post-medieval periods. Below this layer were discovered several pits and post holes.

Pit 4 (5)

A small ?early seventeenth-century pit. Cuts medieval pit *14*.

Pits 6 (7, 9 and 16), *10* (11, 18, 19 and 20) and *14* (15 and 26)

These three pits were found cut into the ?natural Coombe deposits (a mixture of chalk and clay). Pit 10 also partially cut into pit 6. The tops of the pits may have some intrusive material in them, and the top of pit 14 was cut by pit 4. For safety reasons pits 6 and 14 were not bottomed, but probing indicated that there was likely to be at least another metre of deposits in each. The finds from these features suggest that their final function was as cess or rubbish pits. The pits yielded fairly similar groups of flint tempered 'Saxo-Norman' pottery, which is broadly dated to the eleventh and twelfth centuries.

Post holes *22* (23) and *25* (30)

Post hole 25 is on the edge of pit 14 and either cuts the pit or is cut by it. If the former (which seemed the most likely), the post was possibly associated with the pit, perhaps as a marker. Post hole 22 cut post hole 25 and may have replaced it. Both of the post holes yielded flint tempered pottery.

Post hole *8* (17)

The base of a small ?seventeenth-century post/stake hole was found cut into the ?natural.

Trench 3

Pit 3 (4 and 7)

A pit of unknown function or date, with a lower fill consisting mainly of chalk, and an upper fill containing a variety of finds of different periods (twelfth century to post-medieval). The upper fill is probably a deliberate infilling rather than a gradual accumulation over time.

Pit 5

Modern.

CONCLUSIONS

Although the excavations did not uncover anything which is positively Saxon, they did reveal pits containing pottery of 'Saxo-Norman' type. It must be remembered however that most, or even all, of the pottery of this type from Brooman's Lane may well be twelfth, possibly even early thirteenth century. No traces of any buildings were discovered, and the pits possibly belong to tenements which fronted School Hill (or perhaps even Brooman's Lane itself?). The analysis (see below) of the plant remains from these rubbish pits is the first of its kind to be obtained from Lewes.

The post-medieval pits are presumably located in the gardens of houses fronting School Hill.

THE FINDS

Flint Artifacts by P. L. Drewett

Six prehistoric flints were found in different contexts. These consist of: four retouched flakes (one is possibly a rough

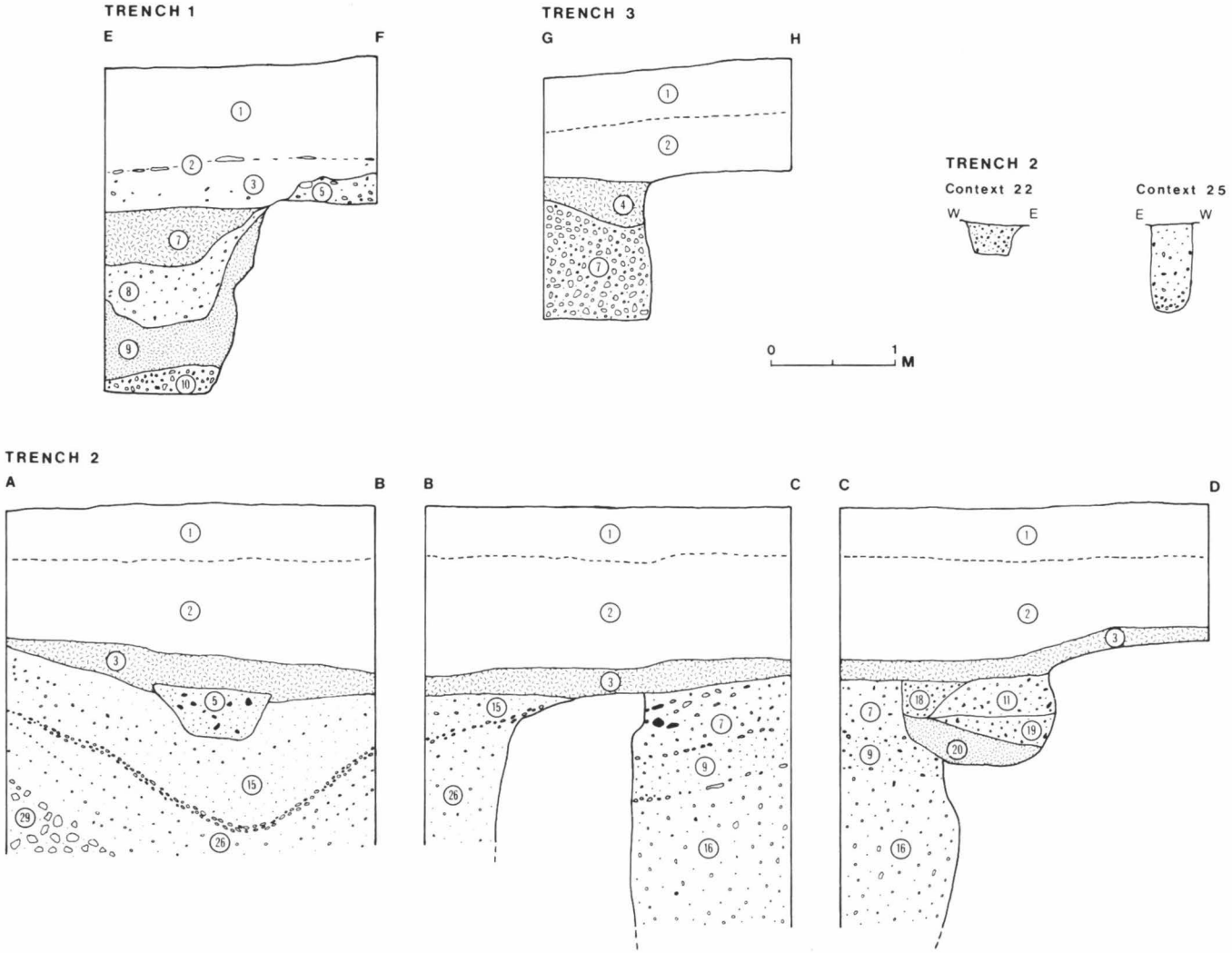


Fig. 6. Lewes. Brooman's Lane, 1979. Sections.

scraper), one waste flake and one fire-cracked flint. None are particularly diagnostic, but are probably Neolithic/Early Bronze age. None are illustrated.

Pottery by D. Rudling (Fig. 7 and 8)

The writer would like to acknowledge the help and advice of John Cherry, James Hadfield, Clive Orton and Anthony Streeten; any errors remain the reponsibility of the writer.

Since none of the pits (medieval or post-medieval) were fully excavated there were no intact assemblages of pottery. Thus, for the purposes of this report, it was decided to describe/illustrate just a selection of the pottery found.

Trench 2

Pit 6 (7 and 16): Eleventh–twelfth century.

1 Not illustrated. Residual: Roman. Body sherd; light grey fine sandy fabric, with smooth darker external surface. Layer 7.
2 Rim; grey, medium flint tempering. Layer 7.
3 Frilled rim; buff-grey surfaces, grey core, medium flint tempering. Layer 16.
4 Frilled rim; buff surfaces, grey core, medium flint tempering. Layer 16.
5 Rim; grey outer surface, grey-buff inner surface, grey core, medium flint tempering. Layer 16.
6 Rim; buff surfaces, grey core, medium flint tempering. Layer 16.
7 Sagging base; grey, medium flint tempering. Layer 16.

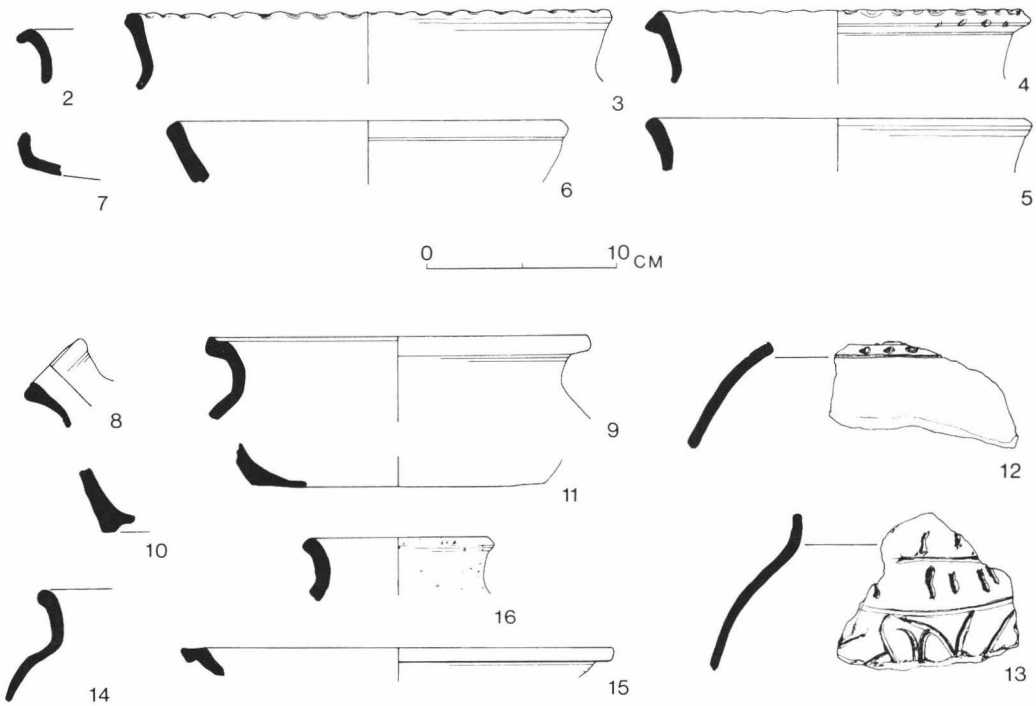


Fig. 7. Lewes. Brooman's Lane, 1979. Pottery (x 1/4).

Pit 14 (15 and 26): Eleventh–twelfth century.

8 Pitcher spout; partial thick yellow-green glaze, orange surfaces, fine white core, occasional medium-large quartz inclusions. Fired very hard. Probably from Normandy. Late eleventh or twelfth century. Layer 15.
9 Rim; grey-buff surfaces, grey core, medium flint tempering. Layer 15.
10 Sagging base with 'foot ring' to balance it; buff-grey external surface, grey internal surface, grey core, medium-coarse flint tempering. Layer 15.
11 Base; grey, medium flint tempering. Layer 15.
12 Body sherd; orange-buff surfaces, grey core, medium to small flint and shell tempering. Incised and indented decoration. Layer 15.
13 Body sherd; orange-buff external surface, buff internal surface, grey core, medium flint tempering. Incised decoration. Layer 15.
14 Rim; orange-grey outer surface, orange inner surface, grey core, medium flint tempering. Layer 26.
15 Rim; orange outer surface, buff-grey inner surface, grey core, medium flint tempering. Layer 26.

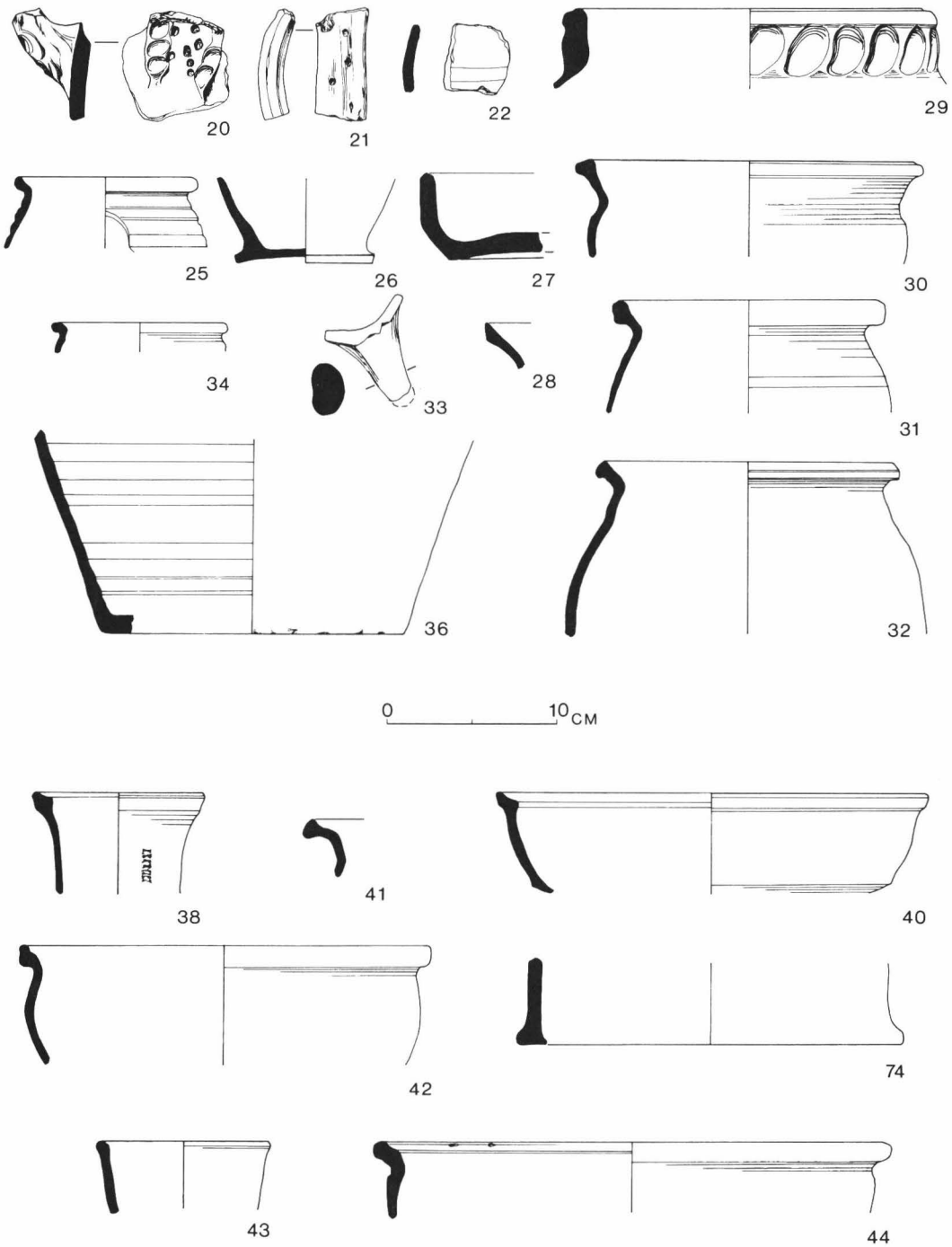


Fig. 8. Lewes. Brooman's Lane, 1979. Pottery (x 1/4).

Pit 10 (19): Eleventh–twelfth century.
16 Rim; buff-grey surfaces, grey core, medium flint tempering.

Pit 4 (5): ?Seventeenth century.
17 Not illustrated. Very small body sherd; 'cut-glass' decorated grey stoneware with light brown external surface. Raeren or Cologne. Sixteenth or seventeenth century.

Post hole 8 (17): ?Seventeenth century.
18 Not illustrated. Body sherd from a platter; Surrey yellow glazed white ware.

Layer 1
19 Tankard; brown glazed Fulham stoneware. Exhibits an impressed excise 'AR' and crown mark. Such marks almost certainly date to the early years of Queen Anne's reign (Bimson 1970, 166).

Trench 1
Pit 6 (7 and 8): Seventeenth century.
20 Residual. Thumbed and stabbed strap handle; buff-grey surfaces, grey core, sand with some flint tempering. ?Ringmer. Thirteenth century. Layer 7.
21 Residual. Stabbed handle; orange-buff surface, grey core, sand tempered. Layer 7.
22 Residual. Body sherd; trailed yellow slip below external green-brown glaze, buff surfaces, grey core, sand tempered. ?Thirteenth century. Layer 7.
23 Body sherd from a large jug; grey stoneware, incised and stamped decoration with cobalt blue slip infilling. Late Raeren or early Westerwald. Early seventeenth century. Layer 7.
24 Not illustrated. Various body sherds of Frechen stoneware. Late seventeenth century. Layer 7.
25 Pipkin; Surrey white ware with external yellow glaze and light green glaze on the rim and internal surface. Early to mid seventeenth century. Layer 7.
26 Base; Surrey white ware with internal yellow glaze. Layer 7.
27 Dripping pan; ?Surrey white ware with internal yellow glaze. Angular and slab built. Layer 8.
28 Rim; grey surfaces and orange-red core, slightly sandy. Layer 7.
29 Rim with applied thumbed strip; orange-buff ware, grey core and patchy internal amber-green glaze. Layer 7.
30 Rim; orange-red ware, grey-buff slip on outer surface, internal amber-green glaze. Layer 7.
31 Rim; orange-red ware, grey-brown slipped surfaces, green-brown glaze on inside of rim. Layer 8.
32 Rim; orange-red ware, grey slipped surfaces. Layer 8.
33 Pipkin foot; orange-red ware, grey-buff slipped outer surface, internal amber-green glaze. Layer 8.
34 Rim; orange-red ware, orange-brown glaze on the rim and inner surface. Layer 7.
35 Not illustrated. small base sherd from either a colander or a chafing dish; orange-red ware, internal orange glaze. Layer 7.
36 Two joining base sherds; orange-red ware, internal orange glaze. Layers 7 and 8.

Layer 5
37 Not illustrated. Body sherd; fine off-white/buff fabric, grey core and buff slipped outer surface on which has been painted a white line. Fifteenth–sixteenth century.

Trench 3.
Pit 3 (4): Post-medieval.
38 Jug neck with impressed, applied vertical stripes; fine cream-buff fabric external vertical bands of alternating brown and amber glaze, and white slip on top of the rim and extending for some distance down the inside of the vessel. Possibly from North France or Andenne. ?Twelfth century.
39 Not illustrated. Several body sherds from different jugs with external green glaze. Thirteenth–fourteenth century.
40 Bowl or skillet with sagging base; buff surfaces, reduced core, sand with some flint tempering. Fire blackened exterior.
41 Rim; orange buff surfaces, grey core, sand tempered.
42 Bowl; buff, sand tempered earthenware with internal yellow glaze. Sixteenth century.

Layers 1 and 2
43 Jug neck; off-white, fairly fine fabric, external mottled green glaze and internal white slip. Thirteenth–fourteenth century. Layer 1.
44 Rim; grey, sand tempered ware, with stabbing on the top of the rim. Medieval. Layer 2.

Clay Tobacco Pipes by R. Stapely
45 Small bowl and stem, rosette mark on heel, possbly London maker about 1620. Trench 1, Layer 7.
46 Bowl with long stem, coat of arms on bowl, possbly the Brighton Crest. John Drape of Brighton is known to have had a design showing the Crest (Atkinson undated, 7). He was 48 in 1841 and worked at Chalk Farm, Sussex Place and 17 Market Street (Atkinson undated, 11). Trench 1, Layer 3.
47 Not illustrated. Part bowl and stem initialed 'IT', possibly John Tucknott who worked in the Lewes High Street between 1851 and 1867 (Atkinson undated, 16). Trench 2, Layer 1.

The Glass by J. Shepherd
a Vessel Glass (not illustrated).
48 Fragment from the lower part of a urinal or bulbous flask. Blown; glass thickens towards the base of the vessel. Dull greenish-colourless glass with grey-brown patination. *c.* Thirteenth–sixteenth century. Trench 2, Layer 15.

49 Fragment from the neck of a flask or bottle. Blown; greenish-blue glass with numerous air-bubbles. Post-medieval. Trench 3, Layer 4.

b Window-Glass (only no. 50 is illustrated).
50 ?Intrusive. Small triangular quarry of window-glass. Blown (cylinder process); deep blue glass with dark grey-brown patination. Thickness about 3 mm. Probably late medieval. Trench 2, Layer 15.
51 Small fragment of window-glass. Blown (cylinder process); dull greenish-yellow glass with dark grey patination. Thickness 1.8 mm. Sixteenth–seventeenth century. Trench 2, Layer 5.
52 Small fragment of window-glass. Blown (cylinder process); colour indeterminable. Dark grey patination. Thickness 1.8 mm. Sixteenth–seventeenth century. Trench 1, Layer 7.
53 Numerous splinters and a fragment of window-glass. Blown (cylinder process); dull greenish-yellow glass with dark grey patination. Thickness 1.2 mm. Sixteenth–seventeenth century. Trench 1, Layer 9.

A Coin and a Jetton by D. Rudling
54 Brass jetton; diameter 22 mm. This has been pierced twice in the centre. Obverse: HANNS. KRAVWINKEL. IN. NVR., triquetra of *lis* with crowns in the interstices.
Reverse: GOTTES. GABEN. SOL. MAN. LOB., cross-topped orb within trilobe. This type, which is recorded by Barnard (1916, 222, no. 86), was made by Hans Krauwinkel who was operating in Nuremberg during the period *c.* 1580-1610. Trench 2, Layer 5.
55 George III copper halfpenny. Fourth Issue, 1806 or 1807 (date illegible). Trench 2, unstratified.

Iron Objects by I. Goodall
56 U-shaped staple. Trench 2, Layer 7.
57 Incomplete strap. Trench 2, Layer 7.
58 Not illustrated. ?Heckle teeth. Lengths 88 mm and 67 mm, latter broken. Trench 2, Layer 7.
59. Not illustrated. Nails with flat square heads and broken shanks, length 32-62 mm. Three each from Trench 1, Layer 10 and Trench 2, Layer 5.

Non-Ferrous Objects by A. Goodall
60 Not illustrated. Lace-ends, copper alloy. One each from Trench 1, Layer 7 and Trench 2, Layer 5.
61 Not illustrated. Pins. Where present the heads are of coiled wire stamped to a globular shape. Three retain white metal plating. Lengths between 24 and 31 mm. Seven from Trench 1, Layer 7, three from Layer 8, one from Layer 9, and seven from Trench 2, Layer 5.
62 Not illustrated. Length of fine rectangular sectioned copper alloy rod. Trench 1, Layer 7.
63 Not illustrated. Small off-cut of copper alloy sheet. Trench 1, Layer 7.
64 Copper alloy disc with pitted surface; probably the top of a thimble. Trench 2, Layer 5.
65 Not illustrated. Length of twisted copper alloy wire. Trench 2, Layer 5.
66 Lead weight. Trench 3, Layer 1.
67 Pewter spoon, possibly plated, with leaf-shaped bowl and small rat's tail on back. Trench 1, Layer 3.

Bone Object by D. Rudling
68 Cylinder of bone, fragment. Hollow except for the base, and internally threaded at the open end. A design (?a lion's head) has been cut into the base, which could have been used as a stamp for producing the design in relief. It has been suggested that this object probably dates to the late eighteenth or nineteenth century; if so it must have been intrusive in Trench 1, Layer 7.

The Textile Remains by J. Dawson
69 Not illustrated. Several very small fragments of textile; unfortunately it was not possible to identify the fibre itself since this was very far gone and well integrated with mud and corrosion products.
Weave: plain, i.e. 1/1
Spin: Z, however this is the spin of the *thread* which is made up of several fibres. Apparently the fibres are generally of opposite spin to the thread which they make up (Edwards 1974, 20).
Colour: Stained to a uniform light grey/brown by the soil, but I would assume that, as they are so pale, the cloth must have been a light colour originally. Trench 1, Layer 7.

Stone Artefacts by C. Cartwright and M. Roberts
Note: none of these artifacts are illustrated.

Trench 1.
70 Niedermendig/Mayen lava fragment from a quern-stone (approximate diameter estimated at 280 mm). Layer 7.
71 Fine-grained Wealden siltstone ?whetstone fragment, Layer 7.

Trench 2
71 Coarse glauconitic sandstone ?quern fragments, possibly fire damaged. Layer 2.
72 Niedermendig/Mayen lava quern fragments. Layers 6 and 16.
73 Glauconitic 'ragstone' fragments from a quernstone (approximate diameter of 450 mm). Layer 26.

During the occupation of this site the main geological resources exploited seem to be those of the Lower Greensand,

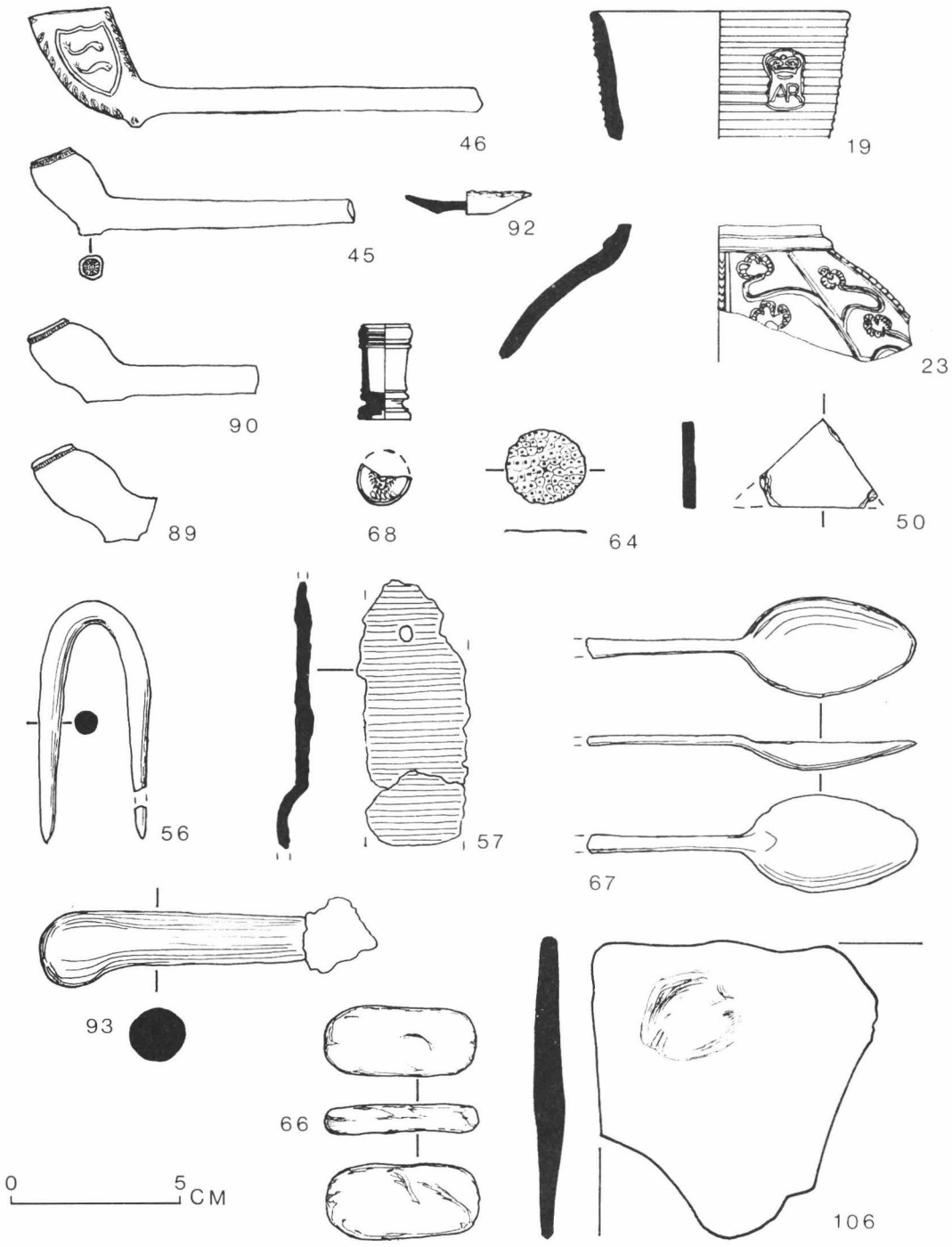


Fig. 9. Lewes. Various sites. Miscellaneous finds (all x 1/2, except 64 which is 1:1).

and the Weald Clay, mainly to the north of Lewes. The glauconitic sandstone quern fragments derive largely from the Hythe Beds in the Lower Greensand series. The fine-grained Wealden siltstone specimens derive from the Weald Clay in the Wealden series. A small abraded Eocene sandstone fragment (Trench 2, Layer 15) probably derives from Coombe Deposits to the south west of Lewes. Limited archaeological information as to use/function can be gleaned from this, or uncatalogued Wealden siltstone fragments (from Trench 2, Layers 5, 9 and 15), due to their undefined and abraded nature (possibly whetstones or building material). The Niedermendig/Mayen lava quernstone fragments however are well documented Continental imports, the texture of the lava being particularly suitable for grinding and rubbing processes.

Building Materials by D. Rudling

a. Chimney Pots.

74 Base; buff ware with sand and flint tempering. Trench 3, Layer 4. Other smaller fragments of flint tempered chimney pots were recovered from Trench 2, Layers 15 and 26.

b. Burnt Clay/?Daub.

Small fragments were found in Trench 1, Layer 7 and Trench 2, Layers 15, 16 and 26.

c. Roofing Slate.

Pieces of West Country roofing slate were found in two of the pits: Trench 1, Pit 6 and Trench 3, Pit 3. One piece (from Trench 3, Layer 4) had been splay cut for a Hip or Valley.

d. Post-medieval Brick and Tile.

The 17th century pits in Trenches 1 and 2 both yielded fragments of brick and thin roofing tiles (some showing square peg holes). Trench 3, Pit 3 also produced similar roofing tiles.

The Bones by O. Bedwin

A total of 320 fragments of bone and teeth were identified (the complete record is archived). Approximately two-thirds came from medieval deposits, and much of the bone was in fragmentary condition. Taking all the medieval contexts together, the species represented (as a percentage) were as follows;

Bos	*Ovis/Capra*	*Sus*	*Gallus*	*Fish species*
39.2	25.3	23.0	6.0	6.5

Among the three main food species, all parts of the skeleton were represented. The fish species identified (almost all as vertebrae) were; cod (*G. morhua*), mackerel (*S. scomber*), plaice (*P. platessa*), conger eel (*C. conger*) and thornback ray (*R. clavata*). Cod and mackerel were the commonest fish species.

Both the overall percentage of the main food species and the range of fish bones (the thornback ray apart) are remarkably similar to those from medieval contexts in North Street, Lewes (Freke 1976, 189-90). This would suggest similar diets in both areas of the town at this time.

In the post-medieval contexts, four additional species were represented, each by only one or two fragments. These were *Canis, Felis, Equus* and *M. aeglefinus* (haddock).

Oyster shells were found in all the medieval and post-medieval pits, and mussel shells were present in Trench 2, Pit 6 and a single whelk came from Trench 3, Pit 3.

The Plant Remains by D. Garton

Soil samples were taken from five pits and one post hole and processed by the excavator. The flot was collected in a sieve with a mesh of 0.5 mm.

The seeds were recovered either as charred or mineralized specimens; the few non-mineralized seed testa were discarded as modern contaminants. The charred seeds were both distorted and fragmented, and the mineralized seeds had lost their outer seed coats thus making identification difficult.

This analysis deals only with an assemblage of seeds from the pits from a limited area of excavation. Thus at most, the likely sources of these seeds can be indicated; the wider question of economy can only be tackled when more evidence is available from excavations. The context (pits), from which this assemblage was derived limits the possibilities of interpretation as these are products which have been discarded, or which have fallen in accidently, and therefore may not even be typical of immediate domestic use (Dennell 1976, 232). Only two of the pits (Trench 1/6 and Trench 2/14) produced a reasonable assemblage of botanical remains; these will be discussed in detail, as will the only pit to produce waterlogged remains (Trench 2/6).

From pit 1/6 one breadwheat grain (*Triticum aestivum* L.), and many fragments of highly distorted charred grains which cannot be identified were recovered. The only other charred material is a bud, however, as the leaf scales have been eroded, no further identification is possible. The other seeds from this pit are all mineralized. These most commonly occur where faecal material has been deposited (Green 1979a, 283), and their presence suggests that this pit's final function was that of a cess pit. Three of the species from this pit may be used as food plants, blackberry or raspberry (*Rubus* sp.), elder (*Sambucus* sp.), and cabbage type (*Brassica/Sinapsis* sp.); but all the species represented are plants from habitats of disturbed and open ground, and may have been growing in the vicinity of the pit, and therefore represent local surroundings, not actual diet.

The cereals from pit 2/6 were charred hulled six row barley (*Hordeum vulgare* L.), with one grain of breadwheat (*Triticum aestivum* L.). Other items preserved due to waterlogging were part of a holly leaf (*Ilex aquafolium* L.), and a unidentifiable moss stem.

Only charred remains were found in pit 2/14. The predominant cereal type was hulled six row barley (*Hordeum vulgare* L.), with oats (*Avena* sp.), some bread wheat (*Triticum aestivum* L.), and rye (*Secale cereale* L.). The cereals are threshed,

there were no glumes or spikelets recovered and therefore probably represent cleaned grains for domestic use (Dennell 1976, 241). The barley had not sprouted, and is likely to have been used as a food resource, or fodder, not for malting (Helbaek 1952, 214). Weedy species are represented by one grain of darnel (*Lolium temulentum* L.), although it should be noted that the rye may also represent a component of the weed flora (Dennell 1977, 366). One fragment of hazel nut shell (*Corylus avellana* L.), was also recovered.

Post hole 2/25 is on the edge of pit 2/14 and the seed assemblage is very similar, except that the minor components, breadwheat (*Triticum aestivum* L.), and rye (*Secale cereale* L.), are not present.

Pit 2/10 yielded a few charred seeds of oats (*Avena* sp.), and rye (*Secale cereale* L.).

The type of plant remains from this site are typical of those recovered from southern English medieval and post-medieval sites in the combination of carbonized, mineralized and waterlogged specimens found. At Brooman's Lane the most numerous cereal recovered was barley (*Hordeum vulgare* L.), followed by oats (*Avena* sp.), with some wheat (*Triticum aestivum* L.) and rye (*Secale cereale* L.). This is in contrast to the site at Tanyard Lane, Steyning where wheat was the commonest cereal, with some barley. No other cereals were identified (Hinton 1979). This difference may relate to site function, the sample size, or the accidental nature of preservation (Renfrew 1973, 21). Green (1979b 80) has noted that wheat and barley are probably equally important on medieval Winchester sites. The oats in the Brooman's Lane samples may indicate the use of fodder crops, or denote local production. Green (1979b, 146, 175) states that oats are associated with inns in the Winchester documentary record, and that they are more often encountered on rural rather than urban sites. Elder seeds (*Sambucus* sp.), and hazel nuts (*Corylus avellana* L.), are reported as 'ubiquitous' on medieval sites in Hampshire (Green 1979b, 85); none were present from Brooman's Lane, and Tanyard Lane, Steyning.

The Charcoal Samples by C. Cartwright

a. Seventeenth century contexts:
Quercus sp., *Crataegus* sp., *Fagus* sp., *Betula* sp., *Fraxinus* sp., *Corylus* sp.

b Medieval contexts:
Those listed above plus *Castenea sativa, Pyrus/malus* sp., *Taxus baccata.*

Although one always has to bear in mind the problems of the agencies whereby all categories of environmental material may arrive in archaeological contexts on *urban* sites, in the case of the charcoal fragments from Brooman's Lane, certain broad suggestions may be made here on the assumption that the deposits have not been grossly disturbed.

The charcoal from the seventeenth century contexts indicates typical components of the vegetation of chalk downland environments (i.e. oak, hawthorn, beech, birch, ash, hazel). The fragments could therefore derive from the vegetation of the nearby downs, brought in for specific purposes such as fuel, building, tools, utensils, furniture, etc. Alternatively they may derive more locally from domestic gardens and/or common land in the vicinity of the town.

Similarly, much of the charcoal from the medieval contexts may also derive from the downland environment, but in this case it would seem more likely that a number of the trees represented i.e. sweet chestnut, pear/apple, yew, would have been growing in the back gardens of medieval tenements in this area (or possibly in local churchyards).

Brief descriptions of layers

Trench 1.
Layer 1: garden soil.
Layer 2: orange clay.
Layer 3: grey-brown loam.
Layer 5: brown clay with chalk.
Layer 7: brown silty soil.
Layer 8: Sandy silt with chalk and flints.
Layer 9: Very sandy light soil.
Layer 10: Chalk and silt.

Trench 2.
Layer 1: garden soil.
Layer 2: grey-brown earth.
Layer 3: grey-brown clayey earth with chalk and flints.
Layer 5: charcoal and clayey earth.
Layer 7: grey-brown clayey earth with chalk and flints
Layer 9: clayey earth with chalk.
Layer 11: clayey earth with chalk and flints.
Layer 15: clayey earth with chalk and flints.
Layer 16: clayey earth with chalk.
Layer 17: silty clay.
Layer 18: clayey earth with chalk.
Layer 19: clayey earth with chalk and flints.
Layer 20: brown clay with chalk.
Layer 23: silty clay with chalk.
Layer 26: clayey earth with chalk.
Layer 29: chalk rubble.
Layer 30: clayey earth with chalk.

Trench 3.
Layer 1: garden soil.

Layer 2: grey-brown loam.
Layer 4: brown clayey earth with chalk.
Layer 7: chalk with light soil.

ACKNOWLEDGEMENTS

I should like to thank the directors of Penard Associates (Developments) Limited for their permission to undertake the excavation; and James Hadfield, Mark Renkin, Mark Roberts and Arthur Sayers for their help on site. Thanks are also due to Ted O'Shea of the Lewes Archaeological Group and Fiona Marsden of Barbican House Museum.

2. *Lewes Castle Floodlighting, 1974* by F. Marsden

During June, 1974 a series of connecting cable trenches approximately 9 in (23 cm) wide were dug from the Barbican, across the 'Gun Garden', up the east slope of the Castle mound, round the exterior of the Keep and across the centre of the Keep enclosure.

No structural features were uncovered in the 'Gun Garden' where the trench was dug to a depth of 18 in (46 cm). It contained a certain amount of building debris, 18th and 19 century pottery and marbles, presumably relating to the schools and warehouse cleared from the site in the mid-19th century (Salzman 1946, 27).

On the slope of the mound the trench, at a depth of 6 in (15 cm) consistently revealed the chalk structure of the mound immediately below the vegetation layer/topsoil. At the summit the trench running round the outside of the Keep, also at a depth of 6 in (15 cm), did not reach below the topsoil. There were no finds. Within the Keep the trench was dug to a depth of 18 in (46 cm), and at one point, marked 'A' on the plan (Fig. 10), uncovered the remains of two structures (see sections — Fig. 10). An upper wall (2), in places just emerging above the surface and of which three to four courses of flint work remain, ran diagonally across the trench on a direct alignment with the angle on the inner face of the Keep wall. This wall and its return to rejoin the Keep wall is customarily included on detailed Castle plans (Godfrey 1972). The wall base rested partly on a layer of orange gravel (3) containing quite heavy deposits of charcoal and which continued as an increasingly thick stratum at the base of the trench branching off to the north. Immediately below the flint wall, but partly covered in places by a thin spread of gravel, was the structure (4) of small irregularly shaped chalk blocks set in thick mortar. This would appear to have been partly cut into during the construction of the upper wall. On the east side of the two structures was a concentrated deposit of kitchen refuse — animal bones, oyster shells and broken pottery — resting directly on a layer of broken roof tiles that lines the base of the trench (5). The pottery was largely body sherds of a hard grey ware containing fine flint grits, and generally with one red surface, either exterior or interior. The one rim sherd has a sharply everted rim with a hollow bevel on the interior surface. The date is probably *c.* thirteenth century.

3. *An Exploratory Excavation at Barbican House, 1979* by D. Rudling

Prior to the enlargement during 1980 of the Sussex Archaeological Society's premises at Barbican House by building on the back yard, a small trial excavation was undertaken to ascertain the extent of archaeological distrubance likely to result from the development.

The site is situated (Fig. 10) only a few metres to the south of Lewes Castle's fine Barbican or outer gatehouse, which was erected in the first half of the fourteenth century (Godfrey 1972). Barbican House as it survives today is a sixteenth-century timber-framed building which was enlarged and re-fronted in brick in the eighteenth century. Its basement however probably retains part of the masonry of a medieval house on the site (Godfrey 1942, 6).

The yard in 1979 was paved with brick, and below this, in addition to exposing two relatively

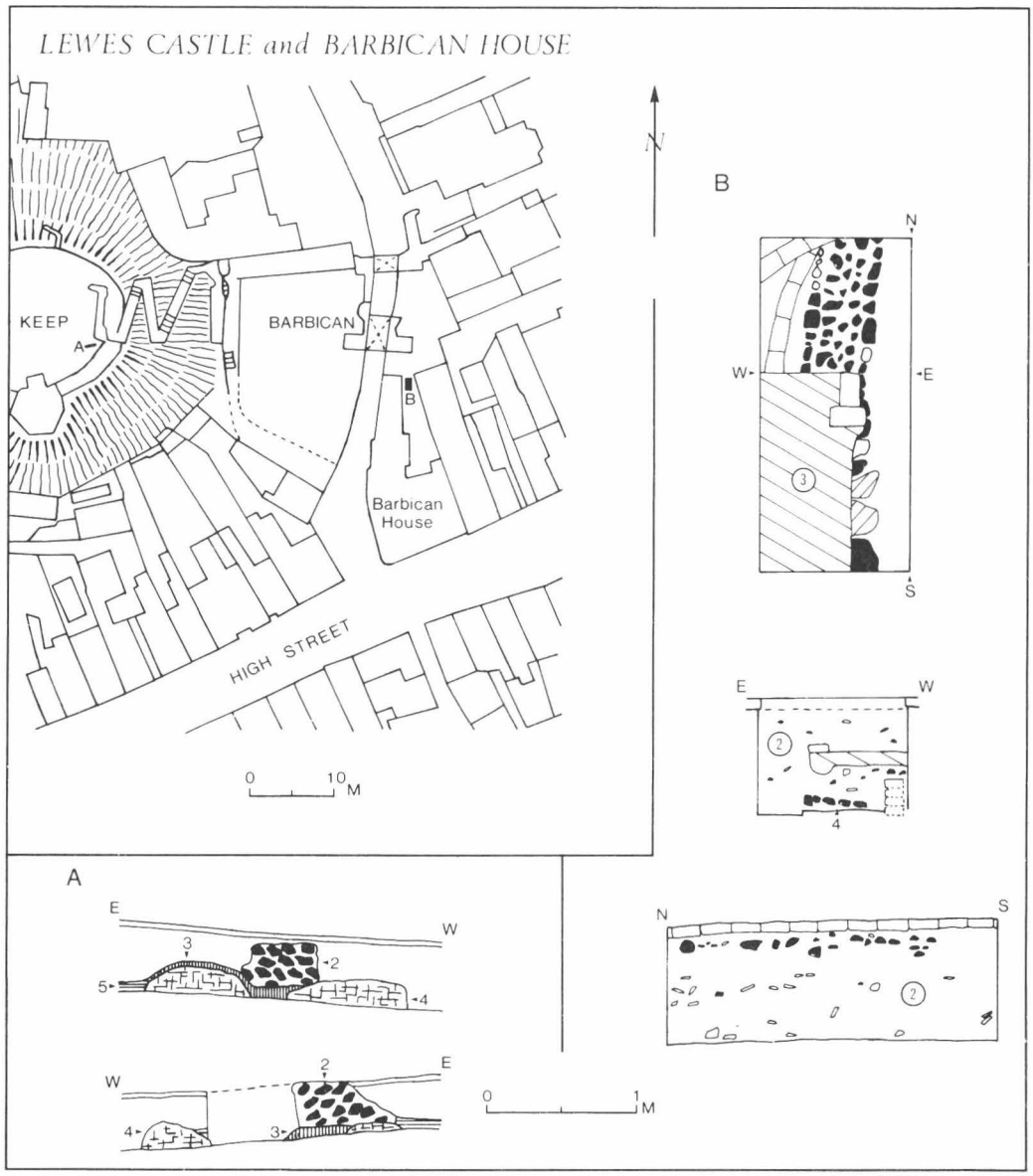


Fig. 10. Lewes. The Castle and Barbican House. Location map, sections and Barbican House trench plan.

modern drains, the excavations revealed the foundations of a brick building (3), under which were the foundations of an unmortared wall (4), approximately 40–50 cm wide, oriented north-south and composed largely of flints, with just a few pieces of chalk and two of sandstone. No archaeological material was found directly associated with either of these wall foundations and their dating is uncertain, although the brick example built on a mortar raft is likely to be eighteenth century or later, while the flint footings (for a timber-framed building) could possibly be as early as

the seventeenth century or earlier. Both walls were left intact since the building work was unlikely to damage them.

THE FINDS

POTTERY by D. Rudling (Fig. 11)

No 'sealed' groups were found below the brick paving and the following is therefore a selection of types to give an indication of the date range encountered.

75 Not illustrated. Small body sherd; buff surfaces, grey core, sand and a little flint tempering. ?Ringmer. Thirteenth/fourteenth century.
76 Ointment jar; Surrey white ware with yellow glaze. Sixteenth/seventeenth century.
77 Pipkin; Surry white ware with internal yellow glaze and traces of green glaze on the underside of the base. Sixteenth/seventeenth century.
78 Drinking mug; fine off-white fabric, brown glaze, combed decoration. ?Cove Ware (Hamphsire). Early seventeenth century.
79 Drug jar; white tin-glazed earthenware, decorated with blue paint. Mid–seventeenth century.
80 Base; white tin-glazed earthenware. The exterior is speckled purple.
81 Base; white tin-glazed earthenware with crazed internal, yellow glaze.
83 Dripping pan/baking dish; orange-red outer surface, grey core and inner surface, internal green glaze.

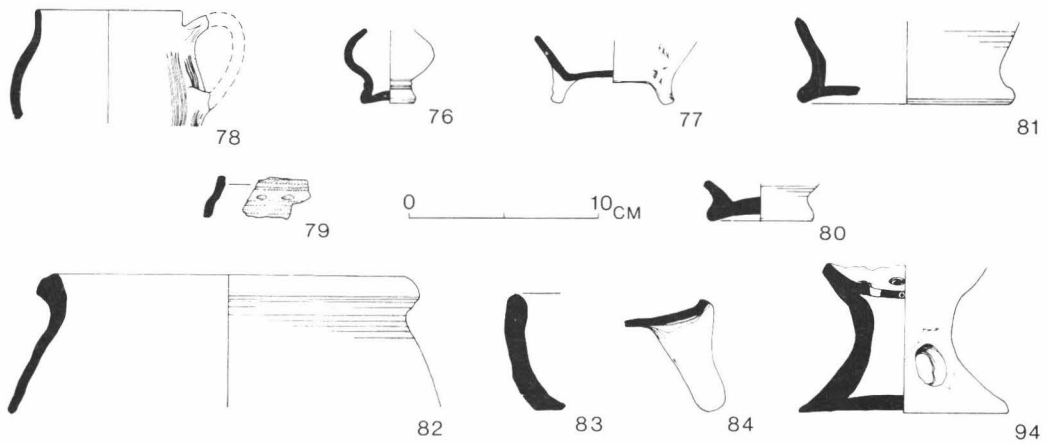


Fig. 11. Lewes. Barbican House, 1979. Pottery (x 1/4).

84 Pipkin; orange-red ware with internal mottled light brown glaze.
85 Not illustrated. Base; Westerwald stoneware with blue painted decoration. Seventeenth century.
86 Not illustrated. Body sherd; Frechen stoneware. Late seventeenth century.
87 Not illustrated. Body sherd; London stoneware. Early eighteenth century.
88 Not illustrated. Various sherds of porcelain with transfer designs. Late eighteenth/nineteenth century.

Clay Tobacco Pipes by R. Stapely

89 Small bowl, rouletted rim, *c.* 1600–40.
90 Small bowl with part stem, rouletted rim, *c.* 1640–60.
91 Not illustrated. Part stem and heel, part relief mark on heel, possibly London maker. *c.* seventeenth century.

Glass by J. Shepherd

92 Fragment from the base of a urinal or bulbous flask. Blown; glass thickened at base, pontil mark visible. Dull greenish-yellow glass. *c.* thirteenth century.

Bone object by D. Rudling

93 Handle of polished bone. Heavy corrosion around blade-end.

Finds made during the building work

94 Chafing dish; orange-red fabric, grey core and internal green glaze. There are two holes in the sides of the pedestal foot, and the bowl is pierced at the bottom by six, possibly seven holes. Sixteenth/seventeenth century.

The museum curator was also shown a brass Nuremberg jetton of the sixteenth/early seventeenth century, but this was unfortunately subsequently 'mis-placed' by the workmen.

4. *A Trial Excavation on the site of the Grey Friars, Lewes, 1981* by D. Rudling

INTRODUCTION

Recent proposals to re-develop the derelict railway land in Lewes have meant that the site of a convent of Grey Friars is now threatened. Following an archaeological implications study (Woodcock 1980), at the request of East Sussex County Council the Sussex Archaeological Field Unit undertook a small trial excavation in order to assess the potential of the site for larger scale investigations.

HISTORICAL BACKGROUND by J. Houghton

The Lewes Grey Friars is known to have existed between *c.* 1230 and 1538, and that upon its dissolution it passed into lay hands (Page 1907, 95–6; Poland 1928, 87–94). It was never a wealthy establishment (at the Dissolution its debts exceeded its disposable assets), or large. The site appears to have been on the Brookland margin of the river flood plain, outside the main inhabited area of the town.

After its surrender to the Crown it ceased to owe service to the Manor of Lewes, and thus the Court Books are of no use in tracing its post-dissolution history. John Kyme (steward to Sir William Petre) is said to have 'bought the Greyfriars in 1557 and *rebuilt* it as The Friars' (Emmison 1961, 257). There is a description of the property in Kyme's will of 1570 (quoted by Challen 1962, 134–6). Randoll's Map of Lewes (1620) shows a building on an east–west alignment, with two southward cross-wings. There is a substantial stone wall on the north and west sides. There is also a small gate house and entrance on the High Street frontage, and a complex of buildings on the south–west side of the Bridge.

There are many references up to 1846 of a house called the 'Greyfriars' or the 'Friary', and these refer to a house close to the High Street frontage which is said to have been built in 1673 (Woollgar, undated).

Lambert's Map of Lewes of 1788 shows a series of buildings on the site, proceeding from north to south:-

A. A large, square building close to the High Street frontage.
B. A building to the south with two southward cross-wings.
C. A small rectangular building, south and east of B.

William Figg Junior in a discursive narrative on the traces of ancient Lewes (1861) includes a conjectural map of 1775. On this map (which is likely to have been constructed from original source material) the unidentified building to the south–east of the building with cross-wings is uncompromisingly marked 'Chapel'. In the narrative (pg. 34) we are informed that when the mansion and the other buildings were pulled down prior to the erection on the spot of the original Lewes station 'the only portion of the ancient buildings remaining was the Chapel which had been converted into a barn. It contained traces of Early English work'

In 1929 a male skeleton was found when digging for gas mains in front of the Free Library and this was presumed to be an interment in the cemetery of the Grey Friars. Several other skeletons were said to have been found close by in Friars Walk many years earlier, and *c.* 30 yards away under the crossing into the railway yard.

In 1967 Messers. J. Knight-Farr and D. Thomson undertook an excavation on the site of the Old Railway Station in Friars Walk, but unfortunately the discoveries were never published, although a sketch plan and photographs show that substantial ashlar foundations were uncovered.

THE GREY FRIARS, LEWES

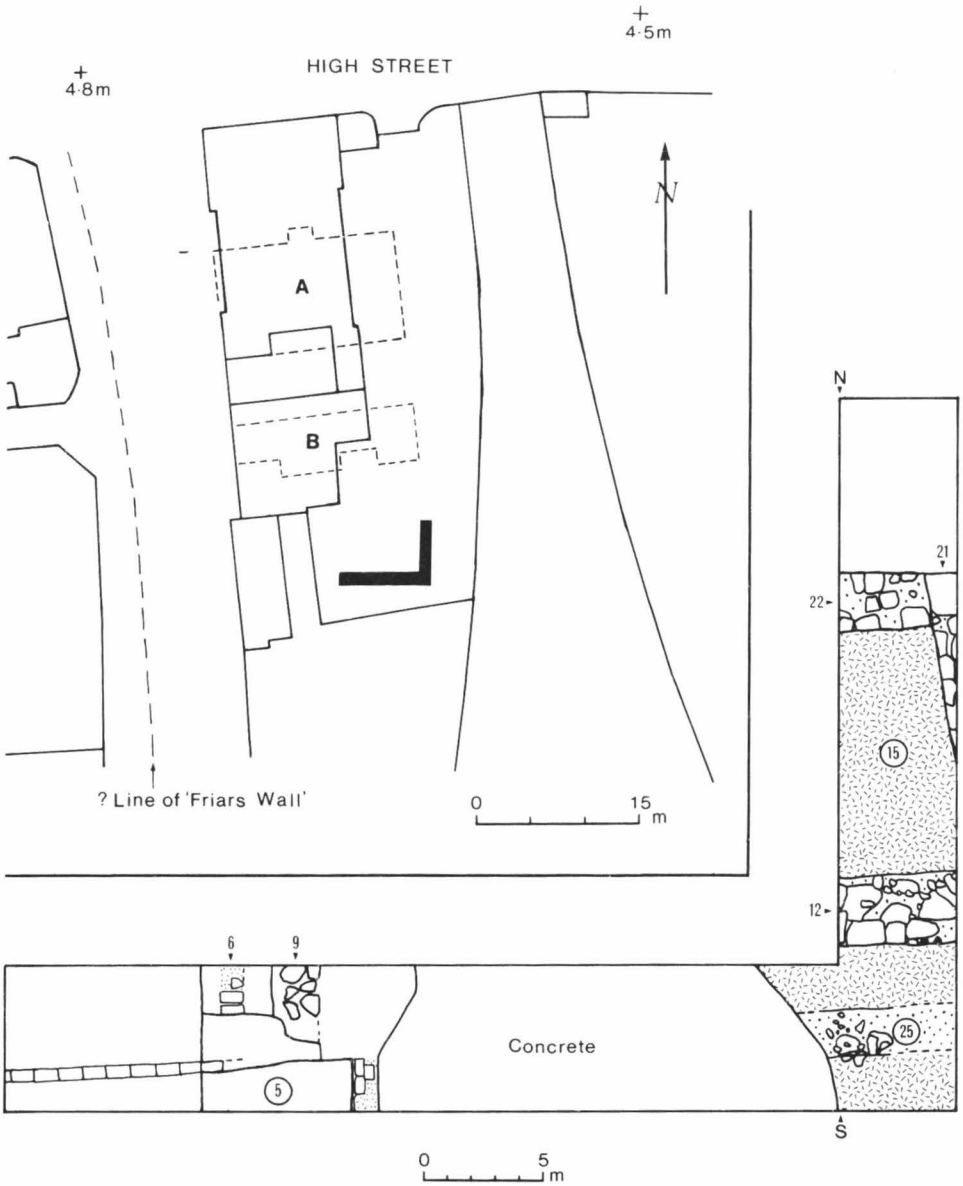


Fig.12. Lewes. The Grey Friars, 1981. Site and trench plans. The site plan also shows the approximate locations of buildings 'A' and 'B' on Lambert's map of 1788.

THE EXCAVATION by D. Rudling

In 1981 an excavation (Fig. 12) was located on a small patch of wasteland which forms part of a car park situated immediately to the north of the area investigated in 1967. An 'L' shaped arrangement of trenches was used, the north–south limb being 6 m long x 1 m wide, and the east–west limb 8 m long and 1.25 m wide. On average about 1.2 m of modern deposits (dumpings/ground levelling) had to be

removed, and unfortunately much of the east–west trench below this level had been destroyed by a concrete raft and the north east corner of a cellar (5). The only other discoveries in this east–west trench were several brick walls (example: 6), and the apparently unmortared chalk block footing of a wall (9) running north–south. Unfortunately no dating material was found associated with this feature, but it is likely to be either medieval or early post-medieval.

Fortunately the north–south trench proved to be more rewarding and the main discoveries were the foundations of three parallel, chalk block walls (12, 22 and 25) with an east–west alignment (Figs. 12 and 13). Walls 12 and 22 yielded traces of an identical pebble mortar (for analysis see below), and are presumed to be contemporary. No mortar was discovered in association with wall 25 (which consisted of loose chalk blocks), and it is earlier than 12 or 22 (note it is sealed by layer 15). In between walls 12 and 22, and over wall 25, was a layer of crushed chalk (15). This overlies a layer of brown clay (23), which in turn overlies a layer of chalk (24), which unfortunately could not be excavated due to shortage of time. Possibly the various layers may have been necessary due to problems of flooding/ the high water table in this region. Dating material from contexts 15, 23 and 25 show these to be medieval (thirteenth/fourteenth century) and they are therefore presumably part of the Grey Friars complex. Wall 22 was cut by a well-laid, regular wall (21) of mortared (pebble mortar) chalk blocks running approximately north north west–south south east. Although no finds were found associated with this wall it is likely to be either later medieval or early post-medieval.

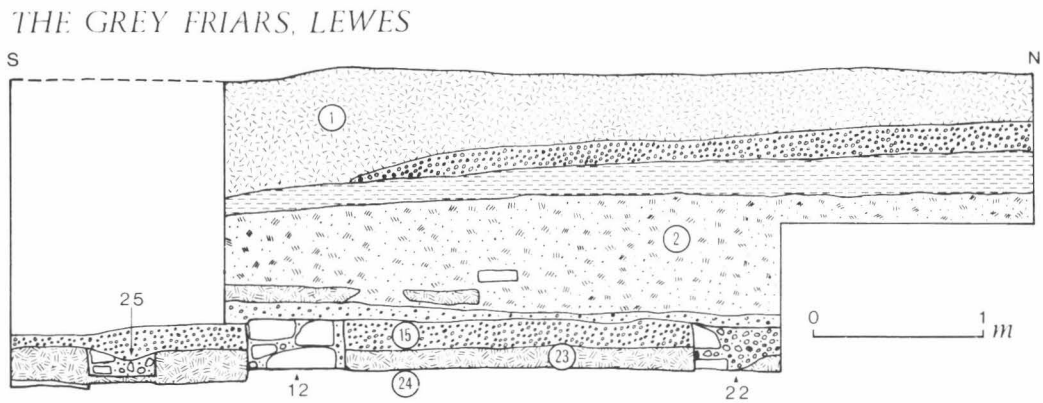


Fig. 13. Lewes. The Grey Friars, 1981. North-South section.

CONCLUSIONS

The trial excavations in 1967 and 1981 both yielded medieval masonry belonging to the Grey Friars complex. Enough therefore appears to remain in order to warrant larger scale excavation in advance of re-development and /or a watching brief to be held on the remainder of the site during construction work.

THE FINDS

Pottery by D. Rudling

Very few pieces of pottery were found during the excavation and all were body sherds, mostly from medieval glazed jugs. Several stratified sherds are described below. None are illustrated.

95 Fine sandy grey fabric, orange-buff internal surface, external green glaze. Thirteenth/fourteenth century. Layer 23

96 Sandy grey fabric, unglazed. Layer 15.

97 Sandy grey fabric, lighter coloured external surface which has been decorated with combed vertical lines and mottled green glaze. Surface of Layer 15.

98 Sandy fabric, orange-red outer surface, grey core, buff internal surface, external patchy mottled green glaze. Surface of Layer 15.

The Floor Tile by E. Eames (Fig. 15)

99 About two thirds of a tile was submitted. This is decorated with the same design as two tiles from the site of Lewes Priory in the British Museum collections (Eames 1980, Tiles 11, 253–4, design 2453). Both belong to the same group as those from Lewes Priory and Mount described below, but the Grey Friars example does not. The fabric is less sandy and although it is mainly reduced it is very much lighter in colour and the glaze is therefore a browner shade of olive. The tile is only about 14 mm thick and is slightly dished because it is too thin for its surface area. The tiles from the Priory are generally between 22 and 24 mm thick. The tile from the Grey Friars has a scatter of small round stabbed keys on the base and also two thin curved scored lines probably made with the point of a knife. The inlaid white clay revealed in the fractured edge is about 2 mm deep.

The design with which this tile is decorated gives some indication of date. The design (Eames 2453) seems to be directly derived from a design present on tiles from Salisbury cathedral, Eames design 2452, tentatively dated about 1258 when the cathedral was consecrated. In the Lewes design (Eames 2453) the neat quatre-foils in the middle of the Salisbury version (Eames 2452) are replaced by clumsy triangles although the half quatrefoils at the sides are retained. This suggests that the Lewes version is derived from the Salisbury design and is therefore later than 1258. The same design on the thinner tile from the Grey Friars is probably later than the tiles from the Priory, not only because there was a tendency to reduce the thickness of tiles for commercial reasons, the thinner tile used less clay, but also because the Priory was the more important religious house and is likely to have had tiles first.

I suggest that there were three closely related groups of tiles in Lewes, all derived from the Salisbury-Wessex tiles, all dating after 1258, and all probably made at the same tilery and decorated with the same stamps. Although the three groups were probably made at different times all could have been made within a decade, the tile from the Mount (see below) representing the earliest group, the Lewes Priory tiles in the British Museum a subsequent period of production and the tile from the Grey Friars the latest of the three.

The Grey Friars tile was found on the surface of Layer 15.

The Mortar Samples by C. Cartwright

Samples of mortar from two walls, 12 and 22, were submitted for analysis. Judging from a surface examination through a microscope these two samples appear to be broadly of the same constituents, that is mainly small, rounded flint/quarts pebble grit in a calcareous (limey) matrix with the occasional larger (rounded) flint pebble inclusion. The main difference appears to be that the sample from wall 12 has glauconitic inclusions whereas the sample from wall 22 does not.

Bone Report by O. Bedwin

A total of twelve animal bone fragments were identified from medieval contexts (15, 23 and 25); the species present were *Ovis, Bos, Sus* and *G. morhua* (cod). A single oyster shell was also found in Layer 15. Because of the small area investivated and the few bones found, no generalizations as to medieval diet can be made, but it should be noted that cod bones were also present in broadly contemporary contexts at North Street (Freke 1976) and Brooman's Lane (see above).

Other Finds by D. Rudling

A piece of furnace lining was found in wall 25, and fragments of roofing tile (thickness approximately 10 mm) were found on the surface of Layer 15.

Acknowledgements

I should like to thank Andrew Woodcock of East Sussex County Council, British Rail who gave permission for the excavation on their land, and Owen Bedwin and John Mills for their help on site.

5. *Lewes Priory Mount* by F. Marsden (Fig. 14)

In 1925–6 Lewes Priory Mount, surveyed only a few years earlier by H. S. Toms (1922, 224), was cut into on the south-west side to accommodate the corner of a new bowling green, presumably the one opened in July, 1926 as reported in the East Sussex News (Friday, 23 July, 1926). The cutting left exposed two sections, sloping steeply at about 60° and meeting at an approximate right angle. These were examined at the time by several local antiquarians. In one published account J. H. Every (Crookshank 1927, 153) reported simply that the Mount was made of chalk, as opposed to 'gravel' from the nearby terraced area, the 'Dripping Pan'. W. H. Godfrey makes more precise observations:— 'In a recent cutting through the foot of the mound, in connection with the formation of a bowling green, no trace of a ditch was disclosed. The composition of the mound was seen to be wholly of chalk and soil, with no admixture of stone or building rubbish, proving that it was formed before the dissolution of the Priory. From this cutting it appears plainly that the mound was originally conical,

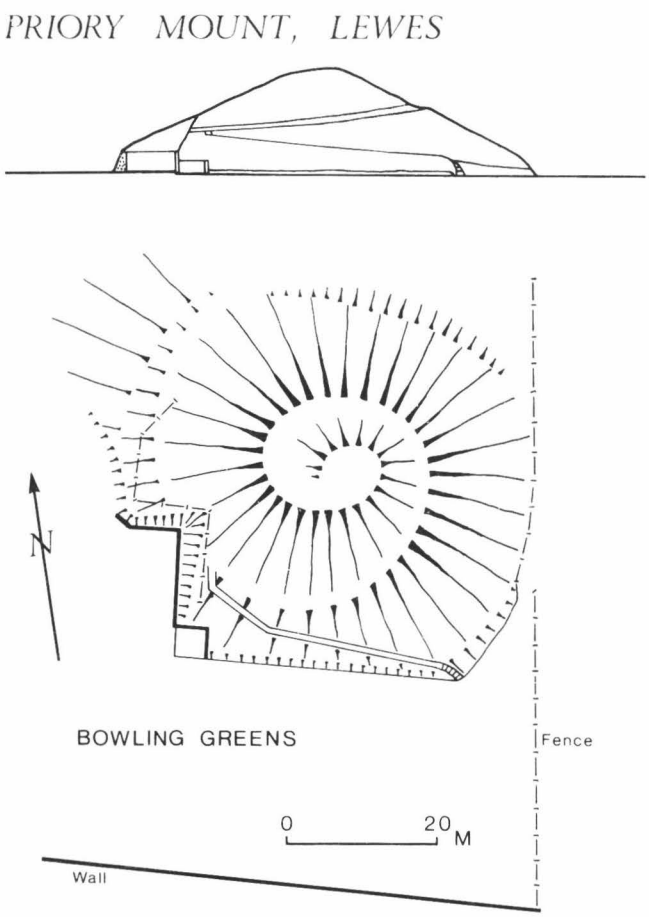


Fig. 14. Lewes. Priory Mount, 1981. Plan and profile from the south based on a survey undertaken by P. Leach and H. Clarke.

and that the spiral pathway to the summit had been formed by the *addition* of soil which contains fragments of slate and other comparatively modern material' (Godfrey 1927, 24).

Almost twenty years later, in 1943, the still exposed sections were inspected by C. Vigor, who collected sherds and building material from them. By now the distinction between the make-up of the main body of the Mount and the spiral pathway was no longer apparent and Vigor states:—'Personally I am satisfied that the work is attributable to one phase only, for the sherds were evenly distributed throughout the face and came from a position that was formerly well towards the core of the mound . . . pottery was found protruding from base to top of the of the cutting' (Vigor 1948?). Photographs accompanying the manuscript show considerably eroded sections much overgrown with weeds.

While the chief value of Vigor's work lies in the assembling of previously published references and some unpublished speculation about the Mount he does not appear to have been aware of Godfrey's account. In general his notes on sites and excavations in the Lewes area are characterized more by enthusiasm than accuracy and though they are liable to be set out as reports prepared for publication there are gaps where the crucial evidence to establish his hypotheses was never inserted.

Thus we learn of the Mount finds that:— 'Pieces of brick, tile, slate, plaster, potsherds and oyster shells . . . have been submitted to the British Museum for vetting and the widest possible dates for their incidence has been pronounced as the —— to the —— centuries'. One suspects that the British Museum made no pronouncement and perhaps did not even return the material. Elsewhere in the manuscript Vigor himself states that 'all the pottery is later than that which would have been current at the Norman Conquest' and later he implies that none post-dates the Norman period. Since today it is accepted that no clear distinction can yet be made between local late Saxon and post-Conquest pottery no reliance can really be placed on this specific dating of his material. Unfortunately none of these Mount finds were present in the cabinets received by the Sussex Archaeological Society in 1953 on Vigor's death other than a small piece of burnt daub that is not referred to in his text.

There are however two small groups of finds from the Mount sections that do survive in Barbican House Museum. Of particular interest are some apparently collected by Eliot Curwen in August, 1926. A note in his handwriting that accompanies them corroborates Godfrey's statement that a distinction could be made between the central core of the Mount and the spiral pathway at the time the cutting was made. It reads:-

'From the 'Calvary Mount' Southover 7.viii.26
The *slate* and tile from under the spiral path
(on ground level) at West side.
The small bits of glass from the chalk core
of the mound.
The other scraps from levelling the new
bowling green at the West side.'

The sequence of events here is not very clear if the Bowling Green was opened in July, 1926, while the note, dated August, seems to refer to material collected while levelling the Green before turfing.

On the basis of this note the finds themselves would seem to fall into the following groups. From 'under the spiral path' comes the thirteenth century floor tile (Find No. 100), though whether the terms 'slate and tile' were intended in the singular or plural remains obscure; no slate is now present among these finds. From the 'chalk core of the mound' come the five small fragments of window glass which have been identified by Jill Kerr as of fourteenth and fifteenth/sixteenth century date (Nos 101–5). The 'other scraps from the levelling of the new bowling green at the west side' appear to comprise a large piece of crown glass (No. 106), daub, a piece of charcoal (identified by Caroline Cartwright as being hazel), and several fragments of bronze/bronze slag.

Also in the museum are two further finds made much later, in 1957, by the then Curator N. Norris. These are described on the envelope which contains them as 'Slate and sixteenth or seventeenth century pottery from the make-up of the Priory Mound 6 ft up in the cutting by the bowling green on the west side. May 1957'. The sherd of pottery (No. 107) is now thought to be late medieval.

Such as they are these surviving finds from the cutting all date to the medieval or post-medieval period and there is reason to suppose that Vigor's lost finds also fell within this broad period. Of particular interest however are the pieces of glass from the core of the Mount , identified here as the five pieces of fourteenth – fifteenth/sixteenth century window glass among Curwen's finds. *If* this is accepted, though the evidence is far from conclusive, it would suggest that even the first phase of the Mount, apparently a conical mound made up largely of chalk, only predates the Dissolution of Lewes Priory in 1537 by up to a century or so. The second phase, the construction of the spiral pathway, with material containing building debris, probably post dates the Dissolution and the overthrow of the Priory buildings.

If it is accepted that the core of the Mount dates to the late medieval period one is forced to dismiss the interesting theory that the mound is the first castle motte of William de Warenne, a suggestion originally put forward by Allcroft (1917), and most recently discussed by Houghton (1974). Similarly one must thus also reject the various other theories which depend upon an early medieval date for the mound.

Speculations as to the Mount's purpose in the late medieval and post-medieval periods generally favour a Calvary attached to the Priory (Lower 1845, 35) and/or a structure associated with the nearby Dripping Pan (Lee 1795) — a terraced rectangular area of some size, whose function is equally obscure though a medieval salt pan has been suggested (Godfrey 1927, 24). In addition Horsfield (1824, 250–1) notes a tradition that 'it was thrown up by one of the Earls of Dorset, lest he should be overlooked by a brother living in Lewes, with whom he was at emnity'. However, family feuds apart, the mount, often ascended by a spiral pathway, is a well documented feature of Tudor and later gardens and it is interesting to note that its origins relate to the mounds raised against the walls of religious establishments to allow the inmates to see outside (Dutton 1937, 33, 48 and 86; Burton 1976, 243 and 257). It is tempting to see in the two phases of Lewes Priory Mount a progression of this sort from a plain mound with a functional or religious purpose attached to the Priory, to a mount improved by the addition of a spiral pathway to form a fashionable garden feature in the Tudor or later periods by subsequent owners of the Priory complex.

THE FINDS

The Floor Tile by E. Eames (Fig.15)

100 A small square tile from 'under the spiral path'.

This tile, measuring 39 x 38 x 28 mm, is one ninth of a large tile decorated with nine small fleurs-de-lys arranged in three rows of three. The tile had been scored across the surface before it was fired so that it could be broken into nine after it was fired. This was the usual practice because the tile could be stacked in the oven more easily when it was the same size as the rest of the batch and the tilers clearly found it more economical to risk some faulty breakage when the tiles were separated after firing than to have small pieces to arrange in the oven. This tile is from the middle of the upper edge of the parent tile.

The British Museum collections include one complete example, about half of a damaged example and one complete oblong third from the right side of such a tile, scored to be separated into three oblongs for use in borders. All three are from the site of Lewes Priory (Eames 1980, tiles 11,250; 11,251 and 11,263; designs 2140 and 1282). The fabric of these three tiles is rather coarse with small white inclusions and is heavily reduced, particularly at the surface, which gives the glaze a light olive green appearance over the grey body. The incomplete tile 11,251 has part of one scooped key remaining in the base; the complete tile 11,250 has a scatter of small stabbed square and triangular keys; the oblong tile 11,263 has two small square stabbed keys. The decoration was inlaid in the surface of the tiles in stamped cavities about 1–2 mm deep. Most of the inlaid clay has come out of the cavities in the complete tile during wear.

The submitted tile is made of a better prepared, finer fabric with less reduction except at the surface over which the glaze also appears a light olive green. The edge has chipped at the base of the fleur-de-lys revealing that the white clay is very

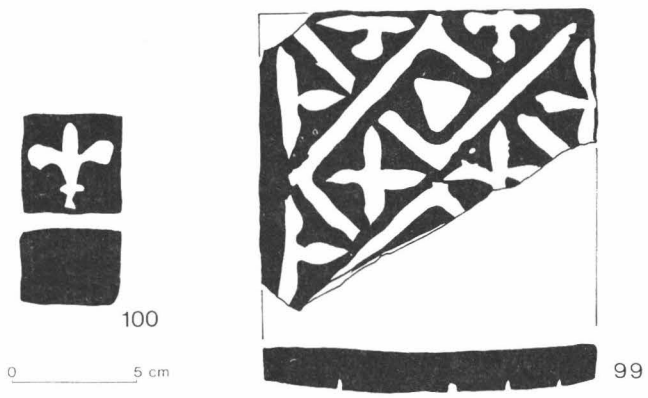


Fig.15. Lewes. Various sites. Medieval floor tiles (x 1/3).

shallow. The fleur-de-lys is slightly smaller than that in the comparable position on the tile 11,250. The projections on the stamps which made the cavities in the surface of the tiles were normally cut with sloping sides and therefore the deeper the stamp went into the tile the larger the compression of the design at the surface. The empty cavities on tile 11,250 show that the projections on the stamp with which it was decorated had the usual sloping sides to its projections. The stamp was certainly pressed much more lightly onto the surface of the submitted tile than onto the tile in the British Museum and it seems more likely that this accounts for the slightly smaller fleur-de-lys than that a different stamp was used. There are no keys in the small area of the base of the submitted tile but there may have been some on other parts of the parent tile. Besides being made of a finer fabric the submitted tile is thicker than those in the British Museum. It was not part of the same batch of tiles, but it seems most probable that it was made at the same tilery at a different time.

The design with which the submitted tile is decorated and the way in which both it and the tile from the Priory, Eames 11,263, were divided after they were fired give some indication of date. The design is present, both in the small square and the oblong form, on tiles from Salisbury cathedal (Eames 1980, vol 1, 189 and 202, design 1281), dated about 1258. Oblong and small square tiles cut as proportions of the basic square tiles are common features of the arrangement of mid- and later thirteenth century pavements. Examples may be seen in the replica of the Chapter House pavement at Salisbury and in the pavement in the retro-choir of Winchester cathedral and in the piece of pavement from the Queen's chamber at Clarendon Palace exhibited in the medieval tile room at the British Museum. Such tiles are sometimes decorated as in the Salisbury and Lewes examples discussed here and are sometimes plain glazed yellow or dark green, but the methods of manufacture and use are the same.

The Glass by J. Kerr

a. Unpainted medieval window glass from the 'chalk core of the mound'. Note: No's 101–5 are not illustrated.

101 35 x 22 mm. 2 mm thick. 4mm lead shadow.
White glass. Broken before burial, now fragmented into two pieces and completely rotted and opaque. The exterior surface is excessively covered with deep corrosion pits indicative of having been acquired while *in situ* for a considerable period of time. ?Fourteenth century.

102 25 x 20 mm. 2 mm thick. 4 mm lead shadow.
Pink pot metal. Broken before burial. Translucent where the surface deterioration has sloughed off. The exterior has traces of corrosion pits. ?Fourteenth century.

103 36 x 30 mm. 3 mm thick. No lead shadow.
?Pot metal yellow glass, very pale in tone. Broken before burial. The exterior surface was heavily pitted with corrosion. Both surfaces have an opaque layer of devitrified lamination which sloughs off to reveal an opalescent interface. This has revealed the base glass which is still translucent and vitreous. ?Fourteenth–fifteenth century. The heavier corrosion would be consistent with an earlier dating.

104 19 x 40 mm. 2 mm thick. No lead shadow.
White glass. Broken before burial. Very light weathering on exterior surface; burial has caused the interior surface to iridesce. The glass is still vitreous and translucent and pale brown in tone. ?Fifteenth–early sixteenth century.

105 50 x 43 mm. 3 mm thick. 2 mm lead shadow.
White glass. Broken before burial. Light weathering on exterior surface; burial has caused interior surface to contract a crust of opaque black. The glass is still translucent where this has sloughed off and green in tone. Poorly durable clear glazing. ?Fifteenth early sixteenth century.

b. A piece of crown glass 'from the levelling of the new bowling green'.

106 A substantial piece of crown glass, 84 x 87 mm, and varying in thickness from 2–10 mm. It is a discarded 'bull's eye', the centre of a piece of crown glass too thick and heavy to glaze. The pontil mark is clearly visible in the centre and is 29 mm in diameter. None of the edges is grozed, they all appear to have been broken without shaping; this would be consistent with it being discarded by the glazier as being too thick. Within the surface deterioration which burial has produced on both sides, the glass is still translucent and is a pronounced green in tone owing to the thickness, although the glass would have been used as white glass in plain glazing, perhaps in a domestic context. The fragment is still very heavy. ?Fifteenth–early sixteenth century.

The Pot Sherd by D. Rudling.

The only pottery from the Mount in Barbican House Museum is the piece found in 1957 'from the make-up of the Priory Mound 6 ft up'.

107 Not illustrated. A small base sherd; fine sandy orange ware, with buff surfaces and a reduced core. Late medieval.

6. *An Excavation in the Garden of Anne of Cleves House, Southover, 1976* by F. Marsden.

Anne of Cleves House is a timber-framed structure, with a late medieval south range facing onto the street, an Elizabethan west wing, and a large eighteenth-century workshop beyond (Godfrey 1924). The tunnel-vaulted cellar is probably fourteenth century. The house was a freehold of Southover manor, and formed part of the property of the suppressed priory of Saint Pancras in Southover, which was settled on Anne of Cleves by Henry VIII after their marriage had been pronounced invalid in 1541.

The aim of the limited excavation in 1976 was to establish the existence of features likely to be damaged by work in connection with a proposed period garden to be established by the Friends of

Anne of Cleves Museum. An area approximately 15 m^2 was opened at a distance of some 1.5 m from the north and west sides of the house.

Immediately below the turf in the north east corner was a small square (16 m^2 of good quality cobbling of rolled flint pebbles ('kidneys') with post holes at its two undisturbed corners. On one side was a square, brick edged drain and a galvanised metal water pipe projected from the cobbles nearby. This feature is identified as a stable on a 1910 deed of sale for the property. Contemporary with this building was an extremely damaged exterior cobbled surface of small broken flints, much patched with gravel and blast furnace slag. Running across it from the north east corner of the house to the south west corner of the stable was an open drain made up of eight rows of 'kidney' cobbles with a central row of brick paving tiles set on edge. The stable, drain and yard surface appeared to be of late nineteenth-century date, and these were left intact along a 4.5 m strip on the east side of the excavation.

In a second segment on the south west corner of the excavation a layer of seventeenth-century cobbling was partially uncovered at a depth of up to 0.5 m. This was overlain however in the extreme south west corner by an area of good quality nineteenth–twentieth-century cobbling of large rolled flints. It rested on a layer of brick rubble and flint above the seventeenth-century surface and this was left in place over approximately half the trench. This segment was much disturbed by modern water mains and a drain taking water from off the roof into a possible well now capped with concrete.

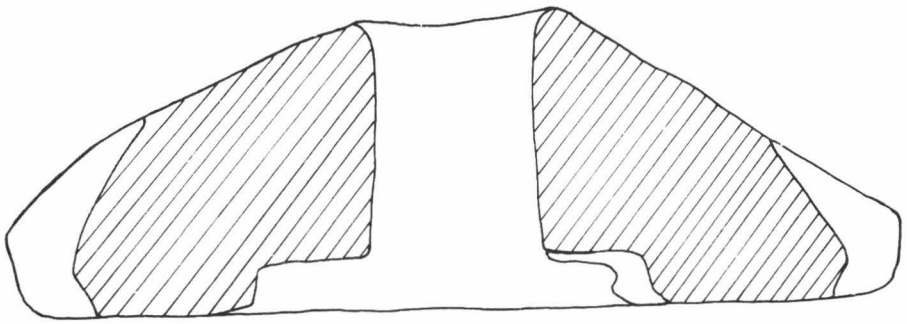
In the third north west segment of the excavation the seventeenth-century surface was consistently uncovered with the removal of heavy deposits of brick and flint packing. Much of this comprised broken Tudor bricks and associated vitrified flint nodules but the inclusion of nineteenth-century pottery indicated that it had been brought to the site as hard core, to level the extremely irregular seventeenth-century surface. This shelved steeply towards the north following the original slope of the ground until cut across by a modern drain running the entire length of the excavation. Immediately above the cobbled surface were quantities of domestic animal bones and characteristic seventeenth–eighteenth-century pottery, including traditional red bodied Sussex wares with iron streaked glaze, Delft probably of British origin, 'tiger' combed slip wares and a small quantity of Chinese porcelain.

Although the seventeenth-century cobbled yard was too damaged to leave permanently exposed it was decided that it must be protected from further damage by gardening acitivities. Similarly the nineteenth-century features are to be preserved, and it is planned to build up the garden into two terraces of sufficient depth to leave the excavated surface undisturbed.

A lava pot-quern (Fig. 16) by D. Rudling

108 The upper stone of a Niedermendig-Mayen lava pot-quern was found in the layer of brick and flint hard core over the seventeenth-century cobbled yard. In addition to the central aperture for the entry of grain there are also five holes formed in the top of the stone, and a stick would be placed in one of these for revolving the quern by hand. The insides of four of the holes have been well smoothed by the friction of the stick, and the wear in these holes indicates that the quern was rotated anti-clockwise. The exterior cylindrical surface of the stone shows signs of wear resulting from friction against the sides of the lower stone. The underside of the stone is flat to fit onto a flat lower stone, and there are two dovetailed slots, one on either side of the central aperture, to receive an iron rynd (missing), which was fixed in place with lead (part of which still remains in one of the slots). Originally the missing rynd would have been supported on a metal spindle projecting upwards from the centre of the lower stone. A pot-quern is one in which the upper stone (as described above) revolves in a fixed hollow cylindrical lower stone, taking the form of a shallow pan. Such a lower stone was found in the precincts of Lewes Castle, and this, together with the upper stone from a pot-quern found at Selmeston, has been published by Eric Holden (1967), who kindly examined and commented on the Anne of Cleves' example. He pointed out that pot-querns were sometimes operated by means of a long rod (in place of a short handle), the top end of which passed loosely through either a roof beam or part of a frame constructed around the quern. For an illustration of such a frame arrangement in the fourteenth century the reader is referred to Salzman (1926, 55).

The dating of the Anne of Cleves' pot-quern is uncertain since the context in which it was found was a layer of relatively recent hard core. Pot-querns in general are the latest type in a German typology of lava querns, and are there assigned to the



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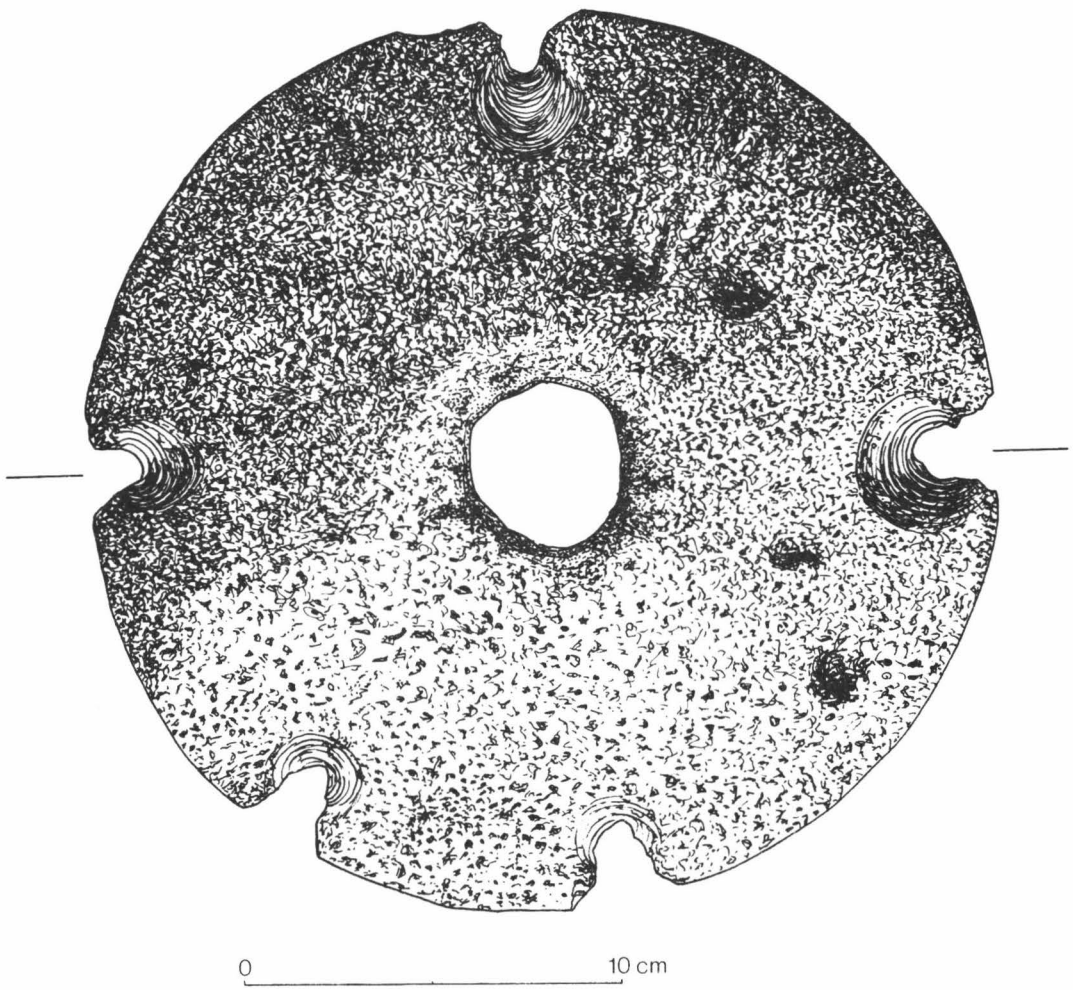

Fig. 16. Lewes. Quern stone (x 1/2).

Late Middle Ages (Hörter *et al.* 1950). Mr. Holden however has seen this type of quern in frames at the Hjørring Museum, Denmark, where he was informed that they might even be post-medieval since querns were in use until the eighteenth or nineteenth century for grinding such things as mustard and malt.

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THE CULT OF ST. RICHARD OF CHICHESTER IN THE MIDDLE AGES

by D. J. Jones

Richard of Wych, bishop of Chichester from 1244 until his death in 1253, was born in c. 1197 at Droitwich (Worcs.). He enjoyed a prestigious and successful career in the Schools, gaining a doctorate in Canon Law and serving as Chancellor of the University of Oxford in the mid 1230s. He was subsequently chancellor to St. Edmund of Abingdon when he was Archbishop of Canterbury. After the death of St. Edmund in 1240, Richard considered entering the Dominican Order and studied with the friars at Orleans. But he was back in England by 1244, when he was nominated Bishop of Chichester. His appointment to Chichester was followed by a long dispute with the king, who had hoped to secure the diocese for a prominent royal servant, Robert Passelewe. Richard did not receive the temporalities of the see until July 1246, but thereafter was able to devote himself to the administration and pastoral care of his diocese: he promulgated the earliest series of diocesan statutes extant for Chichester, and his surviving charters show his constant interest in pastoral matters of all kinds. When he died in 1253 the odour of sanctity was already all about him. He was canonised in 1262, and his cult, although it never achieved the popularity of the shrine of Becket at Canterbury for example, remained popular with Sussex people until the Reformation. It is the purpose of this paper to describe and investigate this cult.[1]

It was a characteristic of medieval religion that God was thought directly to intervene in human affairs, and that this was felt chiefly through the lives and miracles of wonder-working saints. At least at the popular level, pious men were frequently hailed as unofficial saints very soon after their deaths. Richard died at Dover on 3 April 1253 and, once the entrails were removed from the corpse and buried in the chapel of St. Edmund that he had recently dedicated, the body was taken to Chichester for burial. According to Bocking, who wrote the longest and most reliable Life of the saint *c.* 1270 and who was a friend and *confidant* of the saint during his lifetime, the corpse was immediately found to be invested with thaumaturgical powers, and whatever touched it was popularly regarded as a relic in its own right.[2] A devotion to Richard grew up immediately at the popular level, and at a higher one pressure for his canonization soon got underway.

The Chichester Chapter sent two of its canons to Rome to press forward Richard's claims to sanctity, and the pope appointed commissioners to investigate the matter in June 1256. Richard was already a celebrated miracle-worker, and a flood of letters of postulation were despatched to Rome by influential persons. None of these is known to survive, but Bocking, who used the canonization archive in compiling his Life, states that the king and barons wrote in support of the case as well as prelates and many clergy. Richard was actually canonized in 1262, but by then his cult had already enjoyed several years of popularity at Chichester. He had been buried 'in a humble place' in the north aisle, near the chapel of St. Edmund,[3] and his grave was early regarded as a shrine, and in October 1254, a chaplain was appointed to look after it. He was rewarded with the vicarage of Mendlesham in the diocese of Norwich which Richard's close friend, Walter of Suffield, bishop of

Norwich, appropriated to the chaplain's use. Walter's act to this effect tells something of the endowment of the chaplaincy and of the chaplain's duties: two candles were to burn there constantly, and the clerk was to receive five marks on Richard's *obit* day, of which at least two were to be given to the poor.[4]

In Richard's case, canonization brought official recognition and approval to a cult that was already in existence, but it also brought the shrine new prestige. Urban IV granted all those who had been present at the mass of Canonization, an indulgence of three years and three Lents,[5] and he encouraged pilgrimages and offerings to Richard's shrine by allowing those that visited it on Richard's feast day remission of one year and one Lent's penance. One Lent's remission was accorded those who arrived there within a fortnight of the feast.[6] Urban also granted forty days' remission for the feast of Richard's Translation:[7] those who actually attended the Translation received remission of one year. These papal indulgences were the official foundation of the cult. Curiously enough, no further indulgences, either papal or episcopal, are known to have been granted to the shrine.

The shrine now grew rapidly in wealth and prestige. One gets the impression from the extant material that this was largely the work of Bishop Stephen Berstead (1262–87), who eagerly encouraged the cult. Perhaps it is significant that the Dunstable annalist describes him as having been St. Richard's chaplain,[8] and a personal connection with the saint may explain the devotion that he showed to his memory. In an act of 5 April 1279 he laid down the Dean and Chapter's duties towards the shrine:

> They shall maintain ten square tapers at the shrine of St. Richard to burn on the feasts of the first dignity. Also nine round tapers and one at his grave. And nine round tapers of two pounds in weight to burn night and day about the shrine on feasts of the first, second and third dignity'[9] . . .

After Richard's canonization, Urban gave permission for the saint's bones to be moved to a more fitting tomb in a more honourable position in the cathedral. And when Translation came in 1276, after the long delays of the Barons' Wars and Bishop Berstead's subsequent exile in Rome, the bishop spent more than one thousand pounds[10] in providing an impressive and elaborately adorned shrine immediately behind the High Altar, the position always occupied by the most prestigious shrines.

Chichester probably possessed no other relics of great value,[11] but by this time there were three main objectives of veneration in the cult of St. Richard there. First, of course, in importance was the magnificent bejewelled and gilded shrine to which Richard's relics were translated amid great splendour on 16 June 1276. The chronicle known as 'Rishanger' describes it as a casket (*capsa*) of gilded silver,[12] and it was studded with jewels: in 1280, when the jewels were stolen and subsequently recovered, seemingly miraculously, Edward I ordered them immediately to be replaced.[13] Even after 1276, however, devotion still continued at the site of Richard's original tomb on the north side of the cathedral, where a small chapel was built and enclosed by a screen.[14] Thirdly, there was the separate veneration of Richard's head (a common practice in this period) that was placed in a silver reliquary in the chapel of St. Mary Magdalen.[15] The redecoration of this chapel was provided for in the will of Bishop William de Lenne (d. 1373, after translation to Worcester in 1368). The walls on one side were to be painted with frescoes of the life of St. Mary Magdalen, but the will continues: 'I want . . . the aforesaid chapel to be painted anew (*de novo*) on the left side, that is where the head of St. Richard is placed, with good and lasting pictures of the life of St. Richard'.[16] There was also a statue of St. Richard in this chapel, mentioned in the visitation of Bishop Story in 1478, to which offerings were made.[17] Reverence was also paid to the saint's mitre

and chalice, but it is not known where in the cathedral they rested.[18]

The shrine gradually accumulated an impresseive collection of jewellery, ornaments and offerings in precious metals. Several of the bishops in their wills were generous benefactors of the shrine of the saint. Bishop de Lenne has already been mentioned, and in addition to the paintings that he ordered to be done, he left money for an image or ornament for the shrine. Bishop Patrington (d. 1417) left to the shrine two silver gilt bowls and two silver candle-sticks. But by far the most generous episcopal benefactor was Bishop Robert Rede who in 1415 left to the shrine a whole catalogue of riches that is worth quoting in full:

> One precious tablet of gold with precious stones with images of the Passion of Christ, the Blessed Virgin, John the Baptist and St. Katherine and the Holy Trinity to be placed in the feretory of St. Richard there, and twelve pearls are set in the same tablet. For the shrine of St. Richard, one gold ring set with a white stone of Jerusalem adorned with the face of a man and two other gold rings set with stones. To the shrine, two brooches of gold: one round, in the middle of which is a white swan and under its wing is a small sapphire with five white pearls in a circle; and the other, in the old style (*de antiqua forma*), with seventeen small red, white and green stones. Item, for use of the priest celebrating mass at the High Altar in the said church on the great feasts, out of reverence for St. Richard, one great ewer of gilded silver.[19]

Valuable bequests made by other members of the cathedral clergy include the gold tablet set with precious stones left by John Bisopston, the cathedral chancellor, in 1384 and a gold ring bequeathed by Vicar-Choral John Willoughby in 1498/9.[20]

Another important and generous patron of the shrine was King Edward I. He had been present at the Translation in 1276, and as king he was prompt in repaying £583 0s. 4d. 'lent' by the saint to Henry III; in fact, the money had been outstanding since the vacancy of 1244–6, before Richard had been admitted to the temporalities of the diocese.[21] The Wardrobe accounts of the reign are full of generous royal benefactions to the shrine, and it is clear that King Edward held the saint in high regard. In the accounts for 1285–6, for example, the royal family are found sending eight gold brooches (*firmaculi*) worth a total of £22 2s. 0d.[22] On at least two occasions, in 1284–5 and 1289–90, the king sent oblations to each of five different places of devotion: the shrine itself, an altar near the shrine, the chapel where the saint's head rested, the original grave and an altar near to it.[23] On other occasions the king sent a cloth of gold or arranged to be 'measured' in wax for the saint — that is to say, he promised to provide candles whose total length would equal his own height.[24]

Offerings of this kind are impressive, but one must not forget the smaller offerings made by more ordinary folk. The indices of Sussex wills prepared by R. Garraway Rice attest to this unequivocally. Throughout the later Middle Ages small sums were bequeathed to the shrine in large numbers. The steady stream of offerings of this kind bears witness to the consistent popularity of the saint right down to the Reformation, and shows that the cult was quick to revive in the brief Catholic *revanche* of Mary's reign.[25]

Unfortunately, no medieval inventory of the shrine's jewels and other treasures has survived, but when Henry VIII had the shrine destroyed and its treasures confiscated, the detailed account produced by his commissioners leaves one in no doubt that this was a thriving cult and one to which a large amount of treasure had accrued:

> In a ship coffer, 55 images of silver and gilt.
>
> In a long coffin wherein Bishop Richard's bones were, 57 pieces of silver and gilt.
>
> Three other coffers full of broken silver.
>
> A coffer with three locks that was delivered by the dean and archdeacon, with relics and other

jewels parcel of the said shrine.
In a little box, 31 rings with stones and three other jewels.
In a casket, 51 jewels set with stones and pearls.[26]

A great many pilgrims to the shrine must have been motivated by the hope of a miracle-cure. But for the dissemination of Richard's cult as a miracle-worker one has for material only the posthumous miracles that Bocking took from the canonization process and the brief collection of miracles associated with the saint's Translation in Paris, Bibliothèque Nationale MS. 15033. Obviously miracles recorded as having taken place during the saint's lifetime (at Orpington, Tarring (2), Cakeham (2), Selbourne, Lewes, Bramber and one at sea)[27] are associated only with the scenes of Richard's life. The posthumous miracles or accounts that mention pilgrimage are more useful here, for they attest to a geographical area in which Richard's cult was followed. Bocking's miracles generally include details of the places from which the *miraculés* hailed, and they attest to pilgrimages to Chichester by people from Bignor and one unnamed place within the diocese, and from Southwick (Hants) outside it.[28] Bocking's miracles also attest to Richard's reputation as a miracle-worker at Robertsbridge, Lewes, Southwick and Chichester in the diocese, as well as at a number of places outside: Pontefract (Yorks), Elmley (Worcs.), Winterbourne Earls (Wilts.), Romsey (Hants.), Oxford and London. The Paris collection records pilgrimages to Chichester by people from Winchester, the unidentified *'Ralretton'* and Kent. Peter of Peckham, who translated a version of the Bocking Life into Anglo-Norman verse sometime before 1293, adds miracles at Guildford and Dorking (Surrey).[30]

The accounts also give a valuable insight into the ways in which Richard's cult was practised. In two cases, at Elmley and at Robertsbridge, a penny was vowed to the saint.[31] At Lewes Castle and at Romsey the sick person was 'measured' to the saint.[32] At Elmley an appeal to St. Richard came to mind because the daughter of the house had seen a wax image commemorating Richard's resurrection of a man that had drowned.[33] This, too, was a common practice. But the most interesting stories are those that illustrate the use of relics for healing purposes. In the case of the London miracle, the relic was a handkerchief that had been dipped in Richard's blood when his corpse had been disembowelled.[34] At Bayham was a miracle-working bed that Richard had slept in,[35] and elsewhere his hat (*capa*)[36] and his boots[37] were found to be invested with thaumaturgical powers. Finally, there was an arm-bone that appears in a miracle-story set in Guildford; it is not clear whether it belonged to the Dominican convent there or to Queen Eleanor who also figures in the story.[38]

Although relatively few in number, Bocking's miracles do attest to a widespread devotion to St. Richard in the years immediately after his death. The pilgrimage cult was vigorous. The indulgences granted by Urban IV encouraged pilgrimages, and the Whitsun pilgrimage that Richard had himself enjoined on his diocese with the lure of indulgences was soon associated with the saint:[39] the pilgrims were going to St. Richard's church, where his relics were now the main attraction. These occasions attracted large crowds and, one imagines, commensurately large offerings; and in 1478 Bishop Storey found it necessary to lay down in detail regulations to prevent unseemly behaviour and breaches of the peace.[40]

Outside Chichester the cult never reached very impressive dimensions, but one way of examining its extent is to look at the liturgical evidence. St. Richard's Deposition (3 April) was celebrated with a feast of twelve lessons at the Benedictine houses of St. Albans, St. Augustines at Canterbury, Chertsey, Chester, Ely, Hyde and Westminster. The Benedictine nuns of Barking made the day a *commemoratio*, and the feast was observed in a manner left unspecified in the extant texts at Abbotsbury, Durham, Lesnes, Sherbourne and Tewkesbury, and by the Orders of Gilbertines,

Carmelites and English Franciscans. His feast was added to the Cistercian use in the British Isles at the petition of King Edward I in 1277. The secular cathedrals of Exeter, Hereford and Salisbury gave Richard nine lessons in their influential uses, as did the monastic cathedral of Norwich and the Brigetine house of Syon.

The observance of the Translation (16 June) is not so impressive. It was accorded twelve lessons at both Christchurch and St. Augustines, Canterbury, and at Gloucester; it had nine lessons at Norwich, Salisbury and at Syon, where it shared the day with SS. Ciricus and Julitta. Three lessons marked the feast at Chertsey.[41] The important point about the liturgical evidence is this: whereas St. Richard's feasts were apparently observed with some keenness in Benedictine houses, the secular uses that included Richard are those whose significance was centred on central or southern England, and the great northern use of York omitted the saint altogether.

Another sort of evidence is that of church dedications. Here Richard's fame was even less widespread. The cathedral at Chichester was for long known as St. Richard's church, but the title was unofficial. The register of Robert Rede, for example, often refers to Richard as 'our patron' but it is clear that the cathedral was also associated with the Trinity, the Virgin and All Saints. When, for example, the foundation stones were laid of a new common manse for the vicars-choral, it was done first in honour of the Trinity, then of the Virgin and only lastly of Richard.[42] A similar case is found at Pontefract, where a house of Dominicans was dedicated to Richard along with SS. Mary and Dominic. This foundation was made by Edmund de Lacy, who had been one of the saint's intimates, and it cannot be held to attest to the fame of the Chichester saint in the north of England.[43] These apart, there are only two known medieval dedications to this saint; one was at Heathfield in Sussex,[44] and the other was a chapel in the crypt of St. Augustine's Abbey, Canterbury.[45]

Evidence of the diffusion of the cult that can be drawn from the inventories of relic collections is much more impressive, for a large number of relics is recorded. This is not surprising: Richard was, after all, an officially canonized saint, and all relics were grist to the mill of the religious houses that collected them. In addition to the relics at Chichester, Christchurch Canterbury possessed an arm that Archbishop Kilwardby had obtained at the Translation in 1276. Another arm or arm-bone figures in a miracle-story recounted by Peter of Peckham and set in the Dominican house at Guildford; it is, not clear, however, whether it belonged to the convent or to its patron Queen Eleanor of Provence, who also appears in the story. Glastonbury had a piece of his tunic, St. Albans a finger, and Worcester claimed part of Richard's head preserved in a cross. Both Worcester and Meaux (Yorks.) maintained that they possessed all or part of his hair-shirt. In London, St. Paul's had at least two of the saint's ribs in a highly decorated case given by Bishop Chishull (1273–80), and possbly a third mentioned in a list that survives only in a copy made by Dugdale; and St. Stephen's, Walbrook, had obtained part of his cross. The royal chapel at Windsor claimed an arm-bone, and various institutions in the south of England claimed different parts of Richard's clothing: in 1290 the Hospital of St. Julian, Southampton, owned his hat; in 1297 several items of the saint's liturgical gear were at West Twyford in Middlesex; and Selbourne Priory (Hants.) possessed a comb, as well as one of his joints (*junctorium*). Salisbury Cathedral had an unspecified 'relic', and in 1381 Edmund, Earl of March, left to Wigmore Abbey one of the saint's bones. Mention has already been made of the handkerchief dipped in Richard's blood that was in London, his bed at Bayham, his hat and his boots, which are known from Bocking to have been prized as relics.[46]

For all the large numbers of relics that this cult can boast, one truth is clear. Apart from the outlying relic at Meaux, all known relics were located in the southern half of England, and of these all, save the hair-shirt and the fragment of Richard's head at Worcester and the bone at Wigmore,

were located in what may be very generally described as the Thames Valley (the most northerly is St. Albans) or still further south.

Finally, however, there were two cult-centres well outside the Chichester vicinity, both of them at places closely associated with Richard: one was at Droitwich where he was born, and the other was at Dover where he died. The early history of the Droitwich cult is obscure, but it is known that the canons of Chichester felt that it was worthwhile to collect for the erection of the saint's shrine in his home diocese of Worcestershire; they are not known to have collected in any other diocese.[47] Documents about a cult at Droitwich survive only from the Tudor period, but it is clear that devotion to the saint then centred on the parish church of St. Andrew, where a chantry was dedicated to St. Richard. The first mention of this is found in the reign of Edward VI when the endowment of the chantry was disputed, but it is generally accepted that it dates from before the church's other chantry which was founded by Thomas Walker *c.* 1491. The documents do, however, make it clear how the chantry was endowed: the priest was granted what was termed the 'service' of St. Richard, specified as including 'four boileries of salt water, otherwise lying and being in our salt well at Upperwich'. These boileries were known as the 'vawtes of St. Richard' and at the time of Henry VIII the priest enjoyed all the profits of the specified portion of the salt wells, plus an extra four marks per year.[48]

Droitwich was renowned for its salt, and the sixteenth-century antiquaries who deal with the town all comment on its qualities. For Leland, it was the best salt in the country. St. Richard was probably the town's most famous son, and it was natural that the two should become connected in the popular mind. In the sixteenth century, Leland, Camden and Habington each visited the place and attested to this. Leland and Habington both heard a story that the salt wells had failed during Richard's lifetime, and that his prayers had restored them; and Camden, although very scornful of what he regarded as 'old wives tales' that Richard had actually procured the wells by his prayers, also attests that the townspeople in former times 'not only firmly believed and recorded this, but paid him a sort of divine worship on this very account'. The 'sort of divine worship' to which Camden refers appears from Leland and Habington to have included marking St. Richard's feast day by hanging the salt wells with tapestry and holding 'drinkings, games and revels'.[49]

This semi-religious observance of the feast and the growth of legends about Richard and the salt that have no basis in the *vitae* or any other extant source for the saint's life were paralleled, at least in the later Middle Ages, by a more strictly religious cult. This is seen partly in the dedication and endowment of the chantry, but also in the presence there in the late fifteenth century of a statue of the saint and also of the saintly King Henry VI. The evidence is a grant of Henry VII dated 20 June 1490, which notes the good offices of Thomas and Isabelle Walker towards the parish church of Droitwich, and the fact that they had 'newly made and repaired two images there, one of St. Richard and another of King Henry, by which there is the more resort of pilgrims and offerings to the said saints'.[50]

The other subsidiary cult-centre was at Dover, and it was based on the chapel of St. Edmund that Richard dedicated shortly before he died. When Richard died, his body was disembowelled and his entrails were buried in the chapel. Archaeologists led by Mr. Brian Philp investigated the chapel in the early 1960s when it was restored, and found a small cist measuring 34 inches by 22 inches just to the south side of the altar. In his account of the restoration of the chapel, Tanner argued that it was here that the saint's entrails were buried. This is convincing. Bocking stated explicitly that the entrails were buried in the chapel, and the standard of workmanship that went into the making of the cist, which was dug into the earth without any stone dressing and roughly plastered over with puddled chalk, would reasonably indicate a rushed job such as the burial of entrails would make

necessary. There was also found a small round passage that connected the cist to the surface and this, Tanner suggests, held a stake that not only marked the cist's exact position but also allowed pilgrims to 'touch' the saint, by proxy as it were. Entrails were, after all, as valuable relics as any other part of the saint's person and Tanner is apposite enough in comparing the entrail relics of St. Edmund at Provins. But it is when he discusses the devotion to St. Richard at Dover that he is on less sure ground. Bocking does say that many miracles were granted here, but Tanner's imputation from this that the chapel at Dover remained a place of pilgrimage for the rest of the Middle Ages, is without explicit foundation in the sources.[51]

This article has passed in brief review all the evidence known to be extant for the cult of St. Richard. The lack of any surviving records of the canonizing process or of any fabric rolls for Chichester make it impossible to more than speculate on the social aspects of the cult or on its financial impact on the cathedral. Nevertheless, the miracles that survive, the recorded offerings and bequests to the shrine and other sources discussed above do attest to a cult that persisted at Chichester until the Reformation and even revived in favourable atmosphere of Mary's reign. The cult was never of the international stature or financial importance of the Becket cult at Canterbury, and feasts of the saint were never universally observed even in England. It was a small cult, mainly a local affair, but it remains an important aspect of the religious life of medieval Sussex.

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Notes

[1]D. J. Jones, 'The Lives and *Acta* of St. Richard of Chichester' (unpublished London Ph.D. thesis, 1982), discusses in full. This article is based on pages 169–82.

[2]Jones, 519–21; *Acta Sanctorum* Aprilis 1 (Brussels, 1675), 308.

[3]Jones, 521; *Acta Sanctorum*, 308.

[4]W. D. Peckham, ed., *The Chartulary of the High Church of Chichester*, Sussex Record Society 46 (1946), nos. 250, 251. No. 294 shows the Dean and Chapter acting on these principles in 1294.

[5]P. Chaplais, ed., *Diplomatic Documents 1100–1272* (1964), no. 351.

[6]Jones, 575; *Acta Sanctorum*, 317.

[7]*Calendar of Papal Letters 1198–1304* (1898), 377.

[8]H. R. Luard, ed., *Annales Monastici*, Rolls Series, (1864–9) III. 339.

[9]Peckham, no. 713; M. E. C. Walcott, 'The Earliest Statutes of the Cathedral Church of the Holy Trinity, Chichester, with observations on its constitution and history', *Archaeologia*, 45 part i (1877), 173.

[10]Walcott, 173.

[11]So I. G. Thomas, 'The Cult of Saints Relics in Mediaeval England' (unpublished London Ph.D. thesis, 1975), 72.

[12]H. T. Riley, ed., William of Rishanger, *Chronica et Annales*, Rolls Series (1865), 189.

[13]Peckham no. 38; *Calendar of Patent Rolls 1272–81* (1901), 363.

[14]Walcott, 168.

[15]Walcott, 169.

[16]Walcott, 169; Worcester Diocesan Record Office, Bishop Whittlesey's Register ff. 128–9.

[17]Walcott, 169 note; West Sussex Record Office, Epl/1/3, f.7v.

[18]Walcott, 174.

[19]M. E. C. Walcott, 'The Bishops of Chichester from Stigand to Sherbourne', *Sussex Archaeological Collections* 28 (1878), 47; 29 (1879), 3, 55–6.

[20]W. H. Godfrey, ed., R. Garraway Rice, *Transcripts of Sussex Wills* 1, Sussex Record Society, 41 (1935), 269.

[21]W. W. Stubbs, ed., *Gervasi Cantuariensis Opera*, 2 Rolls Series, (1880), 285; *Calendar of Patent Rolls 1272–81* (1901), 63, 148.

[22]B. F. & C. R. Byerly, ed., *Records of the Wardrobe and Household 1285–6* (1977), nos. 1992, 1995, 1997.

[23]Public Record Office, C47/4/2 m. 28 and C47/4/4 m. 41d.

[24]E. B. Fryde, ed., *The Book of Prests 1294–5* (Oxford, 1962), 100; *Liber Quotidianus Contrarotulatoris Garderobae Anno regni Regis Edwardi Primi Vicesimo Octavo* (1787), 97. Also see PRO C47/4/1 m. 18d.

[25]Godfrey I. 269–71, 370.

[26]*Letters and Papers of Henry VIII*, 13, part ii (1893), no. 1103.

[27]Jones, 478–97; *Acta Sanctorum*, 302–5.

[28]Jones, 536, 532, 540; *Acta Sanctorum*, 310, 311. Another miracle at Southwick may refer to the place of that name in Hampshire or that in Sussex (Jones, 539; *Acta Sanctorum*, 311).

[29]Jones, 526–54; *Acta Sanctorum*, 308–14.

[30]Society of Bollandists, *Catalogus Codicum Hagiographicorum Latinorum in Bibliotheca Nationali Parisiensi*, 3 (Brussels, 1893), 294ff.; British Library, Loans 29/61 (formerly Welbeck Abbey MS. I.C.1), ff. 242v–244v.

[31]Jones, 529, 543; *Acta Sanctorum*, 309, 311.

[32]Jones 527, 553; *Acta Sanctorum*, 309, 313.

[33]Jones, 542; *Acta Sanctorum*, 311. A similar votive statuette was promised at Robertsbridge (Jones, 531; *Acta Sanctorum*, 309).

[34]Jones, 534; *Acta Sanctorum*, 310.
[35]Jones, 500; *Acta Sanctorum*, 305.
[36]Jones, 498; *Acta Sanctorum*, 305.
[37]Jones, 499; *Acta Sanctorum*, 305.
[38]British Library, Loans 29/61 f. 243.
[39]Jones 219–28; Peckham nos.76–87.
[40]Walcott, 175.
[41]Jones 178–9, where full references are given.
[42]C. Deedes, ed., *Episcopal Register of Robert Rede II*, Sussex Record Society, 11 (1910), 436.
[43]Jones, 493–5; *Acta Sanctorum*, 304.
[44]F. Bond, *Dedications and Patron Saints of English Churches* (1914), 328.
[45]R. Twysden, ed., *Historiae Anglicanae Scriptores Decem* (1652), 1794.
[46]Jones, 180–2, where full references are given.
[47]J. W. Willis Bund, ed., *The Register of Bishop Giffard 1268–1302*, Worcester Historical Society 1902, 23.
[48]Public Record Office, STAC 3/1/91; *Letters and Papers of Henry VIII*, 17 (1900) nos. 1015, 283 (33).
[49]L. Toulmin Smith, ed., J. Leland, *Itinerary*, 2 (1908), 93; J. Amphlett, ed., T. Habington, *Survey of Worcestershire*, Worcester Historical Society 1895–9, 1. 468, 2. 301; W. Camden, *Britannia*, 2nd edition, 2 (1806), 470—first published 1586.
[50]T. R. Nash, *Collections for the History of Worcestershire*, 1 (1781), 323.
[51]Jones, 519; *Acta Sanctorum*, 308. Also T. E. Tanner, *St. Edmund's Chapel, Dover, and its Restoration* (Dover, no date), 8 ff. St. Richard was long remembered in Dover, where a close was named after him: C. Hanes, *Dover Priory* (Cambridge, 1930), 125–6.

Sussex Archaeological Collections **121** (1983), 87–94.

LANCASTER *v.* DALLINGRIDGE: A FRANCHISAL DISPUTE IN FOURTEENTH CENTURY SUSSEX

by Simon Walker

The prosecution of Sir Edward Dallingridge in 1384 by John of Gaunt is examined in detail. It is shown to have been the result of a long series of attacks on Gaunt's estates in Sussex, occasioned by the local gentry's resentment at the efficiency and novelty of the Lancastrian administration in the county. The support Dallingridge enjoyed amongst the gentry was sufficient to protect him from retribution until 1384, when John of Gaunt exploited the momentary weakness of Sir Edward's patron, Richard earl of Arundel, in order to press his case. The judicial proceedings provide some vivid details of court procedure in the late fourteenth century and show that Dallingridge personally conducted a lively defence, but he was unable to avoid sentence before a bench of justices favourable to Lancaster. The duke was, however, sensible of the power of the Sussex gentry and careful not to press his advantage. In the end, Dallingridge lost very little by his violence.

In June 1384 Sir Edward Dallingridge was attached at the suit of John of Gaunt, duke of Lancaster, to answer a special commission of oyer and terminer on certain charges brought against him.[1] Lancaster was clearly anxious to gain a conviction, for he proceeded concurrently against Sir Edward at the trailbaston sessions of the Rape of Pevensy, both by special bill and jury of indictment.[2] His anxiety is understandable for, whatever the findings of the commission, they could hardly fail to be without a wider political significance. Gaunt was at the height of his unpopularity amongst Richard II's courtiers; during the recent Salisbury Parliament he had been accused of plotting the king's death and Richard had allegedly reacted by ordering his summary execution. Yet one of his few remaining allies, the earl of Arundel, counted Dallingridge amongst his principal retainers, whilst Sir Edward himself was perhaps the most influential of the Sussex gentry at this period.[3] After a long and apparently profitable career in the French wars, he was currently expanding and consolidating his Sussex estates. A servant of the Despensers and the duke of Brittany, as well as the Arundel family, Dallingridge was nevertheless a figure of political importance in his own right.[4] In 1380 he had been chosen by the Commons as one of the three knights on the committee appointed to examine the state of the realm and his subsequent career shows him to have been an able diplomat and politician. In the aftermath of the Appellancy crisis, Dallingridge was to become an important royal councillor. When London was taken into the king's hand in 1392, Sir Edward was appointed warden of the city and his diplomacy and moderation seem to have played a large part in the eventual reconciliation between the king and citizens.[5] In addition to the intrinsic interest of a dispute between such protagonists, the survival of an unusually full record of the commissioners' proceedings justifies a close examination of the case, for it provides a chance to examine John of Gaunt's method of action in such a dispute whilst casting an interesting sidelight on the political community of Sussex in Richard II's reign.

The occasion for the judicial commission sought by John of Gaunt was an outbreak of violence

against Nicholas Boyle, his ranger in Ashdown forest, which culminated in the murder of William Mouse, a sub-forester, in March 1384. It emerges from the presentments, however, that this was only the most recent in a constant series of attacks on the duke's Sussex estates, dating back to June 1377, when his chase at Ashdown was illegally hunted and his lands in Fletching and East Grinstead despoiled.[6] In March 1380 the duke's underwood was fired at Ashdown and in April 1381 Dallingridge began a campaign of systematic intimidation against his estates and officials. On Good Friday he drove off livestock belonging to the duke from Fletching. A month later he appeared whilst John Broker, the duke's steward in Sussex, was holding his lord's court at Hungry Hatch and compelled him to swear an oath never to hold a court there again. For good measure, Broker was deprived of his court rolls and book of fees. In June, taking advantage of the confusion created by the Peasants' Revolt, Dallingridge and his accomplices ambushed John Delves, the Lancastrian feodary in Sussex, at Ringmer, forced him to surrender his commission from the duke and then burnt it in front of him.[7]

The suppression of the great insurrection brought a halt to Dallingridge's open violence, but this was principally because he had succeeded in his object of breaking the resistance of the duke's officials. Faced with a national crisis in his authority Gaunt chose conciliation rather than confrontation wherever possible. In August 1381 Sir Edward was appointed master forester of Ashdown, at a fee of ten marks a year, and for the next two years he and his servants seem to have been allowed to hunt the forest at will. Simon Littler, for example, caught poaching at Maresfield in February 1383, was handed over for punishment to Dallingridge, who immediately freed him and appointed him his sub-forester. The attack on Nicholas Boyle in 1384 must, therefore, be seen against a background of continuing popular unrest in Sussex in the wake of the Peasants' Revolt. At Lewes, the earl of Arundel's castle was stormed and pillaged in 1383; on the Lancastrian estates in the county, disorder and disobedience continued unchecked. Sir Thomas Hungerford, Gaunt's chief steward, was unable to levy a fine of ten shillings from Fletching because the villagers refused to have the lord's minister amongst them.[8]

Despite this disorder, Sir Edward might have remained secure in his local predominance, had it not been for the exigencies of national politics. Although removed from his master forestership of Ashdown in August 1383, Dallingridge remained in close contact with the Lancastrian administration. When he went up to Salisbury for the Parliament of April 1384 he carried with him part of the issues of the duke's Sussex lands to deliver to William Everley, his receiver.[9] At that same Parliament, however, the Commons complained for the first time of the violence and extortion practised by the followers of the magnates. Lancaster responded to their demand for legislation on the subject by an assurance that the lords of the realm were capable of maintaining discipline amongst their own men, adding that an example would be made of any of his own followers guilty in this respect. The Commons accordingly dropped the matter but, if an example had to be made as an earnest of the lords' good faith, Gaunt's delinquent master-forester presented an obvious, perhaps not unwelcome, target. Within a fortnight of the Parliament's close the judicial commissions against Dallingridge had been issued at Lancaster's request.[10]

Up to this point, Lancaster's policy had been one of inaction and conciliation in the face of considerable and violent provocation. He had, in a sense, little choice for his Sussex estates were of recent acquisition and had yet to acquire the burden of loyalty and expectation that went to consitute a magnate's local standing. Indeed, in expressing so forcibly his hostility towards the duke's officials, Dallingridge was voicing the grievances of many of the Sussex gentry against a powerful but alien newcomer. As earl of Richmond, Gaunt had held the manors of Crowhurst, Burwash and Bivelham with the rape of Hastings since 1342. In 1372, however, he surrendered

these estates in the east of the county and received in exchange Queen Philippa's former manors — Willingdon, Grinstead and Maresfield as well as the forest of Ashdown and Pevensey rape and castle.[11] This marked a definite shift westward of Lancastrian territorial interests in Sussex and so brought the duke and his ministers into contact with a powerful new set of neighbours. Chief amongst these were John, lord de la Warr and Sir Edward Dallingridge. De la Warr was lord of the manors of Wilmington, Arlington and Folkington, close to Pevensey, and of Fletching, which marched with Maresfield. Dallingridge's lands, like de la Warr's, extended throughout Sussex but the family originated in Hartfield and Folkenhurst and it was Sir Edward's estates along the northern edge of Ashdown forest—Sheffield and his residential manor of Bolebrook—that formed the core of his inheritance.[12] The evidence suggests that in the past the estates of the Crown in this area had been laxly administered. Farmed for £30 p.a. in Queen Philippa's day, cash liveries from these same properties under Lancastrian supervision were closer to an average £45 p.a.[13] The discrepancy is so large as to suggest that Sir John Seynclere, Queen Philippa's farmer, was receiving a preferential lease in lieu of a retaining fee and the steep rise in the issues of the estates cannot, in consequence, be regarded as direct evidence of the superior efficiency of the Lancastrian administration. Nevertheless, Seynclere's stewardship seems to have been lax, for the foresters under his supervision were themselves guilty of illegal hunting and petty extortion, the manor of Maresfield was in ruinous condition, its ministers seriously in arrears of their charge. Seynclere himself was later alleged to have detained the profits of quarrying in the forest to his own use, although they were no part of his farm, and to have prevented the Ranger from discharging his duties effectively.[14]

Against this background, the minute supervision exercised by the duke's council over his lands came as an unwelcome contrast, the annual tourns conducted by Sir Thomas Hungerford as an irksome financial innovation, whilst a spate of outlawries suggests that tighter control was also being kept over the Lancastrian forest rights.[15] From the point of view of the Sussex gentry it was Lancaster who was the aggressor, disrupting the balance of the local community by his intrusive lordship. Resentment at the demands of the Lancastrian administration was widespread. The villagers of Folkington withdrew their suit from the duke's hundred court of Longbridge and were maintained in their defiance by John de la Warr. Even the sheriff consistently refused to hand over the profits of his tourn in the vill of Lindfield, which properly belonged to the duke, unless he was paid a mark a year for his trouble. Dallengridge could, in consequence, command considerable support in his attacks from amongst his immediate neighbours. His principal accomplices, besides his own family and servants, were Sir Thomas Sackville of Chalvington and Sir Philip Medstede.[16] Sackville was Dallingridge's son-in-law and Medstede a fellow client of the earl of Arundel; the three often acted together.[17] Sackville, whose estates lay principally between the Lancastrian possessions of Pevensey and Willingdon, was also responsible for abetting and receiving the murderers of William Mouse, Gaunt's subforester. Against a tight-knit gentry community of this kind, even the greatest of English magnates could not act until he was sure of his ground.

Lancaster was not, of course, entirely lacking in support amongst the Sussex gentry. His many retainers included Robert Beyvill of Little Perching, William Fifide of Shermanbury[18] and Sir John Seynclere, perhaps retained as compensation for his loss of the farm of Queen Philippa's Sussex lands. None were as powerful as Dallingridge, however, nor could the Lancastrian affinity in Sussex (if it can be dignified by that term) draw on the bonds of kinship and the sense of grievance open to the duke's opponents. In this case, however, Lancaster's lack of an adequate body of local support was amply compensated by his influence on the delegates of central authority. Six justices of oyer and terminer were appointed under a commission dated 16 June but the proceedings were heard by

only three — Reginald Cobham, David Hanmere and John Holt. Holt was both a justice of Common Bench and John of Gaunt's steward at Higham Ferrers. Hanmere had been in receipt of a fee from the duke since at least 1376/7. For the trialbaston sessions in the Rape of Pevensey these three sitting justices were joined by a fourth, the ubiquitous Sir Thomas Hungerford, Lancaster's chief steward.[19] The absentee justices, by contrast, included Richard, earl of Arundel, Dallingridge's principal local patron and Sir Edward Saint John, a trusted servant of the Arundel family. This is odd for, under normal circumstances, Arundel would have been expected to look after the interest of his retainer; the original appointment of justices may even have ained at impartiality by including the partisans of both protagonists, in the hope that they would bring the opposing parties to arbitration rather than judgement. In the summer of 1384, however, Arundel was in no position to oppose Gaunt's whshes, for it was only by the duke's mediation that he had been saved from the consequences of his own tactlessness and the king's anger at Salisbury the month before.[20] Political coincidence had thus left Dallingridge unexpectedly exposed to Lancaster's retribution. The duke was swift to seize his opportunity.

Appointed on 16 June, the justices under both commissions sat at East Grinstead from Thursday 23 June until Wednesday 29 June. Unusually, Dallingridge appeared in the court to defend himself and it is, in consequence, possible to follow the judicial proceedings in detail and hence to identify the motives for his attack on the Lancastrian estates with some precision. The sueing of a commission against him and the speed with which the justices acted upon it seems, in the first place, to have taken Sir Edward, by surprise, for his behaviour in court was violent and unruly.[21] On first hearing the charges against him, Dallingridge immediatedly answered them by a wager of battle — throwing down his gauntlet in court and saying that unless his accuser was closer in blood to the King than himself, he was prepared to disprove the charges against him by his body. Such a challenge was rare, but not unknown as a legal ploy, yet since Dallingridge was accused of trespass alone it was not a recourse open to him, for the wager of battle would only lie in the writ of right or on an appeal of felony.[22] Dallingridge, or rather his counsel, must have known this and his behaviour is puzzling. If his action was not simply bluster, it may have been an attempt to gain time in order to prepare a more adequate defence. On the other hand, Sir Edward's reference to the duke's precedence of blood suggests that he may have been thinking of the procedure of the court of chivalry, where the wager of battle was both permissible and more frequent.[23] Such a possibility is perhaps confirmed by Dallingridge's request, on being presented by the hundred juries, for a copy of the charges against him so that he might answer the presentments by the advice of his counsel. This was common practice in the court of chivalry but the defendant at common law did not enjoy such a right until the nineteenth century.[24] In consequence, the request was refused by the justices, who pointed out that he had already answered the same charges when alleged against him by the duke's counsel, upon which Dallingridge refused to plead at all and was promptly committed to the custody of the sheriff for contempt.

His confinement seems only to have been formal, for Sir Edward was certainly in court when counsel began his defence.[25] This began impressively enough by entering a waiver stating that the offences of which Dallingridge stood accused had occurred during the great rebellion and he could, in consequence, have claimed the benefit of a general pardon for all trespasses committed at that time, but that he had no wish to do so. Sir Edward, standing in court with his counsel, expressly confirmed this, saying that he had no wish to claim the benefit of any statute in so great a matter, and asked his counsel to reply to the charges against him. It was the common rebels, he explained, gathering together with the intention of killing the duke's officials and destroying his property, who had attacked Delves and Broker. He had indeed been there but only in his capacity as a justice of the

peace, doing his best to pacify them. Equally, he was innocent of all the trespasses and hunting offences alleged against him, apart from taking two does and two hinds by the duke's command to deliver to Sir William Croyser's wife. On the other hand, Dallingridge attempted no defence to the accusation that he had prevented the duke of Lancaster's steward from holding his court at Hungry Hatch.[26] He admitted the fact, arguing instead that the court there was innovation, established by the present duke, and one that drew away suitors from his own hundred court of Dean (i.e. Danehill in Horsted Keynes parish). He had, in consequence, forbidden his tenants to attend the Lancastrian court, even if summoned before it. In the same way, Dallingridge admitted the charge of carrying off four cows, six oxen and 30 sheep belonging to the duke from Fletching, stating that as the forfeited chattels of John Herlond, a convicted felon, they were rightfully his as lord of the hundred of Dean, as his ancestors had been since time out of mind.

This was the real crux of Dallingridge's grievance against John of Gaunt. The trespasses and hunting offences of which he stood accused were commonplace, even traditional, misdemeanours amongst the county gentry. His own grandfather had been convicted of very similar offences in Ashdown forest in 1315.[27] A landowner expected, as a matter of courtesy, to be allowed to ride over his neighbour's estates and Richard earl of Arundel's attempt to establish the inviolability of his Sussex chases in 1377 had led to considerable resentment amongst the gentry, who clearly considered him to have exceeded his rights.[28] The violence of Sir Edward's attacks on Lancastrian property and officials was, by contrast, exceptional, only to be explained as the reaction to a more fundamental challenge to his local standing. There is some evidence that his father, Roger Dallingridge, has been a forester of Ashdown under Queen Philippa; he certainly received gifts of deer from the forest.[29] Sir Edward's attack may, in consequence, have been prompted by a desire to regain a place in the forest administration lost to his family when the property passed to John of Gaunt. The denial of franchisal rights was, however, an altogether more serious matter. The profits of private courts was small, but the possession of private jurisdiction was invaluable, an indispensable adjunct of lordship, both as an instrument of authority and a means of patronage. Dallingridge's possession of the hundred of Danehill gave him lordship over men as well as lordship over land, a means of coercing and disciplining his tenants that was especially valuable at a time of increasing labour difficulties. It was this that he had sought to defend by his attacks on the Lancastrian officials who trespassed on his franchise.

Yet his defence of his seigneurial rights, though calculated to win approval amongst the local gentry, proved less successful in legal argument. Thomas Pinchbeck, Lancaster's counsel on this case, who was later to become the duke's chief steward in the south and a justice in the palatinate of Lancaster, replied that the franchisal rights in this dispute were so nearly attached to the dignity of the Crown that they could not be exercised by another without a specific royal grant — which, Pinchbeck lost no time in pointing out, the duke of Lancaster certainly possessed and Dallingridge's customary claim conspicuously lacked.[30] This was precisely the position adopted by Crown lawyers during Edward I's *quo warranto* inquiries[31] and it was fully supported by two royal letters close, reciting the franchisal grants made to Lancaster in 1372, as well as by the finding of the hundred jury that Henry, late duke of Lancaster, had held a court at Hungry Hatch every three weeks, as of the honour of Leicester.[32] The case was not, however, as clear cut as the jury's verdict suggests. Dallingridge's plea of long user, that his ancestors and predecessors as lords of the hundred had always exercised the rights he claimed, had long been recognized at law as sufficient warrant for possession of a franchise. If the court at Hungry Hatch was not itself an innovation, it may be that the novelty lay in the duke's sweeping interpretation of the rights it gave him, including the ability not only to justice his immediate tenants but also to exercise a supervizory jurisdiction over their

courts. It was certainly this claim to which Dallingridge most objected, but his protest was unavailing against the combination of judicial favour and royal support that Lancaster could command.[33]

Having lost his principal point, Dallingridge had little better success with his other pleadings. His case was substantially undermined, when the justices reconvened on Saturday 26, by the appearance of John Bocche, who came into court and promptly confessed to being an accomplice in all the crimes charged against Dallingridge and his companions.[34] Bocche's appearance in court is surprising, when the sheriff could find none of the others indicted. It is so opportune, and his admission of guilt so comprehensive, that it is hard not to suspect a degree of suborning by the Lancastrian administration. Outwardly he was treated with no special leniency by the court since, on failing to appear in King's Bench he was outlawed until his surrender to the Marshalsea in 1388, but he was then paid 36 shillings towards the cost of his pardon by the duke's receiver in Sussex, which strongly suggests that some sort of plea-bargain must have been struck before Bocche appeared in court at all.[35] As they could hardly fail to do, the jury consequently found against Dallingridge on almost every charge, exonerating him only from the accusation of burning the duke's brushwood at Ashdown in March 1380 and the attack on his servants and property of Ringmer. They also moderated the rather exaggerated estimate of the game taken by Dallingridge and ajudged against him damages of £1,080 rather than the £2,000 originally demanded. Sir Edward once again exacerbated matters by his intransigence, for whilst Sir John Seynclere was giving evidence he declared that it was untrue, threw down his gauntlet in open court and again wagered battle, this time against Seynclere. His action was certainly without legal justification this time for witnesses, although relatively common in court by the late fourteenth century, had no formal or essential part in proceedings. This suggests that Dallingridge recognized the proceedings for what they were, a challenge to his lordship, and so insisted on treating the case as a matter of honour rather than of legal form. For his contempt of court, Sir Edward was again committed to the custody of William Waleys, the Sheriff, and he remained under arrest after conviction, since he refused to make fine with the king for his trespasses. Waleys could be trusted to keep him safe, for he was also Sir John Seynclere's son-in-law.[36]

In the short term, therefore, John of Gaunt's prosecution of Sir Edward Dallingridge had successfully vindicated his seigneurial rights in Sussex, indicated to the county gentry the limits of the earl of Arundel's protection and provided an object lesson in discipline for the benefit of the Commons. Yet the sequel to these events clearly demonstrates how exceptional were the circumstances that enabled Gaunt to bring his opponent to heel. On 16 July, little more than a fortnight after his committal to custody, the Sheriff was ordered to release Dallingridge; it has been plausibly conjectured that the earl of Arundel, benefitting from the duke's temporary absence abroad, interceded for him whilst the king was at Arundel castle in July.[37] This was clearly displeasing to Gaunt who, on his return from negotiating a truce with the French, had Sir Edward re-arrested in October, but this second imprisonment was again very temporary, since Dallingridge was returned to the Westminster Parliament in the following month. Sir Edward's political standing thus suffered little harm from his conviction. His accomplice, Sir Thomas Sackville, was eventually pardoned at the instance of Sir James Berners, the chamber knight, and in so far as the affair brought him into prominence as at odds with the unpopular John of Gaunt, it may even have increased Dallingridge's standing amongst the king's courtiers and hence eased his path to rapid promotion in Richard II's service.[38]

In Sussex, as well, Gaunt was careful not to press his advantage too far. The chattels of John Herlond, which Dallingridge had illegally seized in April 1381, were never returned to the duke's ministers; he was still in dispute with the Lancastrian council over their value at the time of his

death.[39] John Skinner, Sir Thomas Sackville's parker, successfully followed the example of his masters and refused to pay the fine imposed on him. The tenants of Maresfield were granted two marks towards the cost of a new rental, to replace that destroyed by Dallingridge. The court at Hungry Hatch, which had so outraged him, was re-established in 1385–6 but abandoned in the following year by the advice of the duke's council and, it was specifically stated, at the suit of Sir Edward Dallingridge.[40] It was not the only source of income from the duke's estates to vanish. The violence in Ashdown meant that the profits of the forest dropped steeply whilst the bailiff of the Lancastrian franchises in the county was unable to levy the estreats imposed during the chief steward's tourn on account of the concerted legal opposition to his demands.[41] For John of Gaunt, the profits of the court (29s. 2d. in 1385–6) were a small price to pay in order to maintain good relations with a man of Dallingridge's standing. He had established the principle that he was entitled to hold a court there; in practice he could well afford to abandon it. His concession paid handsome dividends for Sir Edward's son, Sir John, served Henry Bolingbroke as both earl of Derby and king of England with conspicuous loyalty.[42] Dallingridge was soon in trouble with the law again, appearing in King's Bench in Hilary 1385 for an alleged attack on a jeweller in London, but he had little cause to abandon his violent ways.[43] Besides an uncomfortable couple of months in the summer of 1384 his attack on the Lancastrian estates in Sussex proved remarkably successful. In the short term, it bought him the master forestership of Ashdown; in the long term, it brought the abandonment of the court at Hungry Hatch. It was perhaps the success to be gained by such violence and the Commons' unwillingness to will the means for its effective suppression, rather than the magnates' failure to discipline their own men, that rendered the Commons' complaints at the Salisbury Parliament so unavailing.

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APPENDIX

P.R.O., JUST 1/944 m.4:

Memorandum quod cum Edwardus Dalyngrugge chivaler attachiatus fuit ad respondendum Johanni[1] regi Castell' et[2] Leg' duci Lancastr' , simul cum aliis de placito diversarum transgressionum, idemque rex dux die jovis in vigilia nativitatis Sancti Johannis Baptist versus prefatum Edwardum transgressiones in brevi (sic) et narratione sua contentas coram prefatis justiciariis narravit et declaravit, idem edwardus coram prefatis justiciariis statim et expresse dixit quod si quis ea que in brevi (sic) et narratione predictis continentur sibi imponere voluit, nisi fuerit de propinquior consanguini domini regis quod ipse paratus fuit versus eum ea[3] disrationare per corpus suum et inde coram prefatis justiciariis protinus vadiavit duellum. Insuperque[4] cum idem Edwardus de diversis transgressionibus indictatus fuerat et per processum versus eum inde factum predicto die jovis coram prefatis justiciariis comparens, allocutus[5] qualiter de transgressionibus predictis sibi impositis se voluit[6] acquietare, idem Edwardus petiit a curia predicta copiam presentationum predictarum sibi liberari, ut de eis per avisamentum consilli sui domino regi potuit respondere. Et quia constabat curia quod idem Edwardus de materiis in eisdem presentationibus contentis antea ad sectam ipsius regis ducis allocutus fuit et eidem regi duci inde respondebat et tempus maturum tunc non instabat curia diversis de causis ad copiam presentationum eidem Edwardo deliberandam, per quod lectis sibi presentationibus predictis dictum fuit eidem Edwardo per curiam quod domino regi responderet de premissis transgressionibus sibi impositis, quiquidem Edwardus coram prefatis justiciariis expresse dixit quod ipse noluit domino regi inde respondere quicquid iidem justiciarii sibi inde facere voluerint nisi haberet copiam presentationum predictarum, per quod idem Edwardus pro contemptibus predictis comittitur prisone in custodia Willelmi Waleys vicecomites, ibidem moraturus quousque domino regi pro contemptibus predictis satisfecerit. Ac postmodum cum jurata inter prefatum regem ducem et Edwardum de transgressionibus predictis ad dicendum veredictum suum coram prefatis justiciariis onerata fuerat ac quidam Johannes Sencler chivaler pro ipso rege duce diversas materias in evidencia prefate jurate declaraverat, prefatus Edwardus coram prefatis justiciariis dixit[7] quod materie ille non continebant veritatem et protinus projecit seretecam suam coram prefatis justiciariis et petiit se admitti ad disrationandas materias predictas versus prefatum Johannem Sencler per duellum, et sic contra legem terre coram prefatis justiciariis vadiavit inde duellum per quod preceptum fuit vicecomiti quod salvo et secure custodiret prefatum Edwardum quousque domino regi satisfecerit pro contempitibus predictis.

1. Written over erasure.
2. Interlined.
3. Written over erasure.
4. *que* interlined.
5. Written over erasure.
6. Written over erasure.
7. Interlineated.

Footnotes

[1]Public Record Office (abbreviated hereafter to P.R.O.) JUST 1/947/5.

[2]P.R.O., JUST 1/944.

[3]The Marquis Curzon of Kedleston, *Bodiam Castle, Sussex* (London, 1926), 25-8; A. Goodman, *The Loyal Conspiracy* (London, 1971), 115-16, give a brief biography.

[4]L. F. Salzman, ed., *Feet of Fines for the County of Sussex* 3, Sussex Record Society, 23, (1916), Nos. 2480, 2574, 2580, 2616; P.R.O., SC 8/209/10442; *Cal. Pat. Rolls 1381-5*, 55.

[5]T. F. Tout, *Chapters in the Administrative History of Medieval England*, 3 (Manchester, 1928), 352; A. Tuck, *Richard II and the English Nobility* (London, 1973), 141-3. C. M. Barron, 'The Quarrel of Richard II with London', in *The Reign of Richard II*, ed. F. R. H. du Boulay and C. M. Barron (London, 1971), 192.

[6]P.R.O., JUST 1/947/5 m. 1; DL 29/441/7083; *Cal. Pat. Rolls 1381-5*, 580

[7]P.R.O., JUST 1/944 m. 1-3; JUST 1/947/5 m. 1.

[8]P.R.O., JUST 1/944 m. 1; A. Reville, *Le Soulevement des Travailleurs d'Angleterre en 1381* (Paris, 1898,) cxxxiv; P.R.O., DL 29/727/11938.

[9]E. C. Lodge and R. Somerville, eds., *John of Gaunt's Register* 1379-83, Camden Third Series, 56 (London, 1937), No. 1138; P.R.O., DL 29/727/11940.

[10]J. R. Lumby, ed., *Polychronicon Ranulphi Higden*, IX, Rolls Series, (London, 1886), 40-1; *Cal. Pat. Rolls 1381-5*, 427-8.

[11]*Cal. Pat. Rolls 1364-7*, 333; S. Armitage-Smith, ed., *John of Gaunt's Register 1372-6*, Camden Third Series, 21 (London, 1911) Nos. 24, 30.

[12]P.R.O., SC 2/206/16; *Cal. Close Rolls 1292-6*, 499; *Feudal Aids*, V, 139, 146; *Calendar of Inquisitions Post-Mortem* VI, 122; W. Hudson, ed., *The Earliest Subsidy Returns for the County of Sussex in the Years 1296, 1327, 1382*, S.R.S., 10 (1909), 188, 195.

[13]P.R.O., SC 6/1028/4 m. 1; DL 29/441/7082-6.

[14]*Cal. Pat. Rolls 1370-4*, 179; Armitage-Smith, Nos. 1569, 1654; P.R.O., C 260/83 No. 88—the plea is stained and damaged.

[15]E.g., P.R.O., C 88/58 Nos. 17, 58; E 101/510/28.

[16]P.R.O., DL 29/717/11939; JUST 1/944 m. 2; JUST 1/947/5 m. 3.

[17]*Cal. Pat. Rolls 1381-5*, 441; P.R.O., C 67/28B m. 13; Lodge and Somerville, No. 1165.

[18]A particular enemy of Dallingridge's—e.g. P.R.O., SC 8/207/10324.

[19]P.R.O., JUST 1/947/5 m. 1; R. Somerville, *History of the Duchy of Lancaster*, 1 (London, 1953), 373; J. R. Maddicott, *Law and Lordship: Royal Justice on Retainers in Thirteenth and Fourteenth Century England*, Past and Present Supplement 4 (1978), 72-3; P.R.O., JUST 1/944, m. 1.

[20]Goodman, 144-5; *Polychronicon Ranulphi Higden*, IX, 33.

[21]See the Appendix for what follows.

[22]G. Neilson, *Trial by Combat* (Glasgow, 1890), 37; F. Pollock and F. W. Maitland, *The History of English Law Before the Time of Edward I*, 2 (Cambridge, 1898, repr, 1968), 632-4.

[23]This is the interpretation of Sir Robert Cotton in *A Collection of Curious Discourses*, ed. T. Hearne (Loncon, 1771), 179.

[24]Hearne, 244.

[25]P.R.O. JUST 1/947/5 m. d.

[26]P.R.O. JUST 1/944 m. 3.

[27]L. C. Lloyd and D. M. Stenton, eds. *Sir Christopher Hatton's Book of Seals* (Oxford, 1950), No. 356.

[28]P.R.O. JUST 1/943.

[29]*Cal. Pat. Roll 1351-4*, 156, P.R.O. SC 6/1028/4 m. 1.

[30]P.R.O. JUST 1/944 m. 2d.

[31]T. F. Plucknett, *The Legislation of Edward I* (Oxford 1949), 44.

[32]P.R.O., JUST 1/947/5 m. 2d.

[33]D. W. Sutherland; *Quo Warranto Proceedings under Edward I* (Oxford, 1963) 81-3, 182-4; P.R.O., JUST 1/947/5 m. Id.; JUST 1/944 m. 3.

[34]Ibid., m. 2.

[35]P.R.O., C 88/61 no. 17; DL 29/728/11975 m. 1. He still came to a bad end, murdered on the high road at Sheffield in September 1392—*Cal. Pat. Roll 1391-6*, 322.

[36]P.R.O., JUST 1/947/5 m. 2; JUST 1/944 mm. 4, 1d. R. F. Dell, *The Glynde Place Archives, a catalogue* (Lewes, 1964), xii.

[37]*Cal. Close Rolls 1381-5*, 449; Goodman, 115.

[38]*Cal. Close Rolls 1381-5*, 482-3; *Return of members of Parliament Part I: Parliament of England 1213-1702* (London, 1878), 224; *Cal. Pat. Rolls 1381-5*, 580.

[39]P.R.O., DL 29/727/11944.

[40]P.R.O., DL 29/411/7085-7.

[41]P.R.O., DL 29/728/11985 m. 2d.

[42]L. Toulmin-Smith, ed., *Expeditions to Prussia and the Holy Land Made by Henry Earl of Derby*, Camden New Series, 52 (London, 1874), 304.

[43]P.R.O., KB 27/495 m. 53d.

[44]I would like to thank Christopher Whittick, of the East Sussex Record Office, for his help with this transcript.

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THE NEUTERING OF THE FELLOWSHIP AND THE EMERGENCE OF A TORY PARTY IN LEWES (1663–1688)

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The disappearance of the Fellowship from the formal record of town government in Lewes, during and after the 1670s, has been noted in passing by previous local historians. This article seeks to set that disappearance in the wider context of the sectarian and political divisions occurring within the county town at the time. In particular the consolidation of a new civic elite, quite distinct in its composition from that of the redundant Fellowship, is seen as marking the emergence of a Tory party in the Borough.

The Fellowship of 'The Twelve' in Lewes retained its essential continuity during the long years of civil war and revolution between 1642 and 1660. Although not a magistracy, its members constituted a civic elite, filled vacancies by co-option, and chose each other annually to be High Constables. These two officers had a special responsibility for law and order throughout the borough, although not in Southover and the Cliffe. To this end they supervised two Headboroughs, controlled a lock-up in the west gate, and occasionally husbanded a small stock of fire-arms. They also served to integrate the borough with a wider political world, providing a point of reference for central government and acting as spokesmen for neighbouring Constables at Quarter Sessions. They were chosen each October when the Stewards and Court Leet assembled. The Leet met mainly to enforce by-laws against various nuisances; but the Fellowship remained distinct from it, autonomous and self-perpetuating, protected by prescriptive custom.[1]

But this stately cycle of election and co-option ended abruptly in 1663. Whit Monday of that year witnessed the last recorded co-options, while in October, and again in 1664, the Constables were chosen by the Justices of the Peace assembled at Lewes for their Michaelmas Sessions. Moreover neither Constable so chosen in 1663 was a member of the Fellowship, and in 1664 only one was.[2] Noting this last development, the local historian Paul Dunvan judged that 'From this period we may date the rapid decline of that Society'—and clearly so, since Constables were no longer being chosen either by or from within the Fellowship. It had in effect been politically neutered. Dunvan noticed other evidence of discontinuity: for the civic years 1663/4–1666/7 'there is nothing more given in the Town-book, than barely the names of the Constables and Headboroughs'.[3] Upheaval often leaves the barest official record for posterity.

Dunvan also advances a reason for such a serious break with precedent. 'This may, with some probability, be imputed to the contemporary persecution of many respectable Presbyterians and other Non-conformists in the town and its vicinity.'[4] This 'persecution' was itself the result of 'the Clarendon Code'. Although Charles II was restored in May 1660, a settlement in Church and State was finally shaped after the election, a year later, of an aggressively Anglican and 'Cavalier' House of Commons, which chose to equate Nonconformity with political sedition. A revised prayer book was authorised in April 1662, and then an Act of Uniformity was passed which required clergy in the re-established Church of England to accept it, together with episcopal ordination and an oath

promising non-resistance to royal authority. As a result some two thousand ministers—Presbyterian, Independent and Baptist— were deprived of their livings in August 1662 or soon after. Laws were also revived which threatened with fines and imprisonment any one who boycotted worship in his parish church according to the new rites. Tens of thousands of the laity, therefore, became potential Nonconformists. The same Anglican yardstick was used to purge the towns of political undesirables; commissioners were to rid corporations by March 1664 of all office holders who refused the non-resistance oath or the Anglican sacrament. The prospect of political exclusion and religious persecution caused dismay, anger and a sense of betrayal among 'Dissenters', and the summer of 1663 buzzed with rumours of plots and insurgence. These prompted fresh legislation: the Conventicle Act (1664) outlawed all assemblies of five or more adults 'under colour of religion', and the Five Mile Act (1665) forbade Nonconformist ministers and teachers to live near a corporate town or any parish where they had served before August 1662.[5]

Nonconformists in Lewes quickly felt the force of these new laws. Under the Commonwealth the town had emerged as a hive of sectarian activity. Quite apart from a militant group of Quakers, against whom every hand was turned, two powerful congregations were flourishing there by 1660. Edward Newton ministered to the Presbyterians and the Fifth Monarchist Walter Postlethwaite to the Independents. Both were duly deprived of their livings in August 1662.[6] Nearly a year later forty-nine men from the parishes of St. Anne's and St. Michael's were indicted at the July Quarter Sessions for not attending their parish church. Forty of these were convicted the following October and fined four shillings each. Respectable as well as numerous, they included five woollen drapers, four tailors, two bakers, two hosiers, two apothecaries, two haberdashers, two linen drapers, two grocers, a maltster, cordwainer, barber, joiner, hatter, shearman, butcher, clockmaker, blacksmith, husbandman, physician and 'gent', as well as five clerks and a writing master.[7] Four of the clerks proved to be deprived ministers—Edward Beecher from Kingston, John Earl from Tarring Neville, Henry Godman from Rodmell and Postlethwaite from St. Michael's. Edmund Calamy later noted that perhaps a dozen or more ejected clergy took up residence in Lewes, a town 'blessed with more than an equal share of these good ministers'.[8] Also in October 1663 a further nine men were presented for non-attendance from St. John's parish, which still left Dissenters in All Saints, Southover and the Cliffe unaccounted for.[9]

Local Nonconformists were not unduly abashed by these moves, however—at least not according to the informer John Hetherington. Writing from Lewes on 11 October, the last day of the Michaelmas Sessions, he claimed that conventicles were still frequented 'as much as in Oliver's time'. 'Fellows preach here . . . no way qualified and obstinate opposers of His Majesty's government'. The recent convictions for non-attendance had uncovered only the tip of the Dissenting iceberg: five times as many more might be 'put in' at the next Sessions in January. Such hesitant caution on the part of 'our public ministers' he attributed to 'fear of a turn'. Lewes, it seems, like everywhere else, was alive with rumours of rebellion. There had been talk 'of an intention of a plot for this town to have risen . . . but nothing was made out'. He ended with a plea that the Deputy Lieutenants and Justices of the Peace be further encouraged to assist 'the honest party' in the town, especially since no militia forces were available in the area.[10] His letter was addressed to Joseph Williamson at the office of Sir Henry Bennet, a principal Secretary of State (and later Earl of Arlington), who maintained an intelligence network in the provinces, of which Hetherington was probably a part. But although the government was monitoring the situation at Lewes, the attitude to Dissent of such senior ministers as Bennet was by no means clear-cut. Many never fully subscribed to a political strategy which rendered the Crown the prisoner of a Church and

Cavalier party, however loyalist. These doubts were shared by Charles II himself, as his brief attempt at toleration in 1672–3 was to show soon enough.

Clearly, however, the 'honest' party in Lewes harboured no such scruples, nor did their fellow loyalists among the Justices of the Peace, since the same week which saw forty convictions for non-attendance also witnessed the first neutering of the Fellowship—the selection at the October Sessions of two Constables neither of whom were members of that 'Society'. As Dunvan surmised, this manoeuvre too was also directed against the Nonconformists. Being a prescriptive body, the Fellowship was not dependent on a royal charter for its legitimacy, and was not subject presumably to the commissioners appointed under the recent Corporation Act, who were busy purging Dissenters elsewhere in the county. Much depended, therefore, on whether an 'honest' majority could be cobbled together within the Fellowship that October; if not, then the recalcitrant body would need to be by-passed, however great the damage to civic autonomy and tradition.

But it must have been blindingly obvious to the loyalist party's leaders that no such majority was feasible, since eighteen of the Fellowship's twenty-three members were known to be confirmed Nonconformists. One, the grocer John Savage, had been singled out in January to swear the new oath of allegiance at Quarter Sessions;[12] sixteen more were convicted for non-attendance at church that October, or were soon to be, when the authorities finally moved against Dissenters in All Saints parish;[13] and an eighteenth, the grocer Richard Button, although removing to Mayfield, still journeyed back as late as 1673 to worship with the town's Independents.[14] The Anglicanism of two others, Ellis Midmore and the draper Stephen Snatt, may well have been lukewarm; certainly Snatt's wife and daughters remained stalwart Dissenters.[15] All but one of these twenty were already in office at the Restoration, and as such they had co-operated closely during the 1650s with a ring of radical local gentry, such as Henry Shelley, William Spence, Anthony Stapley, Herbert Hay and Herbert Morley.[16] Faced by such an adamantine Nonconformist majority, therefore, the 'honest' party had no option but to by-pass the Fellowship, appeal to Quarter Sessions, acquiesce in a period of 'direct rule', and so destroy all civic continuity. But politically the prize must have seemed well worth it. The town was a headquarters of county goverment and contained a Borough sending two members to Parliament. Its merchants, moreover, controlled a major cross-Channel route through Newhaven; the notorious Republican Edmund Ludlow had slipped abroad along it, and the same vessel 'carried over Mr. Richard Cromwell some weeks before'.[17]

Except for an order declaring William Swan to be Headborough in place of Peter Barton,[18] no direct reference to this annihilation of the Borough's prescriptive constitution appears among the records of Quarter Sessions. The two years of direct rule are specified only in the Town Book. But it clearly provoked bitter opposition from the by-passed; the tanner Ralph Pope, a Constable elected in 1662, was still refusing in January 1664 'to deliver over the weights and measures and other things in his custody of public use to the present Constables',[19] and as late as July 1667 it took an order from the County Commissioners for Charitable Uses before Pope, Stephen Snatt (Constable 1657–8) and the draper Edward Holmwood (1658–9) would hand over bonds and money belonging to the Borough.[20] Direct rule by Quarter Sessions ended, however, in October 1665 when new Constables and Headboroughs were chosen 'at the Law Day holden for the Town and Borough of Lewes'. The selection of civic officers was thereby returned to a traditional context, the meeting of the Court Leet, and this proved to be more or less permanent, although the Justices again intervened in 1668 and 1678.[21] But the Fellowship was never restored in any shape or form. Although a full record of civic affairs resumes in October 1666, no mention of it occurs in the Town Book until 1698, when an unsuccessful resurrection was attempted by two surviving members.[22] Moreover, only two of its twenty-three members in October 1663 ever served as Constables

thereafter. Neither were Dissenters, and both had been co-opted after the Restoration, perhaps as a sop to the 'honest' party.

The Town Book is silent on the crucial question of how civic officers were chosen 'at the Law Day'. However it does divulge that the accounts of the retiring Constables were 'given up' to the new Constables and to 'the rest of the Jury'.[23] Since the checking of such accounts had previously been a function of the Fellowship, it may follow that the same Court Leet Jury played a part henceforth in selecting the civic officers. But the only fragment of direct evidence contradicts this. During a brief return to direct rule in 1668–9 the Quarter Sessions Order Book at last waxes explicit on the matter.

> 'Complaint being made to this Court by the present Constables of Lewes that they have served in their office of Constables above one year now last past, and that no others are likely to be chosen by the Lords of the Leet of the said Borough or their Steward, it is therefore ordered by this Court that Henry Hopkins and Ferdinando Bryan, the now present Constables, be discharged, and George Tye and Thomas Russell are by this Court nominated and appointed Constables in the room and steads of Henry Hopkins and Ferdinando Bryan until the Lords of the Leet shall duly elect and make choice of others . . .'.[24]

This may not, of course, be a full or accurate description of the selective process operative since 1665; but it may be, in which case the Borough had regressed to a crude form of direct seigneurial government. Such a transfer of power would certainly have been the surest means of permanently excluding Dissenters from taking office as Constable, and excluded they largely were until 1688. All three Lords of the Leet in 1665 headed intensely loyalist families. Richard Sackville, Earl of Dorset, and a prominent courtier, was appointed Lord Lieutenant of Sussex in 1670, together with his son Charles, who succeeded him in 1677.[25] George Neville, Baron Bergavenny, and Thomas Howard, Duke of Norfolk, were both Catholics. Bergavenny died in 1666, but his infant heir grew up in the faith; and although Norfolk was insane, his brother acted for him until inheriting the title as a Catholic, also in 1677.[26]

But whatever the exact process by which Constables normally emerged after 1665, the exclusion of practising Dissenters from that office was almost total. Only four out of thirty-four Constables between 1663–4 and 1688–9 can be identified among over 150 Nonconformist householders resident in the town at that time. The barber John Knapp died in office in 1674, and his place was taken by his trustee and fellow Presbyterian, the grocer Walter Brett junior, who served again in 1684–5.[27] Dunvan suggests he was chosen against his will.[28] Possibly it was hoped that he and Knapp would refuse to proceed against other Dissenters, thereby exposing themselves to the penalties of the law. Certainly Brett was a marked man; in 1684 and 1685 a loyalist Grand Jury denounced him as 'dangerous and ill affected to the present government'[29] The other two, however, seem to have become committed Churchmen. The butcher Thomas Tourle (1676–7 and 1685–6) attended a Presbyterian conventicle in 1670, but he chose four loyalist godparents for his daughter in 1689;[30] while the haberdasher Joshua Curle (1670–1), although fined for non-attendance in 1663, soon married into an intensely Anglican family and conformed heavily thereafter.[31]

This virtual monopolising of high office in the town by Churchmen reflects how sturdily the equation of Anglican and loyalist principles was maintained at the provincial roots of English politics. During the Exclusion Crisis (1678–81) loyalists might be renamed 'Tories' and their opponents 'Whigs', but the same gut reaction prevailed; indeed if anything, it was strengthened among Tories as Monmouth's Rebellion followed the aftermath of the Exclusion Crisis.[32] In 1684 carefully picked Grand Juries declaimed at Quarter Sessions the nexus between Dissent and sedition. 'Long and woeful experience' had shown that 'an introduction to Rebellion took its rise

from . . . pretences to . . . tender consciences', which were touted by 'persons of antimonarchical principles'.[33] Denunciation grew even more strident in July 1685. 'The late horrid invasion and rebellion of James Scott, late Duke of Monmouth, and all his traiterous and bloody associates' had been 'abetted and assisted by the whole body of the malcontent, dissenting and fanatical party, or those pretending to tender consciences'.[34] Only from 1686, when James II's pro-Papist purposes became blatant, were Tories slowly forced to choose between their king and their creed, a dilemma which broke the political mould shaped in 1661–3.[35]

Naturally enough, many of the twenty-eight Anglican Constables between 1663–4 and 1685–6 sprang from, or married into, families with marked Church or Cavalier links. This was clearly so in the case of the first two, Thomas James and John Holney. Both of them also needed to be middle-weights socially, since they embodied such a violent breach with tradition. James was a self-styled 'gent', who bequeathed messuages and land in the Cliffe in 1667, together with a burnt-out property in London called 'the Cock'. By 1663 he had married a daughter of Samuel Towers, a Cliffe merchant whose father was formerly a prebendary of St. Paul's.[36] Samuel was also a kinsman of John Towers, the zealously Laudian Bishop of Peterborough, impeached in 1641. John's own son, the polemicist William, first used the word 'deist' in its modern sense, and maintained the family's monarchist record by publishing in 1660 a treatise on the *Obedience Perpetually Due to Kings.*[37]

Also by 1663 another daughter of Samuel Towers was married to the surgeon Henry Hopkins. He became Constable in 1667–8 and 1679–80, and must have developed quite a wide professional reputation, since he was summoned in 1687 to bleed the daughter of an influential fellow Tory, Sir John Ashburnham.[38] Yet another son-in-law of Towers was Thomas Stephenson, the rector of St. John's, who died in 1665,[39] and his daughters in their turn married two prominent local incumbents, William Snatt and Thomas Whalley. Before his departure to become vicar of Cuckfield in 1682, Snatt spearheaded the prosecution of local Quakers, and he was accordingly denounced in their 'Book of Sufferings' as a drunkard and lover of debauched company, who 'did keep in his house a Crucifix and other Popish Relics'.[40] He had, though, the courage of his High Church convictions, being deprived at Cuckfield as a Non-Juror. He also later underwent a brief imprisonment after absolving Sir John Friend on the scaffold at Tyburn for complicity in the Assassination Plot of 1696.[41] His brother-in-law, Whalley, led a quieter life, first as headmaster of the Grammar School in the 1680s, and then as rector of the Cliffe.[42]

James's fellow Constable in 1663–4 was John Holney, an apothecary and 'student in physic', who died in 1707 leaving lands in Shermanbury and West Grinstead.[43] Besides being Constable again in 1669–70, he also served on the rabidly Tory Grand Juries which assembled in 1684 and 1685.[44] He too could claim strong clerical links. His wife was the daughter of a former rector of Shermanbury and the niece of Thomas Gratwick, patron of the living there, who married Holney's widowed mother;[45] and his father was almost certainly the same John Holney who was ejected from a Fellowship at Pembroke College Cambridge in 1644.[46]

Holney's family connections were with the western Weald, and his residence in Lewes can only have been brief by 1663. James and Hopkins, too, seem to have transferred from the Cliffe to the Borough at much the same time. Yet another new arrival was Edmund Middleton, who issued a trade token as a haberdasher in 1666.[47] Very much a Tory activist, he became Constable in 1665–6, 1672–3 and 1678–9 and was a fellow Juror with Holney in 1684–5. His links, too, were Wealden. Both his signature and his coat of arms confirm him as the same Edmund Middleton, 'citizen and haberdasher of London', who witnessed a marriage settlement in 1659, whereby lands were remaindered in turn to three brothers, Francis, Arthur and Thomas Middleton, and then to

Edmund himself.[48] He must, therefore, have been a kinsman of their uncle, Thomas Middleton, who played a 'neutralist and crypto-royalist' role as MP for Horsham between 1640 and 1648.[49] As such, he too could claim to be a 'gent' with the right loyalist connections.

The convergence of these loyalist activists on the Borough suggests that the 'honest' party needed external reinforcement, if the power vacuum created by the neutering of the Fellowship was to be adequately filled. Not all loyalist Constables, however, could be accused of political carpet-bagging. The Lewes born saddler, Henry Rose, served as Constable in 1666–7 and 1674–5, and the registrar of All Saints described him deferentially at his death as 'a very honest, just, and good man'.[50] His son, another Henry, held office in 1677–8 and 1686–7, and his nephew William in 1684–5. The explicit Cavalier link is provided, however, by his brother Samuel, who presumably fought for his king in the Civil Wars, since he was awarded £8 by the County Treasurers for Maimed Soldiers in 1662, at a time when pensions to Parliamentary veterans were being suspended.[52] But Samuel's wounds were not sufficiently impairing to inhibit his activity as an informer. In 1667 he caused a sail and anchor to be impounded at Brighton, on suspicion of their being stolen from Portsmouth dockyard. 'There has been much of this trade in the town', he piously assured the Navy Commissioners. Someone should be deputed to control it, and he would be 'diligent' if thought fitting.[53] To coax some such crumb of state patronage must have been many a loyalist's dream.

Another indigenous Tory network stemmed from Thomas Russell, rector of St. John's between 1632 and 1661. Although he clung to the living, he was briefly confined as a delinquent in 1642,[54] and his widening family circle remained staunchly Anglican. His eldest son, the grocer Thomas Russell, became Constable in 1668–9, and another was parson at Hollington; one daughter married the incumbent at Ripe, another the haberdasher Joshua Curle, who served as Constable in 1670–1,[55] and a third the Deputy-Registrar of the Ecclesiastical Court in Lewes, James Clarke.[56] That Court played a key role in the legal harassment of local Dissenters, and according to local Quakers Clarke was 'a fat man who sweated much when abusing Friends'. After his death in 1682 at the early age of thirty-six, the same source noted that he expired 'senseless . . . being a sot, much addicted to wine and brandy'.[57] Three years before, his assistant, one Walter Jones, a 'sharer in God's righteous judgement', had also passed on 'distressed in mind'.[58]

The Ecclesiastical Court provided a haven for other Tories as well. Clarke's successor was Thomas Barrett, whose bitter diatribes against Lewes Nonconformists and their Anglican fellow-travellers will be touched on later. He married a daughter of the rentier William Pellatt, Constable in 1681–2.[59] Pellatt's own wife, however, had dubious antecedents, her father being William Alcock who served successive regimes as Clerk of the Peace between 1640 and 1660.[60] Another official of the Court was the public notary Samuel Astie, who as proctor also busied himself by pressing charges against Dissenters.[61] Like Clarke and Barrett, he too made a loyalist marriage, to a daughter of the innkeeper Fernando Bryan.[62] As well as owning the freehold of the Swan in Southover, Bryan occupied the Star in 1675 and afterwards the White Lion.[63] All three were commodious establishments and doubtless overflowed with a rising tide of patrons visiting the county town for business and pleasure. Like Middleton he was politically very active, serving as Constable in 1667–8, 1675–6 and 1682–3.

Equally zealous in the Tory cause was Bryan's fellow innkeeper Ralph Richardson, who bequeathed the freehold of the Star in 1688 to his nephew, the vicar of West Dean.[64] Yet another loyalist with ecclesiastical links, he was Constable in 1664–5, 1670–1 and 1680–1, and a Juror with Middleton and Holney in 1684–5. During the Protectorate he hosted the Bull, which under his auspices seemingly became a haunt of embittered Cavaliers. Pious John Pellet of Arundel was assaulted there one winter evening in 1657 by the brothers Henry and Francis Woodcock. They were

inflamed by his opinion that the Lord had trampled the royalists 'as mire in the street under the feet of the present power', and that any remaining 'implacable' should be deported to work on the sugar plantations in newly conquered Jamaica.[65]

No such marked Church or Cavalier links have been discovered for the other Anglican Constables serving between 1663–4 and 1685–6. But several did share with Bryan and Richardson a close association with the drink trade. George Tye, for instance, who was Constable in 1668–9 and 1676–7, preceded Bryan at the White Lion. As churchwarden of All Saints he tricked the Quaker Ambrose Galloway into parting with two thin cheeses, after that worthy had refused to contribute his rate to the repair of the 'steeplehouse'.[66] Slightly further down School Hill stood another well patronised hostelry, the Turk's Head, which was kept by John Tooke while he was Constable in 1674–5 and 1678–9.[67] Another loyalist's sign board was that of William Read, Constable in 1679–80 and 1689–90, which swung outside the appropriately named King's Head on St. Anne's Hill. His trade token carried an image of the king, crowned, and with a sceptre in his hand.[68] The cook Robert Phipps, Constable in 1672–3, was a licensed alehousekeeper between 1667 and 1685, and the pension allowed by the Justices in 1684 to Robert Phipps of Lewes, 'aged and in decay' (his father presumably) could well have been a reward for political services to the 'honest' party by the son.[69] The maltster William Swan, Constable in 1671–2, also had a stake in the drink trade.[70] From it, too, may have come any dowry accompanying the wife of Anthony Holman 'gent', who served in 1666–7; he married Anne, 'daughter to old Henry Townsend who lived and died at the Black Lion' (now the Crown in All Saints).[71]

Such a powerful contingent of publicans does suggest, therefore, that the trade formed a local bastion of Toryism. During these years their inns catered for a county elite which was largely Anglican and loyalist, at least in name. Moreover, in the aftermath of the Major Generals, Dissent must have remained bracketed in many minds with Prohibition, and certainly the Quaker emphasis on the 'sottishness' of their (Tory) prosecutors reflected a wider 'Puritan' disdain for drink, and especially for alehouses, which publicans like Tooke also occasionally ran.[72] All Nonconformists in Lewes seem to have boycotted the trade; none of the hundred and fifty or more Dissenting householders kept an inn or alehouse, although any applying for a licence may possibly have been rejected on political grounds.[73]

The most active of the remaining ten Constables was the draper John Delves. He served in 1675–6, 1683–4 and 1688–9, although his name was erased from the Grand Jury list in January 1685.[74] Being born at Newick in 1645, he shared a wealden background with Holney and Middleton; his father farmed at Vuggles there and left him land in Ringmer. By 1688 he was occupying premises on School Hill owned by Middleton.[75] His fellow draper John Artrige, Constable in 1681–2, may also have migrated from the weald, since his relatives were clustered in Chailey.[76]

The speed with which such new arrivals, as Holney, Middleton and Delves, could claim a leading role in the affairs of the 'honest' party, together with its reliance on the ecclesiastical hierarchy, on the drink trade, on the humble saddling dynasty of Rose, and on rentiers like James, Pellatt and Holman, all suggest that local Tories were under-represented within the town's indigenous retailing elite. But they did receive some reinforcement from three butchers, Richard Grisebrook (1664–5 and 1671–2), William Thurgood (1665–6 and 1673–4) who employed the informer Edward Scripps, and Thomas Tourle (1676–7 and 1685–6), from Grisebrook's son-in-law, the cordwainer Thomas Erridge (1683–4), and from two grocers, Thomas Harrison (1669–70 and 1677–8) and Thomas Verrall (1685–6).[77] But Harrison's business may have failed, since a Lewesian of that name, 'a poor person', was granted a pension by the Justices in 1683.[78]

Another Constable, the turner James Read (1680–1), certainly did die in office 'insolvent and unable to satisfy his debts'.[79] Perhaps the 'honest' party came near on occasion to scraping the bottom of the social barrel. This would account for the selection of an illiterate sieve maker William Weston (1682–3).[80]

Certainly Dissent continued to claim a generous segment of the Borough's propertied class. In spite of civic exclusion, it showed no signs of withering away. On 31 December 1663 the informer Hetherington wrote sourly to Williamson that 'this town continues much at the old rate and as great sectaries as ever'. Twenty shops had stayed open that Christmas Day, and a midnight brawl broke out in St. Anne's churchyard, when the newly intruded minister Henry Thurman tried to officiate at the burial of 'a saint'. The 'rogues grew so insolent that they were very like to throw him into the grave'.[81] In 1669 Presbyterians in the town were reckoned to number 'at least 500', mainly of 'the middle sort'; Independents were 'numerous', and a third congregation in the Cliffe (probably Quaker) was estimated at sixty. Two more conventicles existed in the vicinity, at Plumpton and Westmeston, each with about two hundred members.[82] On the whole prosecutions for non-attendance were sporadic and the penalties far from draconian; and after 1673 no Presbyterian or Independent service seems to have been interrupted or informed against. Even harassment of Quakers began to slacken in the 1670s. So much so that the Monthly Meeting felt it necessary in 1681 to censure the children of Mary Akehurst for 'scoffing at people on the fast day as they went to the Steeplehouse'.[83]

The continuing vitality of Dissent in Lewes was also manifest at the political level. Amid the general loyalist euphoria of May 1661 Sir John Stapley and Sir Thomas Woodcock were elected as MPs for the Borough.[84] Both had been involved in an abortive royalist plot against Cromwell early in 1658,[85] and they continued as representatives during the eighteen years of the 'Cavalier' Parliament. In 1678, however, the surface of provincial politics was everywhere whipped into a frenzy by the national panic associated with 'the Popish Plot' — a general belief, based on allegations by Titus Oates and other informers, that a Catholic conspiracy existed to assassinate the king and extirpate Protestantism. This crisis allowed a 'Whig' assault on the royal prerogative through a demand that James, the Duke of York, be excluded from succession to the throne, and this provoked two general elections in 1679 and another in 1681.[86] The results at Lewes were a Whig triumph. William Morley and Richard Bridger were returned in February 1679,[87] and both were endorsed as supporters by the Earl of Shaftesbury.[88] Morley had succeeded his father Herbert at Glynde in 1668. His business contacts in Lewes were all Dissenters, so was his doctor John Panton; and in 1672 he gave £2 to 'Mr. Newton for preaching'.[89] He died soon after voting for the Exclusion Bill,[90] and his seat was taken by Thomas Pelham, eldest son of the third baronet, who had also been endorsed by Shaftesbury when elected earlier for East Grinstead. Pelham sat for the Borough until 1702, and his prominent services to the Whig cause brought him a peerage.[91] Richard Bridger of Hamsey had regularly attended Quarter Sessions since October 1660 and he remained MP till his death in 1694.[92] Both he and Pelham were referred to in September 1681 as candidates the 'Dissenting party' were resolved to choose again at any future election.[93]

The elections of 1679, therefore, marked a signal defeat for the Tories in the Borough, and it may be no accident that the first known reference to Bonfire celebrations in Lewes dates from the same year, when Benjamin Harris described a mock religious procession through the town which ended with a Pope being burned in effigy.[94] Such demonstrations were widely matched elsewhere. As if to consolidate their parliamentary victory, Dissenters also appeared on the Jury of the Court Leet between 1681 and 1683; they included indeed two former members of the Fellowship, John Lopdell and Thomas Matthew. But meanwhile the impact of the Popish Plot and the Exclusion

Crisis had finally convinced Charles II that a vigorous patronage of the Tory party should underpin his counter-attack to displace Whigs from political office at all levels.[96] Already in September 1681 'the Presbyterians' at Lewes were reported to be keeping 'a very strict fast' as a protest against the execution of Stephen College, a Whig organiser in London who was an early victim of this 'Tory reaction'.[97] The royal counter-attack increased momentum after June 1683 when the discovery of a 'Rye House Plot' to assassinate the king brought loyalist and anti-Whig feeling to fever pitch. In July 'ill affected persons . . . such as we apprehend to be disloyal' were disarmed in East Sussex;[98] these presumably included some Lewesians, since seven muskets and two swords were taken from various inhabitants that summer and stored in the Sessions House.[99] Soon after the government dismissed from the Commission of the Peace a local magistrate, Henry Shelley, who had long been a thorn in the flesh of the 'honest party.[100]

For several years local Tories had been hindered by the absence of any trustworthy JP resident in the Borough. Sir Thomas Woodcock sold his property on St Anne's Hill in 1664,[101] but his place was quickly taken by Sir Thomas Nutt who busied himself with Sessions work from a mansion later to be rebuilt as Newcastle House.[102] A keen loyalist, he was allegedly prominent in pressing charges in 1670 against local Presbyterians worshipping in Henge Lane, a quiet by-way which led down into the brooks below Mount Caburn.[103] This provoked the schoolmaster John Ayres to publish *A narrative of the late proceedings of some Justices and others . . . against several peaceable people . . . only for their being quietly met to worship God together.* According to Ayres Nutt threatened two informers 'that if they would not turn accusers he would make the County of Sussex too hot for them, but if they would he promised . . . it should be worth them at least five pounds a man'.[104] Dunvan later singled him out as 'one of those malign retailers of penal law who accelerated the glorious revolution',[105] but Calamy believed he quickly became more moderate, since Nutt allegedly informed Bishop Gunning of Chichester in 1674 that 'they who would have good neighbours must be such themselves'.[106]

By 1674, however, Nutt had probably quitted Lewes, since he sold his town house in 1673 to William Spence of Malling. The sale itself suggests a slackening of loyalist zeal, otherwise Spence might well have been ruled out as a prospective buyer. A lawyer by training, and a professed Baptist, he sat in the Barebones Parliament of 1653, where he showed himself to be 'a radical pacemaker'.[107] His restoration to the Commission of the Peace in 1668 during a royal flirtation with Dissent must have irritated the 'honest' party, especially as he attended the Sessions assiduously till his death in 1679, although in January 1671 a 'quartane ague going and coming all this winter' kept him at home. Not surprisingly he allowed local Quakers the full benefit of any loophole in the law when informers denounced their conventicles to him.[108]

But worse still perhaps for Lewes Tories was the steady attendance of Henry Shelley on the bench from July 1673. The departure of Nutt left him as the only resident magistrate,[109] with Spence of Malling as first reserve. Shelley was nominally an Anglican, but his sister Martha and her husband Robert Coby were practising Independents.[110] Moreover the family tradition was hardly loyalist; his father had sat in the Long Parliament and cooperated closely with the county elite during the Civil War.[111] Like Spence, therefore, Shelley proved adept at exploiting the law to shield Dissenters. When in 1682 the incumbent of All Saints, John Eresby and the proctor of the Ecclesiastical Court, Samuel Astie, requested him to proceed with due haste against a Quaker meeting, he refused to be 'a journeyman for idle fellows' and instead reproached Eresby for reading a few prayers and a homily and then 'dismissing the people'. Just before his removal from the bench in 1683, Bishop Carleton of Chichester argued that his 'being disgracefully turned out for the neglect of his duty' might make 'honest' other Justices 'of the same stamp' and so diminish 'faction and schism and disobedience to the Government'.[112]

The Bishop's opinion was probably prompted by an emotional letter from Thomas Barrett, his Deputy-Registrar at Lewes. The town's loyalists obviously felt themselves beleagured, in spite of the Tory reaction; perhaps the election results had badly shaken their morale. Barrett reminded his superior that 'this part of your diocese, as it is far remote from your palace, so is filled with a sort of men who are further remote from loyal principles than perhaps any other diocese . . . For here is contempt of the King's command and all Acts of Parliament. We have still conventicles held, schism maintained, and the preachers of it defended by those pretended officers of justice who, for fear of being thought too active in prosecution, have totally neglected what lay in their own way for promoting the loyal cause'. At the previous Quarter Sessions one JP (doubtless Shelley) had warned the people 'of extortions in ecclesiastical officers' and 'of errors in their proceedings as to excommunications'. Barrett's spleen was expressly reserved for such Anglican fellow-travellers with Whig sympathies. 'The continuance of this moulded faction here is not owing so much to the professed Separatists as to others, who go to church . . . who, being really private favourers of the factious party, under the disguise of churchmen take all opportunities of serving their turns'.[113] In April 1684 the Tory attack was pressed a stage further when Shelley was singled out by the Grand Jury, together with Thomas Pelham and a few others, as 'dangerous and ill affected to the present government.'[114]

But between the autumn of 1685 and the winter of 1688–9 the Tory reaction faltered and failed. Loyalism lost all coherence as James II's resolutely pro-Papist policies were unfolded, especially as they were linked with explicit political patronage of Dissenters and extreme Whigs, and with a purge of those Tories unwilling to endorse such a framework of government.[115] Thus in December 1686 the Commission of the Peace for Sussex was remodelled; three Pelhams were dismissed, along with Sir John Ashburnham.[116] In July 1687 Sir John Gage, a wealthy Catholic landowner from Firle, attended the Quarter Sessions at Lewes as a JP, and in November he was appointed Sheriff.[117] The following October John Spence of Malling and John Hay of Little Horsted appeared on the Lewes bench.[118] Spence was brother and heir to the radical William who died in 1679, while Hay had close Dissenting and Whig links.[119]

The Constables chosen in 1686, 1687 and 1688 continued to be Anglicans—Henry Rose and the draper Edward Burtenshaw, the tobacconist Simon Snell and the butcher Reginald Jarvis, John Delves and the tailor John Hawkham;[120] but whether the newcomers were full blooded Tories, trimmers, or Whig fellow-travellers like Henry Shelley, cannot be known. October 1689, however, marked a decisive turning point. The innkeeper William Read had held office before, in 1679–80; his fellow Constable, however, the hatter James Bridger, had been declared 'ill affected' as recently as July 1685.[121] By 1690–1 and 1691–2 all four Constables were Dissenters; three of them had been denounced along with Bridger, and two were sons of deceased members of the neutered Fellowship.[122] Clearly the Anglican monopoly of civic office in Lewes was over. A new day had dawned on the Borough's politics.

The Fellowship, however, was not restored, although a few members survived the long years of exclusion. Of the sixteen presented for non-attendance in or after 1663, only the saddler Richard Savage seems to have left the town. The rest remained, to live and die Dissenters. Networks of Presbyterian or Independent relatives, overseers, trustees and witnesses, web the wills of the haberdasher Nicholas Curle, who died in 1666, the draper Richard Barnard (1666), the hatter Samuel Cruttenden (1667), the rentier George Stonestreat (1669), the maltster Robert Swan (1671), the shoemaker Edward Bailey (1672), the baker Stephen Botting (1673), the draper Edward Holmwood (1674), the apothecaries Richard Russell and Thomas Fissenden (1684), and the drapers Thomas Matthew (1690) and John Lopdell (1692).[123] The grocer Walter Brett senior

was cited in 1684–5 as 'dangerous and ill affected' along with Matthew and Lopdell, and with the sons of Barnard, Cruttenden, Russell and Fissenden.[124] Matthew was also denounced for saying that 'every good Protestant or good Christian would be for the Bill of Exclusion'.[125] Although the will of the merchant William Peake (1684) has no sectarian overtones, he was a non-attender in 1672–4.[126] He also made a 'kindly' intervention on behalf of local Quakers; to remove them from harsh conditions at Horsham Gaol, he sued them for trading debts, thereby securing their transfer to a far laxer regime in the King's Bench Prison.[127] The last survivor of all was the tanner Ralph Pope, who had refused to hand over the weights and other Borough property in 1663. He died in 1706, having boycotted St. John's church until the Toleration Act.[128] None of the fifteen died in penury, in spite of sporadic fines and political exclusion. Indeed all but Botting and Pope left land outside the town, together with Irish property in the case of Barnard and Russell.

The fate of the Fellowship, the consolidation of a Tory party, and the sustained cohesion of the Dissenting interest, all serve as reminders that the reign of Charles II witnessed deep political divisions, which are not easily compatible with a steady trend towards a Glorious Revolution. Hitherto these fissures at the local level have been largely neglected by historical research; the glamour of the 1640s and 1650s has proved too alluring. The evidence for Lewes is neither abundant nor colourful, but it does provide a framework. Hopefully future studies will fill out the picture elsewhere in Sussex, both at county level and for other embattled communities.[129]

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[129]I am most grateful to Professor William Lamont for his comments on an earlier draft of this article, and to my wife Judith for several references.

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CUSTOMARY MEASURE AND OPEN FIELD STRIP SIZE IN SUSSEX

by Alan Nash M.A.

The size of open field strips has been explained variously as being determined by the statute acre, the quality of the land, or by pre-existing units of measurement. An analysis of Sussex open fields demonstrates that none of these explanations are useful, and instead argues that strip size conformed with the local customary acre.

INTRODUCTION

Over large parts of medieval and early modern England open field agriculture was practised, the typical holding of an individual consisting of a number of strips of land, or *selions*, divided amongst the fields of the manor in a scattered and often irregular fashion. A considerable amount of work has examined the operation of this system,[1] but very little research has directly analysed the dimensions of the component open field strips. This is surprising in view of the need to resolve a long-standing dispute concerning an explanation for the size of selions. Thus, it has been variously argued that strips conformed to the statute acre, that their size varied with soil type, or that some were influenced by earlier units of measurement.[2] In order to examine this problem, therefore, the county of Sussex in Southern England was chosen for detailed analysis, being an area well known for its open fields[3] and one which has already received scholarly attention.[4]

In order to test the validity of the theories of selion size it is necessary to investigate systematically the available evidence, which may either be in the form of fossilized relicit features or archival data. Unfortunately, the physical evidence remaining is scanty. Sussex contains virtually no examples of ridge and furrow,[5] unlike many midland counties where strip cultivation produced this phenomenon.[6] Consequently, direct measurement of such relicit features cannot be attempted, even if the number of ridges and furrows in a strip could be decided.[7] Extensive fieldwork and analysis of aerial photographs has failed to contradict this situation.[8] This lack of physical remains would appear to have arisen from a widespread use of the turnwrest plough in Sussex,[9] a plough which authorities suggest was not conducive to ridge and furrow formation.[10] One advantage, however, is that because of this it would appear unlikely that strip size would have been controlled solely by ploughing technique. The only physical evidence which does remain occurs in the form of strip lynchets, step-like features formed by the terrace cultivation of hillsides.[11] However, there are very few in Sussex that are demonstrably from the Middle Ages. Brandon has noted some near Petworth which have the inverted 'S' shape typical of medieval ploughing techniques,[12] while those on Beeding Hill have an angle of cultivation, 12°, typical of the period[13] and are depicted on a map of 1733.[14] Field survey shows them to have an average width of 30 feet, but it would be impossible to use such a small sample for the present purpose.

THE DATA

Lacking other evidence, therefore, it is necessary to use estate maps of the seventeenth, eighteenth and nineteenth centuries which depict open field cultivation and the constituent selions of

TABLE 1 Modal dimensions of 28 Sussex field system strips

Location	*Width*	*Length*	*Area (S)*	*L/W*	*Area (C)*
Chalk					
Alciston	51.97	506.69	50.22	9.75	0.42
Brighton	20.79	498.91	37.30	23.99	0.30
Coombes	31.18	623.18	20.95	19.99	0.18
Gravel					
East Lavant	15.63	507.98	29.16	32.50	0.24
Strettington	31.18	530.09	40.48	17.00	0.34
Tangmere	34.65	606.31	48.01	17.50	0.40
Westbourne	51.97	476.36	121.23	9.17	1.01
Westhampnett	32.33	309.47	72.00	9.57	0.60
Clay					
Bramber	31.26	586.16	50.47	18.75	0.42
Eastbourne	21.70	489.98	80.17	22.58	0.67
Kingston	20.79	446.94	35.71	21.50	0.30
Littlehampton	140.67	1078.47	557.24	7.67	4.64
Petworth	181.89	701.57	317.19	3.86	2.64
Upper Beeding	23.32	303.19	46.74	13.00	0.39
Loam					
Angmering	168.26	627.14	378.13	3.73	3.15
Bersted	91.47	748.35	241.28	8.18	2.01
Bury	113.94	1039.40	31.75	9.12	0.26
Duncton	77.95	402.75	75.95	5.17	0.63
Durrington	20.06	451.06	33.25	22.50	0.28
Goring	46.74	273.53	23.56	5.85	0.20
Lyminster	31.18	644.43	41.67	20.67	0.35
Oving	62.52	320.42	74.00	5.13	0.62
Plumpton	63.88	665.18	50.79	10.41	0.42
Prinsted	145.52	561.28	261.90	3.86	2.18
Storrington	137.67	749.50	463.21	5.44	3.86
Sutton	38.98	571.65	84.00	14.67	0.70
Washington	54.71	664.26	76.27	12.14	0.64
Worthing	23.45	437.64	33.65	18.66	0.28

Notes:

The data in this table were drawn from a computer analysis of approximately 10,000 strips, using S.P.S.S. (Version 6) package programs (N.H. Nie *et al., Statistical Package for the Second Sciences*, 2nd. ed. (New York. 1975).

Soil categories are derived from Young (1813). 'Clay' here includes his 'clay' and 'marsh' divisions, 'loam' his 'rich stiff loam' and 'rich loam' types.

Width and Length dimensions are given in statute feet (these are each comprised of 12 statute inches).

Area (S): modal strip area in square statute perches (the statute acre contains 160 such units, each based on the square of the perch of 16.5 statute feet).

Area (C): modal strip area as a fraction of a customary acre containing 120 square statute perches.

L/W: modal strip length divided by modal strip width.

Sources:

Alciston: Sussex Archaeological Society G45/25 (1758); Angmering: West Sussex Record Office Add.Ms.5168 (1805); Bersted: W.S.R.O. Add.Ms.227 (1840); Bramber: W.S.R.O. Add.Ms.9474 (1729); Brighton: East Sussex Record Office Danny Ms.2105; Bury: Arundel Castle Ms.LM1 (1634); Coombes: W.S.R.O. Petworth House Archives 3316 (Nineteenth Century); Duncton: W.S.R.O. Petworth House Archives 3568 (1608); Durrington: Arundel Castle Archives HC2 (1768), W.S.R.O. Add.Ms.1991 (1800); Eastbourne: E.S.R.O. Gilbert Ms.XC/14 (1816); East Lavant: W.S.R.O. Goodwood Ms.E5030 (1831); Goring: Worthing Public Library (Nineteenth Century); Kingston: W.S.R.O. Wiston Ms.5595 (1773); Littlehampton: W.S.R.O. Add.Ms.5170 (1841); Lyminster: W.S.R.O. Add.Ms.9482 (1724); Oving: W.S.R.O. Add. Ms.2035 (1725), W.S.R.O. Add.Ms.4656 (1838), W.S.R.O. Add.Ms.4656 (1838–42); Petworth: W.S.R.O. Petworth House Archives 3574 (1610), 3232 (1796), 3633 (1824); Plumpton: E.S.R.O. Add.Ms.4952, number 6 (1819): Prinsted: W.S.R.O. Add.Ms.2857 (1640); Selham: W.S.R.O. Cowdray Ms.1699 (1812); Storrington: W.S.R.O. Petworth House Archives 3384 (1788, Copy 1809); Strettington: W.S.R.O. CAP. 1/29/7.26 (1768); Sutton: W.S.R.O. Petworth House Archives 3570 (1608), 3630 (1820); Tangmere: W.S.R.O. Goodwood Ms.E137 (1760); Upper Beeding: W.S.R.O. Add.Ms.2025 (1775); Washington: W.S.R.O. Wiston Ms.5592 (1739), Wiston Ms.(1825); Westbourne: W.S.R.O. Add.Ms.2856 (1640), W.S.R.O. QDD/6/W31 (1858); Westhampnett: W.S.R.O. Goodwood Ms.E4993 (1775); Worthing: W.S.R.O. Petworth House Archives 3214 (1807).

such fields. This assumes that a boundary continuity exists between these strips and those of the Middle Ages. However, such an assumption may be made here since it has been demonstrated elsewhere in the Sussex and national contexts.[15] The criteria a map must meet to be of use here are those of accuracy and widespread coverage. These the Sussex estate maps do. Amongst the earliest are Treswell's maps of Duncton and Sutton of 1608,[16] and from then onwards their number markedly increases. The great majority of these can be shown to be remarkably accurate as other scholars have noted,[17] a fact consistent with the involvement of two estate map surveyors, Yeakell and Gardner, with the early work of the English Ordnance Survey.[18] Nevertheless, wherever possible all maps used here have been checked against modern Ordnance Survey maps. County maps, beginning with Saxton's of 1575, have also been used to corroborate the regional picture and to examine where possible the continuity of field boundaries.[19] Finally, later evidence from tithe and enclosure maps has been consulted, but only to check estate material, because such evidence by itself can be misleading since it portrays by then a much-altered system of farming.[20]

From the 46 relevant Sussex estate maps now extant a sample of 28 field systems was selected on the basis of ensuring countywide coverage.[21] These systems ranged from less than 100 strips, as at Littlehampton,[22] to the 984 at Brighton[23] and collectively comprise a data set of over 10,000 strips. Each of these was individually measured by ruler to the nearest millimetre. On a map with a scale of 20 inches to one mile this represents a maximum possible error of 5.197 feet, a figure which is comparable to that accepted by other scholars.[24] It is highly unlikely that this error could be reduced further due to the thickness of the draughtsman's lines, the creased and faded condition of many maps, the error of the original survey, and expansion and contraction in both map and the surveyor's equipment due to weather conditions.[25]

By far the majority of strips measured were rectangular and thus posed little difficulty when measuring,[26] but where slightly irregular shapes were encountered an element of subjectivity was necessary to determine the principal axes. For example, an average figure for the width of a tapering selion was found by using the relevant sides' mid-point measurements.[27] Extremely irregular strips could not usefully be measured and were omitted from the study.[28] However, this only occurred in a very few cases and typically, the strip was on the periphery of a field system.

Only the minority of maps recorded strip acreage. The rest presumably had a supplementary field book, which has subsequently been lost, that kept this result of the survey.[29] Consequently, this information must be derived afresh by the multiplication of the measurements obtained here for strip width and length. Since both these dimensions unavoidably contain some error, then the area derived must consequently compound that error. However, where comparision between surveyed and computed areas is possible, as in an Oving estate map of 1758,[30] it appears that the results are almost

identical. This finding is sufficient to suggest that the method used here introduces little additional error into the final results either for area, or for the width and length dimensions from which it is derived. Accordingly the above procedure should provide the information necessary to examine selion size and the mode, or most commonly occurring size, for each of the three dimensions for each field system in the sample, is given in table 1, being the most representative single statistic for each system's dimensions.

ANALYSIS

Both Seebohm and Curwen suggested that the typical strip in an open field system would be ten times as long as it was broad and that its dimensions would be 22 yards wide and 220 yards long, producing an area of one statute acre, or 4,840 square yards.[31] The shape appears to have been determined by the convenience of ploughing as long a furrow as possible before turning the plough back, while the area was supposedly governed by the amount of land which a man and his ploughteam could cultivate in one day.[32] This is still a definition found in some dictionaries for the term 'acre', while incidentally, the width of such a strip is argued to have determined the length of the modern cricket pitch.[33]

It is possible to test Seebohm's and Curwen's view with the Sussex evidence simply by dividing strip length by strip width. If the traditional view holds, then clearly the result should be the ratio 10:1. As can be seen from table 1, however, such an approximate answer is found in only six cases even if measurement error is allowed for, and only that at Plumpton conformed to the dimensions of 22 yards wide and 200 yards long.[34] Moreover, of the six cases, only that at Westbourne[35] even approached the expected acreage of 160 square statute perches. Overall, half the strips were wider than expected, half were smaller, and widths ranged from 15.6 feet at East Lavant[36] to 181.8 at Petworth.[37] Lengths varied from a minimum of 273.5 feet at Goring[38] to 1,078 at Littlehampton.[39] While areas included those of the deserted medieval village at Coombes with the smallest at 21.0 square statute perches, and Littlehampton with the largest at 557.2 square statute perches.[40] It seems clear therefore on the basis of this evidence that the traditional strip size of Seebohm's and Curwen's theories cannot be shown to have existed in Sussex, a finding also demonstrated elsewhere, for example, by Roberts for the English midlands.[41]

It is possible to argue that if the key factor determining selion size is the amount of land that can be ploughed in a day, then obviously the size of a strip must vary with local conditions such as terrain and soil quality. Consequently, an easily worked and well-drained sandy soil will permit a strip to be larger than a statute acre, while a heavy clay might compel its size to be considerably smaller. In view of the wide variety of environments encountered no one typical size for a strip would be apparent but despite this seeming lack of conformity, an underlying common factor would be present. The Orwins clearly suggest that strip width is so controlled,[42] and since strip width limits strip length in abutting furlongs, it can be argued that length must also be influenced, even if it is not affected by the more direct environmental controls which affect width; it follows, then, also that strip area would be related to those environmental factors.

This view can be tested by grouping the sample Sussex field systems according to land quality, although it must be recognized that this procedure is by no means easy. Modern soil maps must be considered inappropriate for this task since they cannot reflect soil texture or give any indication concerning previous conditions. Consequently the Reverend Arthur Young's map of the county, published in 1813,[43] was used here because it describes the condition of the land and also is the closest relevant map to the period under discussion. This was supplemented by William Topley's geological

map of 1874,[44] and by modern rainfall and geological distribution maps as other tests of environmental controls.[45] It should be noted that even if the medieval climate of Sussex was wetter than at present as has been suggested[46] this would not alter the result since relative differences between land qualities remain unaltered. If the evidence for selion area is divided in three different ways according to each classification it can be shown using a series of 't' — tests, adusted for non-normal data, that no significant statistical difference exists between any of the categories and therefore that the environmental factors considered cannot be shown to control strip area.[47] This can be readily appreciated from table 1 where it can be seen that strips situated on clays are not necessarily smaller in area than those on loamy soils.

Thus the hypothesis that strip size varies with land quality cannot be demonstrated in Sussex, and this confirms the limited findings made elsewhere in England.[48] Moreover, such a conclusion is implied by previous work which has suggested that the customary acre in Sussex, while variable in size, was not controlled by soil type or geology.[49]

The final suggestion that has been made is that selion sizes may have been influenced in some way by earlier measures, both Roman and medieval. A number of authorities have pointed to the possibility of centuriation in the south east of England, notably at Rochester in Kent, and at Chalvington, Ripe, Bignor, Hurstpierpoint and Littlehampton in Sussex.[50] Further, the Roman unit of area, the *iugum,* is believed to be the predecessor of the yoke, a medieval unit of land measurement found principally in Kent, but also known in Surrey and Sussex.[51] To examine this hypothesis the data in table 1 was examined for any indications of Roman influence, assuming the *actus* to represent a linear measure of 116.496 statute feet and the *iugum* 904,754.5 square statute feet.[52] Only five places appeared to have the possibility of Roman involvement. At Petworth[53] and Rustington[54] strip lengths approach Roman units, while at Petworth, Alciston,[55] Rustington and Eastbourne[56] strip widths might be fractions or units of the *actus,* and of these only Petworth, with the addition of Duncton,[57] show any sign of conforming to Roman areal measure. Consequently, only at Rustington was both strip width and length possibly affected, and only at Petworth was strip width, length and area involved. In neither case was the relationship between width and length close to the square favoured by centuriation,[58] although such a consideration may not be relevant here since open field strips could be formed within the original outlines of Roman fields. Interestingly, both Duncton and Rustington are near villas.[59] Such results may be based on coincidence but, more importantly, these two possibilities cannot demonstrate that the hypothesis of Roman influence holds for all of the field systems examined, and some historians would discount all such suggestions.[60]

It is possible, however, that influences were not inherited from the Roman, but from the medieval period. Evidence has been put forward that indicates at Angmering, Willingdon, Maresfield, Icklesham, Yapton and Strettington, field systems were set out in a planned fashion in the early Middle Ages rather than being developed piecemeal.[61] Peckham had made a similar suggestion for Apuldram in 1925[62] and such a phenomenon is well documented for northern England and Sweden.[63] It is perhaps not surprising that an area as agriculturally developed as the medieval Sussex coastal plain might share in such developments.[64] If this is so, then the measures used in such planning need to be known before any investigation can proceed.

Previous work has demonstrated that the statute units of measurement were supplemented by many local 'customary' variations.[65] Typically, these ranged from 15–20 statute feet for local perch lengths.[66] Since it is difficult to know which local perch was used in any one field system it is necessary to analyse all the data in table 1 using a range of seven possible perch sizes for both strip length and width. If it is assumed that only those results which are integer multiples of each local perch in both width and length can be considered as obvious signs of planning, than as table 2 shows, seven places

qualify. However, some of the results may be numerical coincidences and thus irrelevant; that both North Westbourne and Petworth appear twice here, and that Petworth's dimensions also have been shown to have possible Roman influence, adequately illustrates this problem. Furthermore, it is difficult to know if previously unrecorded local perch sizes were used, such as one of 15.5 statute feet found in Essex.[67] Thus, while suggesting the possibility exists that the field systems at Bramber, North Westbourne, Alciston, Westbourne, Petworth, Durrington and Sutton may be the outcome of medieval planning,[68] it is impossible to prove this for the reasons stated.

However, if the rigid notion of planning via particular width and length measures is replaced by the concept that area alone was regulated, and that this was done by local and not statute measures,[69] then it may be possible to demonstrate that strip area had a relationship with the customary acre, that is, the measure of area used locally. To do this, two factors should be noted: evidence has shown that the local acre varied in size across Sussex, but that the most typical size of customary acre found in the county was two-thirds of a statute acre.[70]

If the data in table 1 are reconsidered in relation to a typical customary acre of 120 square statute perches as exemplified at Oving[71] it can be seen that 32% of the systems' strips lie between 30 and 50 square statute perches, approximating one-third of the most common local acre size, and 21% lie between 70 and 90 square statute perches, approximating two-thirds of such an acre. The larger sizes, at Storrington, Angmering, Prinsted and Bersted, can be reasonably interpreted as integer multiples of the typical local acre.[72] Moreover, the overall average of all the field systems' most common sized strips is itself, at 120.5 square statute perches, almost exactly a customary acre.

If indeed the local acre size is the controlling factor then it should be possible also to find this happening in those cases where the customary acre was both larger and smaller than the two-thirds of a statute acre considered above. Unfortunately, the number of cases in the sample for which the size of the local acre is known is only four, nevertheless, the results appear encouraging. At Worthing, where the local acre was 106.6 square statute perches, and at Sutton, where it was 180,[73] the strip area given in table 1 can be seen to represent respectively a third and a half of the local acre's size. At Brighton, with a customary acre of 35 square statute perches, and at Westbourne with one of 109, it can be seen that strip size approximated a complete customary acre.[74] Others may be found to conform to hitherto undiscovered local acre sizes, but meanwhile it is possible these may be estimated from known neighbouring ones. Thus, the seemingly anomalous size at Petworth can be seen as a product of the very large local acres known to have existed in the Weald, and that at Littlehampton may be related to the generally smaller local acres found along the coastal plain.[75]

CONCLUSION

Obviously it is possible with sufficient manipulation to demonstrate that any measure influenced strip size. However, this has not been attempted here. Rather, it has been shown that previously accepted hypotheses are either very poor or irrelevant explanations for selion size in Sussex, and an alternative view, that local customary acres were involved, at least appears a more fruitful approach. It is not being argued that this constitutes the sole explanation since the exigencies of terrain must always have played some part in shaping the detail of some strip sizes, while land sales and consolidation must inevitably have had an influence. Nevertheless in a large number of cases in the Sussex sample the importance of local tradition in field system layout appears a strong possibility. This much is shown even from a simple comparison of the variation in customary acre sizes and strip areas across the county.

Whether local practice in terms of strip area determined the size of the local acre, or *vice versa*, it

is impossible to say now; indeed, it is possible that both evolved together, each reinforcing and eventually necessitating the use of the other, as land was divided into selions for farming. What this study has made clear is that local practices concerning the size of customary measures used were far more important in determining open field strip size than has hitherto been imagined and their role should be carefully considered in future studies of field systems, both at the county scale, and if Sussex can be taken as representative, in national terms.

TABLE 2 Strip size analysed by local perch length

Local perch size in statute feet	*Location of field system*	*Modal width in local perches*	*Modal length in local perches*
15.0	Bramber	2.0	39.0
16.0	N. Westbourne	9.0	35.0
17.0	Westbourne	4.0	28.0
17.5	Alciston	3.0	29.0
	Petworth	10.0	40.0
	N. Westbourne	8.0	32.0
18.0	Durrington	1.0	25.0
18.5	Sutton	2.0	30.0
20.0	Petworth	9.0	35.0

Note:

This table presents the results of analysing the entire Sussex data set for strip size using seven different local perch lengths. Initially, to allow for the data's inaccuracy, all those values which lay within plus or minus 0.10 of an integer local perch value were considered relevant; then, to eliminate simple numerical coincidence, only those which occurred in *both* modal width and length dimensions were taken as possibly significant. These are tabulated here as rounded integer values.

Sources:

Data derived from table 1, local perch sizes from Nash (1978: 63–7).

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MARCHANT'S AND HAYLEIGH FARMS IN STREAT AND WESTMESTON (EAST SUSSEX); THE DEVELOPMENT OF TWO FARMS ON THE WEALD CLAY *c.* 1500–1980

by Sue Farrant Ph.D.

The histories of Marchant's and Hayleigh Farms illustrate the development of farms on the southern bounds of the Weald clay. They are examples of the two most common types of tenure. Hayleigh, a freehold farm, was at first part of the demesne (the lord's share) of the Manor of Middleton. Marchant's was predominantly copyhold held of the Manor of Streat. This study suggests that the major influences upon their development were agricultural practices within the region rather than their different tenures.

I

Historians of the agriculture of Sussex normally divide the county into four regions; the Coastal Plain, the Downs, the marshland and the Weald. Streat and Westmeston Parishes (within which Hayleigh and Marchant's farms are located) transect the two largest agricultural regions, the Downs and the Weald. From the medieval period the light, naturally well drained chalk soils of the Downs and the narrow belt of sandy soils of the greensand ridges just below their northern scarp slope resulted in the development of large, very profitable capitalist sheep-corn farms, and an open landscape with few trees and hedges. By the 1850s, many Downland farms were between 600 and 1200 acres in extent. The farms on the Downland within Streat and Westmeston parishes were typical of this region.[1]

In contrast with the Downs, the Weald is a physically complex region within which most of the soils are difficult to cultivate. The Weald clay belt, which occupies a substantial part of both Streat and Westmeston parishes is especially notorious for its heavy soils which are difficult to drain and hence easily 'poached' by livestock trampling on them. They also require very careful management as arable land; the clay's slowness in drying out in the spring and the speed with which it becomes waterlogged in the autumn have long imposed limitations. These mainly arise from the reduction in time which is available for preparation of the soil and the shorter growing season, particularly in comparison with the Downland region.[2] The advantages of the Downs for agriculture have been appreciated for centuries. By comparison the Weald, and particularly the clay belt, was normally regarded as handicapped by both its drainage problems and its inferior soils. The agricultural practices which evolved in the Weald were considered backward as late as the interwar period.[3] The settlement pattern and the agricultural practices within Streat and Westmeston parishes are typical of the Weald clay zone.

Farmers on the Weald clay adapted to their shorter growing season by developing a pastoral economy which was primarily dependent on cattle livestock breeding and fattening with some sheep keeping. These activities were augmented by sales of wood and wood products and the cultivation of small acreages of wheat as a cash crop on the better drained clay areas of their farms.[4] Farmers increased the acreage under wheat when high prices encouraged them to take the risk, as in the late

eighteenth and early nineteenth centuries, when there was a notable increase in acreage.[5] Then, new farm buildings and cottages were erected to store crops and to house the extra workers which were required.

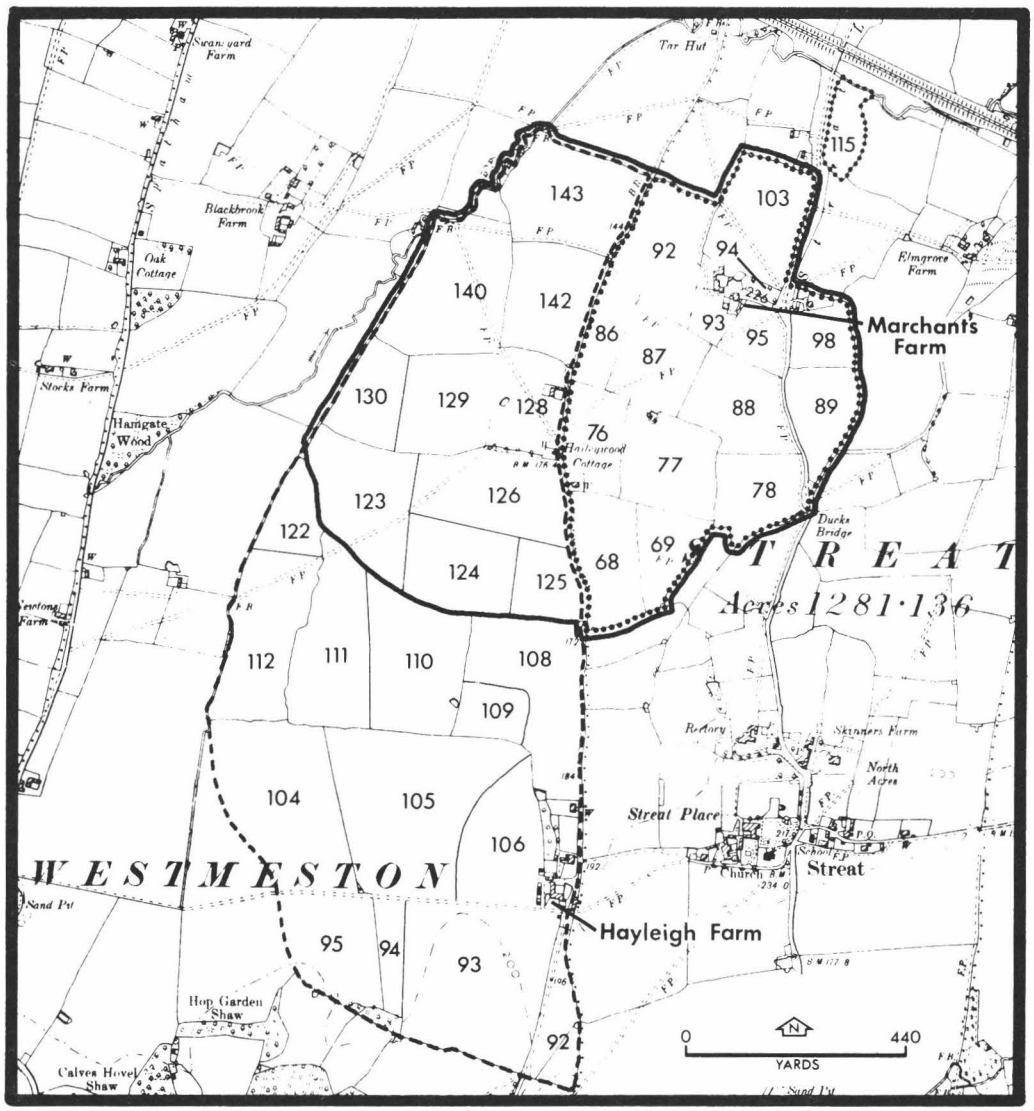


Fig. 1. Marchant's and Hayleigh Farms in Streat and Westmeston.

Source for map; Fig. 1: ESRO Tithe Awards and Schedules for Streat and Westmeston. Modern boundaries from present farmer.

The development of the railway system stimulated rural dairying particularly on farms such as Hayleigh and Marchant's which were close to stations which enabled them to conveniently supply fresh milk for the rapidly growing coastal and inland towns, such as Brighton and Haywards Heath.[6] In the mid-nineteenth century, the fresh milk dairy industry made the farms on the Weald clay more profitable and that encouraged landowners to invest in the new and much more effective field drains which were developed at the same time, and in buildings for the dairy cattle and for pigs (which were fed on the skimmed milk left after cream was made). Dairying saved farms with access to railway stations from the full impact of the agricultural depression in the late nineteenth century, which rapidly undermined the sheep-corn agriculture of the Downland region.[7] Nevertheless farms on the Weald clay had to alter their output and their methods. Dependence upon milk production increased as the acreage under wheat fell. Farmers sought to diversify by increasing the number of pigs they kept, and by venturing into market gardening, orchard fruit, chicken rearing and other enterprises which were not yet threatened by the growing volume and range of cheaply imported foodstuffs. The area under pasture rose because of the rapid decline in wheat production and the failure to find alternative cash crops which required similar acreage of ground. Many farmers did the same as the tenants of Marchant's and increased their herds by growing more fodder crops but even those covered a smaller acreage than wheat rotations had once occupied.[8]

By the late medieval period, small family farms of between 10 and 30 acres with small fields fringed with high hedges and pockets of woodland were characteristic. Farms slowly increased in size by assarting woodland and waste or by assimilation (e.g. Marchant's). As late as the 1850s, farms of more than 200 acres were not typical and the majority of those (such as Hayleigh) had been long established having been formed between the fifteenth and seventeenth centuries when deerparks were disparked for conversion into farms.[9]

The small farm, which was often run by a family perhaps with the help of a couple of farm labourers and seasonal workers (as in the case of Hayleigh and Marchant's), remained characteristic of the Weald clay belt into the twentieth century. Most farmers were tenants — Hayleigh was always a tenanted farm and Marchant's became one in 1827 when the farm was purchased by the Lane estate which already owned Hayleigh. That purchase took place during a period notable in Sussex for the expansion of landed estates at the expense of owner-occupiers.[10] The breakup of landed estates in Sussex from the late nineteenth century affected Marchant's and Hayleigh; both were sold by the heirs of the Lanes during the interwar period.[10] The relative decline in the price of farm land because of the decline in the status and profitability of the ownership of large rural estates resulted in the increase in the number of farms with owner-occupiers and in the purchase of small groups of farms by businessmen.[11] Hayleigh is an example of the former and Marchant's of the latter category.

The unsettled period for British agriculture which extended from the 1880s until the 1960s also resulted in major changes in farm boundaries as in the examples of Hayleigh and Marchant's.[12] In both cases the normal practice of retaining the old names was observed.

II

During the early medieval period, settlement on the wooded Weald clay zone in both Streat and Westmeston parishes was sparse. The clay zone was used as pasture for livestock from the farms on the greensand belt and for hunting. By the thirteenth century, cottages were being built on the clay belt in Streat, for example, at Ducksbridge (TQ 352 157, now part of Marchant's Farm) and suitable deposits of clay were being used to make pottery. In Streat, north of Ducksbridge (at TQ 352 163, also on Marchant's Farm), a series of kilns was built in succession on the same site. They produced high quality

pottery as good as the best from Rye or Ringmer during the fourteenth century. As it has been identified at Battle Abbey and at Michelham Priory it had a wide market.[13]

In response to the increasing demand for agricultural land, hunting had to be confined and during the fourteenth and fifteenth centuries deer parks were established. Hayleigh was emparked in the fourteenth century at the same time as others in the area such as Little Park in Hurstpierpoint parish and a 500 acre deer park to the north of Ditchling village.[14] Hayleigh was still a park in 1489 for then two people were indicted for hunting in it.[15] By the end of the sixteenth century most of the deer parks, including Hayleigh, had been converted into farms because the demand for agricultural land made farms more profitable. The rising value of the clay zone also encouraged landowners in both parishes to reorganise the rest of their estates and to clear more of the woodland upon it for farming. Clearance of woodland provided the landowners with cash.[16] Then the careful management of the remaining trees in the hedges, thickets and woods which were left provided part of the annual income from the farmland.

The considerable amount of timber suggests that clearance of the area for farming was done by assarting; clearing small fields within the woodland leaving thick hedges called shaws and pockets of woodland on the less attractive soils.[17] Timber on farmland was therefore valued in surveys as an estate asset, as in Sir George Goring's survey of his estate in 1581 which included the manor of Streat. Two hundred acres of farmland in the parish and manor of Streat north of the village, on the Weald clay (including Marchant's) were between 20 and 26 acres and the typical field sizes were between three timber valued at £200.[18] The land was divided between eight copyhold farms (including Marchant's) and two smallholdings both of which were newly reclaimed from the adjoining common which occupied the northernmost 200 acres of the parish. The eight farms were between nine and 58 acres in extent and their annual rental value was assessed at between six and thirteen pounds. Four of the farms (including Marchant's) were between 20 and 26 acres and the typical field sizes were between three and five acres. The arable area was normally about a third of the total and farms with more commanded higher rents. The most prevalent land use was meadow.[19]

Goring's survey reflected great interest in the management of estates along the scarp foot during the late sixteenth and the seventeenth centuries. Then, the manorial lords of the Manors of Streat, Westmeston and Middleton in Westmeston initiated enclosure of the common fields on the Greensand and the Lower Chalk, the pasture on the Upper Downs and the remaining 'waste' (common woodland and scrub) on the clay. Their principal aim was the separation of their own from tenants' land. This was in order to make management easier by developing larger farms on their own property. Whenever possible, the lords purchased copyholds; otherwise enclosure and exchanges of land by agreement were done whenever the copyholders consented. The manorial lords were less successful in eliminating common fields on the Greensand and Lower Chalk in Westmeston than in Streat and the fossil remnants survived into the early nineteenth century, but they were more successful in enclosing on the clay in Westmeston.[20] There, 40 acres of Westmeston Common was enclosed before 1582, Sedlow by 1635 and Middleton by 1684.[21] In Plumpton, just east of Streat, enclosure of the waste on the clay in the late sixteenth century caused unrest and this may have resulted in more caution in Streat.[22] Nevertheless, the 200 acres of common pasture which existed at the northern end of the parish of Streat were enclosed by 1653.[23]

The average size of farms on the Weald clay in both parishes rose during the sixteenth and seventeenth centuries, and the number declined as the owners of freehold land successfully established larger farms and the more successful copyholders such as the Tillinghursts, the Shoulders and the Marchants at Marchant's Farm purchased land from their less successful neighbours. As a consequence of the enlargement of farms, the area participated in the 'Great

Rebuilding' of the late 1500s and the early 1600s; Marchant's and Hayleigh farmhouses are good examples of this phenomenon. Houses were built with local timber; licenses to cut timber on copyholds were given by the lord of the manor of Streat between 1580 and 1620. The new buildings, which included barns, and the extension of existing ones, contributed to the clearance of mature timber from the area.[24]

III

Hayleigh is one of the larger freehold farms on the clay which developed on land that was originally demesne of the manor. As a deer park in the fifteenth century, Hayleigh may have supported about 300 deer, for in the 1570s Danny Park contained that number and was of about the same size. During the sixteenth century, the joint owners of Hayleigh allowed it to be converted into a farm and when the Montagues sold it to Sir Antony Stapley in 1634, he obtained a license to extract marl for the farm from nearby common land belonging to another manor. Hayleigh was bought from the Stapleys in 1676 by Sir Peter Courthope of Danny. That sale separated it from the rest of the demesne of the manor of Middleton. Sir Peter commissioned the survey and map of 1682 by Whitpaine (Fig. 2).[25] In 1828, W. J. Campion, who had inherited the farm from the Courthopes, sold it to the Lane family, who had already inherited the Dobell estate in Streat and Westmeston (which included Marchant's) and who were to retain both farms until 1906.[26]

Little information about the management of Hayleigh has been found. In 1682, more of the farm's land was woodland than in 1839 when the Tithe Award and Apportionment showed only a couple of small patches and some hedgerows with trees. Between those dates the tenants of Hayleigh did not make major changes to the internal boundaries, although some of the fieldnames changed.[27] The fragmentary evidence for tenancy during the eighteenth century suggests that the rent was comparable to that for farms of a similar size and location on the Danny estate. The Lanes built Hayleigh Cottage (since rebuilt), the barn in the field to the north of the cottage (since demolished) and some of the farmyard buildings. The Springett family who took over the tenancy in the 1820s remained until about 1930.[28] At first they managed the farm as a traditional cattle and wheat enterprise but they used the sandy-loam soils at the southern end of the farm more intensively and consequently, by the mid-nineteenth century, the farm employed seven men and two boys, a proportionately larger workforce than Marchant's had.[29] By the late nineteenth century, the Springetts had switched from cattle rearing to dairying in which they and their successors continued to specialize until the 1950s when the farm was divided.[30]

In 1906, Hayleigh was inherited from the Lane family by their relatives, the Fitzhughs who sold it in the 1950s. The new owner divided the farm and sold it. The southern 100 acres remained as Hayleigh Farm but the new farmer specialized in market gardening, taking advantage of the sandy loam soils. The remaining 120 acres was purchased by Lord Manton who sold the southernmost 40 acres to a local farmer and amalgamated the remaining 80 acres with Marchant's Farm whose subsequent development is described below.[31]

IV

Marchant's Farm is typical of the copyhold farms whose successive copyholders were successful farmers who invested their profits in extending the holding. The farm got its name from the Marchant family who inherited it during the 1680s and who remained there until 1827.[32] The earliest reference to the farm is in the survey of 1581 (described above) when the occupier was

Robert Picknall. The 26 acre farm was divided between eight fields of between one and six acres, most of which were meadow. The agricultural rent was valued as £10.35 and there was sufficient timber on the farm for two loads worth £2 to be cut each year.[33] The farm was an amalgam of three copyholds, Lemons (eight acres), Wilfathers (three acres), and Commers, which was probably fourteen acres to make the total of 26, unless Picknall subleased other copyholds.[34] Picknall probably built the earliest part of the present farmhouse which is now the east wing. Its layout was typical of small timber-framed farmhouses of the period. The hall was on one side of the central chimney stack and the parlour on the other. The stairs to the upstairs chambers sloped up the chimney's side within the lobby. Picknall also built the timber-framed five-bay aisled barn which still stands.

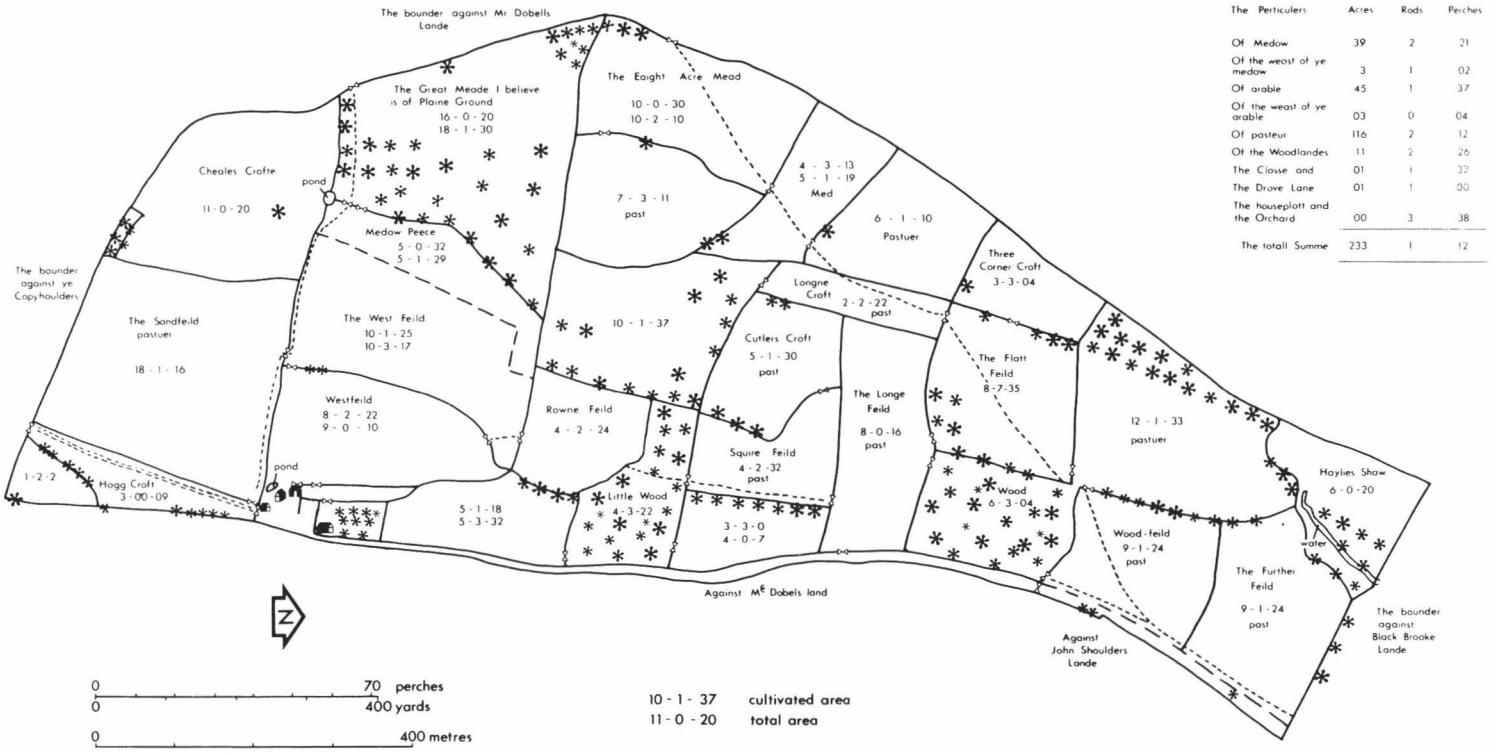
In about 1600, Picknall sold the farm to the Tillinghursts who, in 1620, obtained a licence to cut timber for building for the present north wing of the farmhouse.[35] They soon increased the farm's size to 56 acres for they purchased 'Sternes', a 30 acre tenement in 1610. The Shoulder family who purchased the farm in the early 1670s quickly doubled its size to about 110 acres, for in that decade they purchased four copyholds three of which totalled 48 acres. The acreage of the fourth is unknown, but its copyhold rent suggests that it was several acres in extent.[36] Three of the four copyholds had names which reflect the reclamation of the land from woodland and waste; Grubbs, Riddens and Woodlands.[37] In addition, the Shoulders purchased some manorial freehold but there is no evidence of their extent or of the dates of purchase.[38] By 1682, when the map of Hayleigh Farm was drawn (Fig. 2), the Shoulders had extended Marchant's Farm so that it abutted onto Hayleigh's eastern boundary and Shoulder's name is on the map.

In 1684, the farm passed by marriage to the Marchant family when John married Elizabeth Shoulder. The Marchants expanded the farm by purchasing a five acre copyhold in 1696 and another of about 10 acres in 1746, so increasing the farm's size to over 125 acres.[39] No additional purchases were made. The southern wing of the farmhouse was added in the early 1700s. From the late seventeenth century, Marchant's was both a comparatively large copyhold farm and the largest farm on the Weald clay in Streat. When compared with farms on the clay in Westmeston to the west and Plumpton to the east, only freehold farms such as Hayleigh were larger.[40]

The Marchant's fortunes declined rapidly after 1800. In 1801 about 45 acres of Marchant's Farm was sold by Richard Marchant, which reduced the farm's size to about 80 acres. Then the family's land in Westmeston and Plumpton was sold. Finally, in 1827, the trustees of Richard Marchant's will sold Marchant's to the Lane family for £1700, but Emma, his widow, retained two cottages which the Lanes purchased later.[41] The Lanes did not alter the farm's boundaries (Fig. 1), but they extended the farm buildings, built a separate granary, the farm cottages opposite the entrance to the farm on the east side of Streat Lane and a pair of semi-detached cottages on the farm's western boundary (since demolished).[42]

From 1827, the tenants were the Fitzhugh family, who were the incumbents of the parish.[43] The Fitzhughs put a baliff into the farmhouse and lived at Streat Place. From the 1820s until the mid 1850s, they ran the farm as a stock and wheat enterprise but then changed to dairying so taking advantage of proximity to the railway station at Plumpton. In 1856, the Fitzhughs rented additional fields from Shergold's and Elmgrove Farms to increase their acreage from 80 to 150 acres. The dairy was in the west wing of the farmhouse. By 1881, when a valuation of the farm was taken, the farm had been reduced to about 90 acres in extent, and consisted of the original 80 acre farm and a couple of fields rented from Skinner's Farm. The rent was £127.[44] The total valuation of Rev. Fitzhugh's assets as tenant was £805, of which the dairy herd was a quarter. The crops in the valuation reflect the needs of a dairy farm; there were haystacks of meadow and of clover hay, a

A Survey of Hayleigh Farme lying in the perish of Westmeston in ye County of Sussex now belonging to Peter Courthop Esq^{r}: surveyed and plotted by Robert Whitpaine 1682



The Perticulers	Acres	Rods	Perches
Of Medow	39	2	21
Of the weast of ye medow	3	1	02
Of arable	45	1	37
Of the weast of ye arable	03	0	04
Of pasteur	116	2	12
Of the Woodlandes	11	2	26
The Classe and	01	1	32
The Drove Lane	01	1	00
The houseplott and the Orchard	00	3	38
The totall Summe	233	1	12

Fig. 2. Hayleigh Farm in 1682.

Source for map: ESRO, AMS 5857.

'poor lot' of beans in a store, peas, ryegrass, tares. The cash crop was white wheat for which dung and bone manure were used as fertilizers. The incoming tenant, Mr Cornwall, purchased the dairy utensils and may have bought the herd of 15 Alderney cows and William, the young Jersey bull.[45] In 1920, four of Mr. Cornwall's children purchased the farm from Mrs. Bottomley, who was H. C. Lane's widow, and they sold the farm in 1954 to Lord Manton as a dairy enterprise. He then amalgamated the northern 80 acres of Hayleigh with Marchant's to enlarge the latter to 160 acres.[46] The farm continued to specialize in dairying until it was sold in 1969 to the present owner-occupier, Mr. P. Heagarty.[47]

The management of the modern 160 acre Marchant's Farm continued the post-Second World War trend away from cattle. At present, about half the farm produces grain and the rest is pasture, supporting a herd of about 70 cattle (21 cows, with calves and yearlings plus a bull). In 1982, the arable was divided between 14 acres of winter barley, three acres of winter oats and 67 acres of winter wheat. About a third of the farm's income is from the sale of cattle and two-thirds from grain. The ratio of income on farms in the region from the seventeenth to the nineteenth centuries was the reverse. The permanent labour force is also smaller than before, consisting of one full-time worker with part-time help from the owner and casual labour during the hay harvest and winter sowing time.[48]

The management of both farms was dominated by regional changes in agricultural practices. Hayleigh was of a suitable size and layout for the changes in practice which occurred until the 1950s, and until then no changes were made to the farm's acreage. The owners or the tenants of Marchant's normally attempted to enlarge the farm's acreage which suggests that it was too small to make the best use of the current agricultural practices. Even today, at 160 acres, Marchant's is only just viable as a profitable farm.

Although Hayleigh was an estate farm until the 1950s, and Marchant's became one in 1827, this research had to depend heavily upon standard sources, such as the land tax, manor court books, street directories and the tithe award and schedule. In common with many farms in the Weald, both farms lack detailed management records either because they never existed or because they have been lost. Nevertheless much may be learnt about such farms which may be examined in the context of our present knowledge of the main trends of agricultural change in the Weald as described in the first part of this article. These case studies also help to exemplify and so improve our detailed knowledge of agricultural history and our research methods which must cope with the imperfections of the resources which are available.

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TABLE 1 Summary of the valuation of Marchant's Farm in 1881

				£ p	*Approx. % of total*
Cattle	NM	CD		93.	12
Pigs	L	CD		7.	1
Cows	UUM			223.00	28
Horses	CLA			178.00	22
Implements	CMN	a		139.00	17
Corn etc	CMU	a		132.40	16
Harness	UC	R	R	21.32½	3
Dairy Utensils	U			2.00	0.2
	AdB	U	R	804.	100
Settled at 15% lower	RAM	Ed	R	£683.32½	

Code (not given in the valuation books)

C	U	M	B	E	R	L	A	N	D
1	2	3	4	5	6	7	8	9	0

Source: ESRO BMW A2/12

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Acknowledgements; my thanks to Dr. C. Brent and Mr C. Whittick for their help.

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[7]Farrant (1979), 155–70.

[8]PRO, MAFF 68, 4th June returns quinquennially 1870–1930.

[9]ESRO, Tithe Award and Schedules for Streat, Plumpton and Westmeston.

[10]Farrant (1978), 261–8. Deeds for Marchant's Farm held by the owner, Mr. P. Heagerty.

[11]Deeds of Marchant's Farm as above.

[12]Deeds and as shown on Fig. 1 from Mr. Heagarty's map.

[13]The kiln site was dug by Mr. Con Ainsworth from 1979–82 and he has the pottery and plans at present (1983). The cottage site was dug by him in 1982. Mr. Heagarty owns both sites.

[14]L. F. Salzman, ed., *Victoria History of the County of Sussex* 7 (1947), 104. Brent (1976), 48. P. Brandon, 'Common lands and wastes of Sussex', Univ. Lond. Ph.D. thesis (1963), unpublished; parks gazetteer.

[15]PRO KB 9/382.

[16]Brandon (1963), 104–11. ESRO Danny 1126.

[17]ESRO Danny 1126.

[18]Ibid.

[19]Ibid.

[20]ESRO new accession map of Streat Place and Gote Farms, part of the Lane estate, *c.* 1815. ESRO, SAS 'M' Collection, including 282, 284, 290; see Sussex Record Society vol. 24, which catalogues them.

[21]ESRO M282, 284, 290, etc. Brandon (1963), 155–6.

[22]Brandon (1963), 158.

[23]ESRO M303–5, 312–4, 330. Brandon (1974), 167.

[24]ESRO M/a 1–6.

[25]ESRO Danny 1319–1342. B. L. Add'l Charters 29655, 29656.

[26]ESRO Land Tax.

[27]ESRO, Tithe Award and Schedule.

[28]ESRO, Land Tax. Kelly's Post Office Directories.

[29]PRO, Census Enumerator's Schedules 1961.

[30]Kelly's Post Office Directories.

[31]Deeds of Marchant's Farm from Mr. Heagarty, the owner. Information from Mr. Open, the retired farm manager.

[32]ESRO Danny 1126; M/a 1–6.

[33]ESRO Danny 1126.

[34]ESRO M3a 1–6.

[35]Ibid.

[36]Ibid.

[37]Ibid.

[38]Ibid.

[39]Ibid.

[40]ESRO Tithe Award and Schedule. PRO, Census Enumerator's Schedules.

[41]ESRO M/a 10.

[42]Demolished by Mr. Heagarty.

[43]ESRO, Land Tax, Streat.

[44]Valuation see Table 1. ESRO, Par 488/7/1: Land Tax for Plumpton and Westmeston.

[45]See Table 1.

[46]Deeds from Mr. Heagarty, owner of Marchant's.

[47]Mr. Heagarty and Kelly's Post Office Directories.

[48]Mr. Heagarty.

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GENTRY WEALTH ON THE WEALD IN THE EIGHTEENTH CENTURY: THE FULLERS OF BRIGHTLING PARK

by R. V. Saville

This article discusses the accumulation of wealth and land by the Fuller family of Rose Hill, later named Brightling Park (NGR TQ 684 211) from the end of the seventeenth century, and considers the changes in agrarian practice and organization on their estates. The Fullers owned Heathfield ironworks (TQ 599 186), a forge at Burwash, and between 1693 and 1763 had substantial cannon contracts from the Board of Ordnance. The family also owned sugar plantations in the West Indies and the success of these after 1740 provided an important source of income for the rest of the century. The profits from sugar, ironworking, and the agrarian side helped the family to expand their Wealden estates and invest in agricultural improvement, to purchase Government and Company stocks in London, and to help family members enter national politics, set up in trade and hold office in the Church. The relationships between agricultural work and ironworking on the estate are analysed, along with the failure to invest in new ironworking techniques.

1. THE BACKGROUND TO THE EIGHTEENTH CENTURY[1]

The Fuller family of Brightling were one of several successful Wealden gentry families who extended their estates and encouraged agricultural reorganization and improvement during the eighteenth century.[2] But by the start of that century the Fullers had become less typical of the Wealden gentry as a whole, partly due to their ownership of Heathfield charcoal ironworks, one of the few remaining furnaces on the Weald,[3] and also because of the support the family received from the sugar plantations in Jamaica.[4]

The economic activities of this family have not previously been discussed as an integrated enterprise, though aspects of their correspondence and lives have been considered, and a number of general texts for the period have made mention of one or other of their activities.[5] This article also illustrates the interconnections between iron and agriculture in the last phase of the Wealden industry.

By the third quarter of the sixteenth century, the Fullers owned arable land and woods in Mayfield, Waldron and Heathfield, as well as marshes in Westham, and in 1575 they were wealthy enough to take a 40-year lease of the manor of Waldron, commonly known as Tanners, which they later purchased outright.[6] From 1575 to the end of the century, at least 316 acres were bought or leased in the Heathfield and Waldron area, much of which was concentrated along streams near furnaces which were worked by the family in the seventeenth century. In the first half of the century, the net addition to their lands on the Weald was below 100 acres[7] though the 1650s saw a further 207 acres added in Waldron and Mayfield again in areas near Wealden streams and furnace sites, or of woods; by 1660 over a third of their total acreage was woodland. During the subsequent 30 years, the pace of acquisition in the Weald slowed down, though on the better farming lands of Hellingly and Chiddingly a large holding was built up, which reached 244 acres by 1680, with another 23 across on the Pevensey levels and 94 acres in Berwick.[8] The retreat from purchasing on the high Weald, and the outlays the

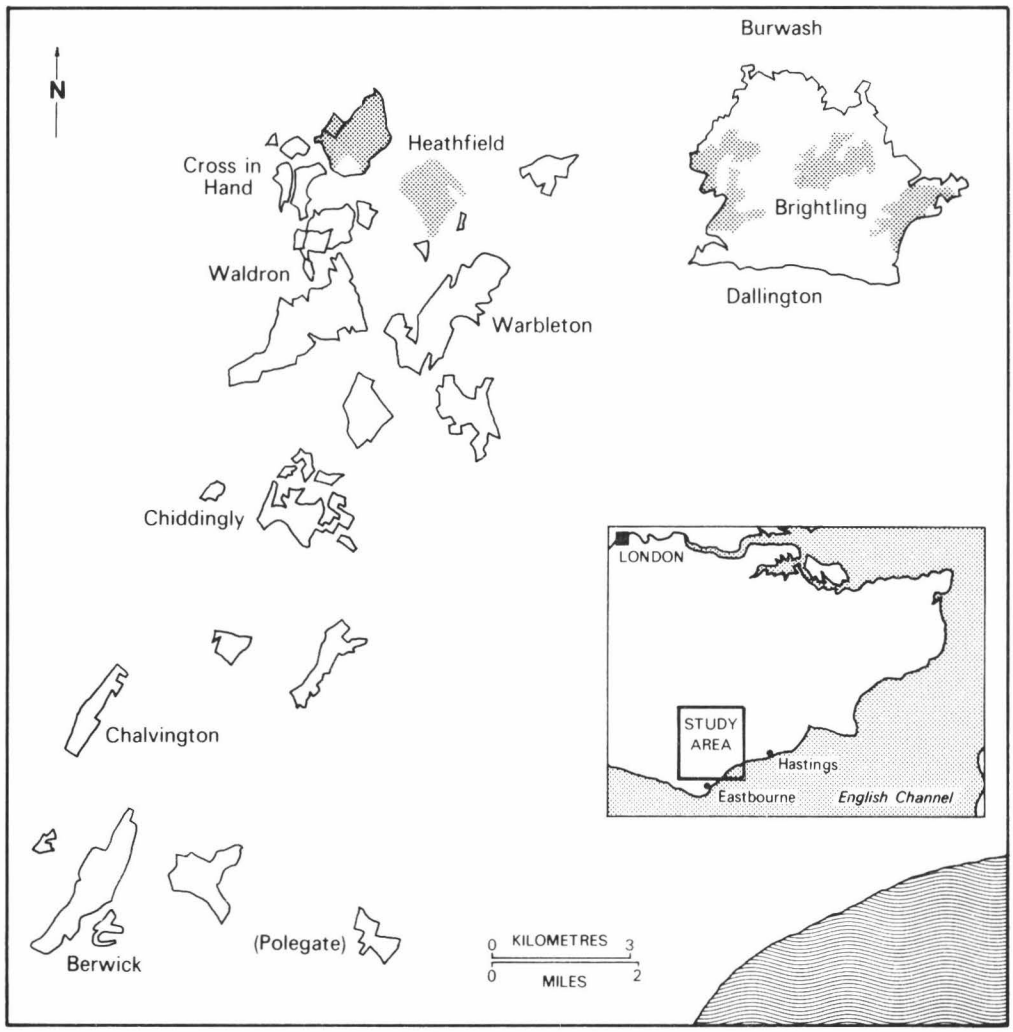

Fig. 1. The Fuller estate in 1777. The stippled areas indicate woodland. (Source: ESRO Fuller collection maps)

Fullers made for marshes and good low Wealden farming land suggest a switch in the balance of their activities from the iron industry to agriculture. They now had a number of farms on the best lands available in East Sussex, which gave them an increased capacity for rearing cattle; the marshes in particular complemented their lands on the Weald.

A greater concentration on agricultural activities in these years (*c.* 1660–90) was forced on many of the Wealden gentry who had made money from ironworks in the sixteenth and early seventeenth centuries, but who later faced the rise of iron imports from abroad and increased competition from charcoal furnaces elsewhere in Britain. The capacity of furnaces and forges in other parts of the country had outstripped the Weald by the early eighteenth century, and surviving evidence indicates closure of furnaces and a considerable fall in output for the civilian market.[9] Except for the few furnaces manufacturing cannon in wartime, it is doubtful whether more than a handful of Wealden

furnaces worked every year. The Fullers were methodical in expanding their non-woodland land holdings after the Restoration until 1690. The farms they bought posed no problems of rent arrears during the depression of the agricultural prices in the first half of the eighteenth century.[10]

The general long-run decline of the Wealden iron industry, and the rise of competition elsewhere, was masked after the Restoration for a few furnace owners by a probable increase in merchant demand for cannon and shot, and by the upsurge in wartime demand from the Navy in 1665–7, 1672–4 and again in 1678. Yet the impact of these wars on the Wealden industry was entirely overshadowed by the huge increase in demand for armaments from the ocean-going merchant fleet and the Navy after 1688.[11] In common with several Wealden furnace owners, including the Dykes and the Pelhams, and London-based families such as the Westerns, the Fullers benefited from this increase in Government contracts.[12] They sold over 786 tons of cannon and shot to the Government from 1693 to 1698 for which they received £14,411 (Table 1).[13] Just prior to these contracts, the Fullers' policy of land purchasing changed and they invested heavily in Wealden woodland areas; they bought 42 acres in

TABLE 1

Income from the sales of cannon to the Board of Ordnance: annual averages by quinquennia.

YEARS	£
1694/5–1698/9	2882
1699/1700–1703/4	410
1704/5–1708/9	1606
1709/10–1713/14	424
1714/15–1718/19	784
1719/20–1724	669
1725–1729	45
1730–1734	1629
1735–1739	1251
1740–1744	2799
1745–1749	3520
1750–1754	4304
1755–1759	3590
1760–1764	3771

Sources: Public Record Office, E 351, Exchequer Accounts (Ordnance); AO 1, Audit Office (Ordnance); WO 51, Bill Books (Ordnance); WO 48, Treasurer's Ledgers (Ordnance).

Waldron in 1688, and over 248 acres, again mostly woods, in 1691.[14] The wartime demand for furnace charcoal drove wood prices up in the 1690s, and numerous Wealden landlords continued to benefit from subsequent war-based price rises down to 1763.[15] A rising demand for hop-poles, barrel staves, furniture and fences encouraged a diversification of woodland management, and the Fullers, along with the Ashburnhams and the Pelhams, grew wood for these markets by the late seventeenth century.[16]

The impact of Government demand for ordnance undoubtedly laid a substantial basis for the improved fortunes of the family. These further benefited from the marriage in 1703 of John Fuller I (1680–1745), heir to the Fuller estates, to Elizabeth Rose (1681–1728), daughter of Dr. Fulke Rose, a merchant and landowner of Jamaica, who had married Elizabeth Langley, daughter of Alderman John Langley of London.[17] The 1703 marriage settlement brought into the Fuller family some of the Langley-Rose wealth, including part of the original Rose estate in Jamaica, comprising 1501 acres near Spanish Town and in other parts of St Catherine's parish, and 648 acres jointly owned with the Isted family, who were also related to Fulke Rose.[18] The Fuller side of the 1703 settlement involved the

purchase of a landed estate for John and Elizabeth in Brightling, originally 169 acres, and a further 73 were added in 1704.[19] The move to Brightling, subsequently named Rose Hill in honour of Elizabeth's late father, proved to be decisive for the family pattern of landowning in the eighteenth century. It was to be here that the Fullers concentrated the bulk of their purchases, and where they established their deer park.

By the end of the first decade of the eighteenth century, the family fortunes were thus established on a broader and potentially more lucrative basis than twenty years before. The sales to the Government from cannon and shot contracts realized £10,079 in the eight years to 1708, and this was augmented by earnings from sales to the merchant marine and of pig and bar-iron locally, though to what extent is unclear.[20] Their Jamaica estate probably yielded a net £300 a year at this time.[21] Together with income from the landed estate, these probably gave the Fullers a net income of around £2000 per year by 1710. The family was closer to London society after the 1703 marriage; in 1695 Dr. Fulke Rose's widow married Dr. Hans Sloane (1662–1753) the polymath and antiquarian, who kept up a correspondence with the Fullers for the ensuing half a century.[22] The surviving papers indicate that both father and son put much store on this correspondence and the election of John Fuller I to Parliament for Sussex in 1713 brought him into national politics.[23] The family tradition of interest in the London cultural scene and support for the activities of the Royal Society dated from these years.[24]

2. DECLINE IN FAMILY INCOME, AND THE PROBLEMS OF THE IRON TRADE AND AGRICULTURE AFTER 1710

This picture of the family fortunes by the close of the war of the Spanish Succession indicates successful diversification helped by wartime conditions and the marriage with the Rose family; yet the promising start to the new century was not to last, and net family earnings fell below the level of the 1700s for the following three decades. The demand for cannon and bar-iron receded and gross income from cannon sold to the Government fell sharply; from 1709 to 1716 they received only £2350, and £7260 in the fourteen years from 1716–29.[25] Wood prices declined due to the fall in demand from other furnaces and was not compensated for by the rise of other uses for Wealden timber; grain and cattle prices also fell and many of the Fuller tenants were unable to raise sufficient cash to pay their rent.[26] To make matters worse, the income from the sugar plantations in Jamaica fell well below £300 a year by the end of the 1720s and then stayed down for the next decade.[27] The income from the tenanted farms is listed in Table 2, along with the explanation for the marked fluctuations in rents from one year to another.[28] The total family income in these depressed years fell from the higher level of the early eighteenth century.

The overriding concern for those involved in Wealden agriculture in the second decade of the eighteenth century was how to accommodate the post-war fall in the price of timber, and the decline in grain prices. Prices failed to improve for timber until the later 1730s.[29] Matters were made worse by the fall in work associated with the furnaces and forges in the Weald; work which benefited the Wealden tenants of landlords who ran furnaces and supplied charcoal, iron-ore and cartage services. The Fullers had the experience of over twenty Wealden tenants of their own to illustrate these problems,[30] and another 44 tenants on the Wealden lands of Sir John Lade (*c.* 1662–1740), the Southwark M.P. and brewer, whose Sussex estate they managed for over 25 years before Lade's death.[31] The Fuller iron-working business took them all over the Weald, and in several national and local political campaigns they were involved in discussions on Wealden problems, and were strong advocates of the Corn Laws.[32] Their ownership of marshland and farms on the levels enabled them

TABLE 2
Rents on the Fuller farms, 1724–37, 1745–58, and 1791–96

Year	*Gross rent receivable*	*in cash*	*of which deductions allowed for*			*arrears*
			iron	*agriculture repairs*	*taxes*	
	£	%	%	%	%	%
1724	1057	61.1	13.9	11.6	8.7	4.7
1725	1045	58.2	11.5	17.4	8.8	3.9
1726	1060	54.5	15.1	14.6	8.6	7.3
1727	940	60.7	17.2	8.7	9.7	3.6
1728	1064	58.5	14.1	14.5	10.1	2.8
1729	902	61.2	9.4	16.2	11.2	2.1
1730	1065	63.9	10.0	12.9	6.9	6.1
1731	1158	59.9	6.6	17.1	7.9	8.4
1732	862	72.5	7.5	6.3	8.3	5.3
1733	1210	67.0	10.7	14.3	6.4	1.6
1734	1100	68.8	7.9	12.4	6.9	3.8
1735	977	64.9	10.3	15.9	6.7	2.0
1736	1022	62.0	6.1	20.6	9.3	1.9
1737	1094	55.3	10.5	18.3	8.4	7.6
1745	746	53.5	9.5	19.4	16.7	neg.
1746	1001	46.2	9.9	27.7	16.3	neg.
1747	1205	42.2	20.3	23.1	14.1	neg.
1748	1313	41.1	19.0	23.5	16.2	neg.
1749	1655	48.5	11.9	23.7	15.8	neg.
1750	1362	33.4	15.6	35.5	15.1	neg.
1751	1165	47.1	15.6	24.7	12.4	neg.
1752	1313	49.9	9.4	27.4	13.2	neg.
1753	1661	39.8	22.9	24.0	13.2	neg.
1754	1775	39.1	24.7	23.9	11.9	neg.
1755	1869	52.7	20.8	16.7	9.1	neg.
1756	1656	53.9	17.1	18.0	10.7	neg.
1757	1896	45.6	26.9	15.9	11.0	neg.
1758	1223	42.8	18.8	19.3	18.9	neg.
1791	1990	68.2	—	17.3	13.4	—
1792	2081	65.1	—	21.2	13.7	—
1793	2415	59.8	—	32.5	15.8	—
1794	2421	66.1	—	21.2	12.6	—
1795	2265	65.7	—	20.6	11.7	—
1796	2424	62.1	—	26.1	10.4	—

Sources: RF 15/26–29 and unlisted account books.

Note: There are two main explanations for the fluctuations in rents in 1724–58, those relating to the farming units and the changes in income each year, and those concerned with the accounts kept by the family. To take the farming reasons first: a number of farms were untenanted each year, but it is not clear from the accounts exactly how much acreage was 'in hand' in any one year, or part of a year; abatements in rents, or a lower nominal rent, were sometimes given to new tenants, affecting the figures in the 1730s and 1740s in particular, where changes of tenant were more frequent than in later years; land purchases augmented the number of farms, and the effect this had in pushing up nominal rents was noticeable in the 1750s. The accounting reasons overlap with the former category: arrears in each year were not always listed on the accounts; the accounting procedure in RF 15/26 and 15/27 occasionally lumped some rent payments in years after they were nominally due, thus 1733 included some payments due in 1732, and 1753 included rents due in 1752 and 1751; the nature of the account books has meant that totals for 1724, 1737, 1745 and 1758 understate nominal rents, some payments presumably being recorded in books now missing.

to appreciate the sub-regional contrasts of East Sussex agriculture: this was evident from their correspondence, and the organization of a number of their farms by mid-century showed they were prepared to put their knowledge of these contrasts into practice.

The key problems of agricultural prices and the fall in demand for iron were highlighted by the

regular failure of numerous small Wealden tenants and the accumulation of arrears of rent. On both the Fuller and Lade lands, the tenants who failed were those who worked small farms with a rent of below £30 a year, and who lost any share in the reduced work available for the iron trade. Table 3 charts the build-up of arrears on those farms owned by the Fullers which fell into this category (nos. 1-15) and lists the dates when they were given up.[33] Only two of this group, Benwicks (no. 14) and Mocketts (no. 15) had no problem with arrears. The other thirteen had lengthening arrears which in ten cases contributed to or were the main factor in a change of tenant; several farms (nos. 5, 8, 12) had three or more changes in two decades. The small Lade farms on the Weald concentrated in the Warbleton, Westfield and Battle areas were likewise hard hit by the depression and the

TABLE 3
The course of arrears for the Wealden farms of the Fullers 1724–1736

Farm no.	*Farm name/ tenant*	*£ Rent*	*Date farm given up*	*Reason for giving up and result*
1	Easton	9	1730	Arrears 3 years. Farm incorporated into larger unit
2	Wimble	11	1730	Arrears 10–11 months
3	Heathfield	15	1726	Arrears. Rent lowered to £6 and later incorporated into larger unit
4	Heathfield	2	1735	Rent increased to £3
5	Bridger	26	1727	Arrears
	Dennis		1730	Arrears
	Th. Mepham			Arrears reached £86 by 1738
6	Sevenoaks	50	1728	Arrears
	Deering			Arrears 8 months 1735
7	James	30	1726	Arrears 2 years
	Gower			Arrears 1 year 1738
8	Gunner	29	1731	Arrears 10 months
	Durrant		1738	Arrears 6 months
	Smith		1741	Arrears 1 year
	Dulake		1742	Later incorporated into larger unit
9	Copper	20	1725	Arrears £164
	Ranger			Minor arrears
10	Ashby	10	1729	?
	Stace		1734	Arrears, rent raised to £15
	Smith			Arrears 2 years by 1740
11	Th. Stace	12		Build up of arrears, cleared after 1737
12	Taylor	37	1721	Arrears
	Crowhurst		1726	Arrears, cleared by iron services in 1725
	Henly		1736	Arrears of £122; he had been given an eleven year lease.
	Brasier		1740	?
	Waters		—	Arrears 1 year by 1745
13	Waters	?	—	Arrears of 16 months by 1742
14	Benwick		—	Takes over farms 1 and 2
15	Mockett	40	—	—
16	Bennet	40	—	Arrears of £106 in 1736, cleared by 1739
17	Jer. Mepham	40	—	
18	Wm. Mepham	20	—	
19	Oxley	38	—	
20	Paine	40	1737	Arrears 2–5 months
	Dyke, Sir Thomas		1742	Incorporated into larger farm, including marsh
	Goldsmith			
21	Piper	34	—	
22	Parker	125	1731	?
	Wm. Gunner		—	Arrears 11 months 1735–47
23	Th. Waters	45	—	Arrears 10 months 1742

Source: RF 15/16–29.

correspondence referred time and again to mounting arrears and the need for distraint, a procedure whereby the landlord seized the goods and produce of the tenant as part payment for arrears.[34]

By way of contrast, those farms on the Wealden lands of the Fullers (nos. 16-23) which provided horses and carts for the ironworks, and thus had a proportion of their rents paid by services, had no major problem with arrears, nor were there any changes in tenants. The contribution of this service work to the rents of these farms averaged over 45% for the fourteen years from 1724 to 1737.[35] The contrast between the two groups is instructive. Of the eight farms which regularly supplied the ironworks, six had rents of £34 or more a year, four of them of £40 to £45, and two (nos. 20, 21) were used as the basis for subsequent amalgamations carried out in 1740 and 1742.

The successful larger farms probably supplied most of the horses and carts for the ironworks, though on occasion even very small farms were utilized. However, for reasons associated with rents and agricultural improvement, the Fullers preferred larger units; and the use of such for the ironworks may have been an expression of that attitude. There was no obvious geographical pattern involved except that farms off the Weald were rarely used, and not at all in this period. The idea of a 'successful' farm based on the distinctions made above could be drawn into question if the Fullers had operated a differential rental policy, with lower rents for farms supplying services, but they did not; and in slack times when fewer farms contributed, there were no abatements in rent.[36]

The Fullers left the work for the furnaces in the hands of regular suppliers, and only rarely (no. 12 in 1726) gave work to farms in arrears. These latter tenants were ususally evicted after eighteen months or two years, and on occasion their farms were incorporated into larger units. It may have been deliberate estate policy to allow certain of these, such as Easton's (no. 1), Wimble's (no. 2), Heathfield's (no. 3) and Gunner's (no. 8) to fall into arrears and be amalgamated. Reductions in rents were not considered on either the Fuller or Lade estates, except for a handful of cases: in consequence, a few farms remained untenanted for a year or two at a time.[37] This was one of the several causes for the fluctuations in rents in the years 1724 to 1758 listed in Table 2. Apart from the Wealden farms which serviced the ironworks and which gave rise to no major problems with arrears, we should note that their farms off the Weald also posed few if any problems of management and rents in this period.[38]

For most of the three decades after 1710, family income of the Fullers was below that for the first decade of the century; in the case of the iron trade they merely waited for Government orders, rather than expanding their modest merchant and civilian cast-iron market.[39] However, on the landed estates and in Jamaica they proceeded to push ahead with improvements, which, like the amalgamations noted above, provided a firmer basis for long-term growth, and to these we now turn.

3. MEETING THE DEPRESSION: DIVERSIFICATION AND REORGANIZATION OF AGRICULTURE, AND CONTROL OVER TENANTS

There is abundant evidence that John Fuller I (1680-1745) and his son appreciated the need for larger farms on the Weald, to secure continuity of occupancy and regular rent payments, and to ensure proper uses of the land and improvement in agricultural methods. The family thus had a similar position to that of numerous landlords in the British Isles in the first half of the eighteenth century. The problems with the small tenants were various, and included social and economic factors, as well as the difficulties with arrears noted above. Moreover, there were persistent difficulties in dealing with leasing arrangements and repairs for building and fences.[40] In fact, except

where it could not be avoided, John Fuller I refused to give a lease to most of his tenants and advised Lade to do the same;

> 'Upon the whole I find the Tenants expect that the farms shall be so repaired before they sign the lease that there will be little wanting in their time, and the insisting upon leases gives them an opportunity of making larger demands upon consideration of their keeping them in repairs which I never yett knew performed by any of them'[41]

The landlord had to be firm, 'for there is no end of their demands, if they find themselves easily complyed with, and the ground of all is their pretence of keeping them in repair which they never do'.[42] There was little point in going to court to enforce covenants in leases, 'all our county jury's being against landlords so that in a lease of the small farms landlords is only tied up'.[43]

Fuller thus avoided formal leases where he could, he preferred to secure agreement to a series of articles at will, and this circumvented possible legal complications involved in trying to evict a tenant with a lease still with some time to run.[44] This was a flexible procedure, and allowed him to rewrite agreements from time to time to accord with his latest ideas. The two major conditions tenants-at-will or leaseholders had to accept was the reservation of all timber and iron ore for the landlord and to allow access at all reasonable times.[45] Thus a standard provision was included, which spelt out in detail, that all trees and timber were reserved along with all coppices and quarries of mine and stone;

> 'now standing, growing, lying or being or which at any time or times hereafter during this demise shall stand, grow, lye or be in upon or within the said demised premises or any part or parcel thereof and full and free liberty of ingress, egress and regress way and passage to and for the said John Fuller his heirs and assigns and his and their servants, workmen and labourers with horses, oxen, carts and all other carriages or otherwise to sell, cut down, hew, saw, dig, draw and carry away the same at all seasonable and reasonable times in the year doing no wilful spoil to standing corn or mowing grass there'[46]

A similar format was used in the articles at will, and Fuller had these drawn up and signed by a lawyer, though there was nothing exceptional in the procedure by this date. All hunting, fishing and shooting rights were further reserved.[47]

The Fullers made their tenants agree to covenants which related to detailed work on the farms: these covered the extent of hop cultivation, the insistence on keeping dung on the farm, the layout of hedges and rails, and the use of fallow.[48] The amount of dung varied according to the usage of the land; in the lease cited, 'three good loads of rot dung' were to be spread on the land for 'every load of hay or straw which shall be carried off from the same'.[49] In the case of sowing wheat the articles at will specified that, 'every tenant when he sows wheat should be obliged to mend it either with three loads of lime upon an acre, or two loads upon the acre, for the first of which he is to have three crops, for the second but two'.[50] On occasion in the 1720s and 1730s, this sowing and liming work had to be done by Fuller and Lade themselves before a tenant would take the farm, which for six acres, 'will cost you seed and all near twenty pounds, which cannot be avoided'.[51] Fuller also tried to persuade Lade to insert an article, 'in all your leases with these (small) tenants that they should fetch all materials for repairs within ten miles'.[52]

Whether using leases or holding their tenants at will, the depression of the years between the wars complicated the work of landlords and made enforcement of these provisions more difficult. This was especially the case with timber, the one really valuable cash crop which, if mature, required only the costs of felling and cartage. Despite the insistence on reserving all standing timber, except that required for necessary repairs to buildings and fences or where specific agreement was reached to the contrary, the Fullers and Lade probably lost a number of trees each year. The problem was

potentially a serious one as some persons tried to hire farms for a year or so with the express purpose of selling the timber. However, on Fuller's estate in the period 1724 to 1737 evictions were, in the main, for arrears, and not for violations of the agreements at will.

It was one matter to have a series of principles with regard to timber and repairs, but quite another to enforce them in practice. On both estates in the 1720s and 1730s, the bargaining which preceded agreements on letting farms frequently favoured the tenants; this was particularly the case over repairs to buildings and fences before the tenant moved in, and allowances to tenants of a certain 'traditional' right to a part of the timber on a farm. Both Fuller and Lade were often faced with repair costs near to a year's rent, in addition to abatements of rent for the first year or two, and in some cases it proved more convenient to demolish farm buildings.[53] As the family were reluctant to reduce rents, several farms remained untenanted in difficult years, and they then faced bills for stolen fences, thefts of cottage stones and doors; and to make matters worse, hop gardens and new trees were dug up, and neighbour's cattle turned out on to the pastures.[54] The impression from the correspondence is one of persistent annoying difficulties with the enforcement of their instructions. Their own tenants and those of Lade often failed to turn up at appointed times for rent payments and on occasion fled at the approach of a steward or a member of the family, even where tenants were known to have sufficient cash.[55] They may have retreated from contact with Fuller himself, but were less reticent when it came to the Westfield farmer, Benskin, employed on general business on the Lade farms. This individual had repeated threats of arson and violence made against him because of his work in distraining goods and surveying farms in arrears, and on occasion he refused to proceed, although Fuller was forthcoming with financial and personal support.[56] This was, of course, the Weald of the Hawkhurst smuggling gang, and confrontations with the customs and excise over imports and exports were frequently reported in Government records. If Fuller was affected in any way by developments of this kind it does not come across in the correspondence; and of course, relations with the growing trade of smuggling were ambivalent for a number of Wealden landlords, not least because of the cash it generated for rents.[58] Fuller's one 'model' tenant on the Lade estate was Edward Jarrett, a known smuggler, who was only too eager to pay his rent.[59]

The Fullers were concerned to obtain a balanced cultivation on their farms, by which they meant that grain and cattle came first, with hops and garden work as a subsidiary. Hop growing required considerable labour, and often extended credit while the garden was laid out, and there was an understandable fear that some farmers would neglect other work, and that liming and dunging of non-hop fields would be neglected. Nevertheless, market trends favoured hops,[60] and when properly supervised and restricted in acreage, these gardens provided an additional cash income without detracting from other farmwork; in any case, as Fuller noted in 1736, 'everybody is now in the humour of planting hops, without which it cannot be let'.[61] The attempt to restrict hop gardens continued after mid-century, and the general maximum was listed as four acres on the Fuller farms from then to the end of the century.[62] There was less problem about the introduction of clover, and at least one of Lade's tenants, and Fuller himself, produced clover seed in sizeable quantities.

The Fullers were interested in all kinds of new plants and regularly planted new seeds at Brightling, among which were Lebanon cedar, almond trees, persicarias and maize.[63] When Rose Fuller was in Leyden, he sent back garden and flower seeds, Dutch peas, cabbage and radish, and the family sent him lucerne and clover seed when he was in Jamaica.[64] They all sent plants to Sir Hans Sloane, one of whose interests was horticulture, and helped one intending author with Wealden plants for a Gardener's Dictionary.[65]

One further consequence of these difficult years was that the family came to appreciate that a

good balance of a farm not only implied a mixed cultivation which could accomodate hops as well as grain and cattle, but one which included several types of Wealden and non-Wealden soils. In this the role of the marsh lands was seen as crucial. The Fullers tried to persuade other landlords on the marshes not to let their land to graziers who bought in non-Sussex cattle, but to let them instead to Wealden farmers, even if that meant a lower rent. As Fuller wrote to Lade:

> 'I am of opinion that the marsh lands should not be let to graziers; but to the people that use the uplands, for it is the chief reason that our country bullocks sell so cheap, that the graziers buy nothing but Welsh runts, whereas the other people would fat their own stock which they bred'.[66]

Moreover, the difficulties of the family's Wealden farms over this period were not shared to the same extent on those they owned on the level lands in Chiddingly, Hellingly and Ringmer. In the 1720s and 1730s, they had ten of these farms, and had few problems of keeping tenants or receipt of rents; deductions from the latter were in the main for taxes, repairs, and the occasional barrel of grain or malt.[67]

The implications of the experience of the farms on the levels and the need for access by Wealden tenants to marsh land gave rise to a straightforward policy designed to achieve a better balance on the farms. In the 1740s, farm reorganizations took place; part of the land on the marshes that they had long owned, and the new purchases, were divided up and included in enlarged Wealden farms.[68] Several of the latter were included now in units also containing lands on the levels, as well as marsh lands, and this was in addition to the amalgamation of the smaller Wealden farming units which did not contribute to the ironworks. By the time Rose Fuller took over the estate in 1755 the results were clear. Of the nineteen Sussex farms with rents over £40, seven had identifiable acreages of marsh; five were jointly Wealden/levels farms, and several more contained different acreages.[69] Though there was some subsequent development of this mixed acreage policy, it had been clearly established by the early 1740s, and required little innovation after the death of John Fuller I in 1745.

The Fullers were involved in the periodic campaigns to strengthen the Corn Laws, and on one occasion John Fuller II (1706-1755) considered that his personal intervention had stopped a cut in the bounties.[70] They failed in their efforts to curtail imports of bar-iron and old cast iron in the 1720s and 1730s; if they had been successful, it would have raised Wealden wood and bar-iron prices, and presumably eased the problems of arrears.[71] As it was, the Fullers spent much time watching the wood markets and sent advice to Lade about the best times to sell, and whether to hold off for a longer growth, or cut short for hop-poles and barrel staves.[72] Once war returned after 1739, the worst of the timber fluctuations were behind them, although warfare came too late to save the numerous tenants who failed on the Weald in the early years of the 1740s.[73]

The pattern which emerges from the Fuller estate accounts of the experience of the depression of agricultural prices shows that the impact was varied, and that farm reorganisation and amalgamations were the most important consequences of these difficult years. On the Weald, those hardest hit were the smaller farms without support from the furnaces, or which had no other external income such as smuggling or cartage services to help them. The larger Wealden farms, those with other incomes, and those off the Weald could not be described as buoyant, but the contrast was appreciated at the time. In general, therefore, it was the diversification of uses for the woodlands, the spread of new techniques, seeds, hop-growing, new rotations, and a mixing of acreages within the farms which were regarded at the time as the key to improvements in profitability, and by the mid-eighteenth century this was borne out by results. The experience of the years between the wars was important in one other respect on the Fuller estate, in that from the later

1740s certain costs of improvements, including grubbing up of hedges and sowing new pastures, were allowed against rents. This is reflected in Table 2 under the head of repairs, and the sharp climb from the low level of the early century illustrated the new policy introduced by John Fuller II and continued by his brother Rose (1708-1777), and their nephew John Fuller III (1755-1834) thereafter. Where these improvements did require marshlands and new acreages on the levels, then income had to be set aside to cover the purchase price, but most of the routine reorganisation, amalgamations and the layout of new pastures was subsumed under the head of repairs and occasional outlays, and was not treated as separate items in the family accounts. The Lade estate did not experience the same pace of change before 1740, due to the conservatism of Sir John Lade. He died in that year and thereafter, with the estate administered by Chancery, it was easier for the Fullers to proceed with repairs and improvements and offset these against rent.[74] Moreover, the general policy of the Chancery court favoured investment in buildings, and there was some reorganization of the Lade farms.

4. THE PROBLEMS OF THE JAMAICA ESTATE, AND THE RISE IN INCOME FROM IRON AND SUGAR AFTER 1739

Though the situation on the Wealden estates was cause for concern before the 1740s, the position of the Jamaica plantations owned by the Fullers was much worse. For the first three decades of their ownership of 1501 acres in St. Catherines and the joint administration of 648 acres with the Isted family, the Fullers experienced difficulties common to absentee owners reliant on local attorneys and factors for day-to-day management. This was a familiar theme in British Caribbean history. They received a mass of conflicting advice, some of which was inspired by merchant rivalries on the island, and they often complained of lack of detail of goods and slaves.[75] One attorney rarely visited the estate,[76] and there was only a vague idea of the position of one part of the plantation.[77] It was suspected that the brief yearly statement of income and expenditure sent there by the factors did not adequately account for their produce.[78] As John Fuller I wrote in 1729: 'I am very feelingly sensible of the great mismanagement in my plantation, and I believe the occasion to be in a great measure that it was managed by merchants . . .'[79] The failure of his attempts in the 1700s to sell ironware and linens using Jamaica merchants did not endear the islanders to him.[80]

His second son, Rose, was despatched to Jamaica in 1733, and found the estate in serious straits, with the cattle and food production side in disarray; moreover, these years were the most difficult period for the Jamaica planters since the 1692 earthquake and the French invasion of 1694.[81] The prices of muscovado sugar on the London market fell from over 30s. a cwt. in the 1710s, to 26s. 4d. per cwt. in 1726, to 24s. 5½d. in 1729 and reached a low of 16s. 11d. in 1733; prices did not recover until the war years after 1739.[82] On the Fuller estate, gross output fell from 100 hogsheads of sugar in 1728, to 82 in 1730 and down to 58 in 1732, before rising later in the decade.[83] John Fuller I took a rather narrow view of reorganization for he would not invest except from profits,[84] and he criticized Rose for buying slaves which did not lead to an immediate increase in output in 1734.[85] Perhaps the slump in cannon sales and the prices in Wealden agriculture contributed to his caution; he was concerned to maintain his yearly net income from Jamaica at £300 or above, which he took to be 30 hogsheads of muscovado sugar, at a time when several of his other children required support for trade and dowries.[86] The fall in sugar prices and initial difficulties after Rose's arrival encouraged his pessimism, and he even toyed with the idea of selling the estate for the £5000 he had been previously offered. The decision was left to Rose, 'if you doe not like the country or think that you shall not succeed there, or if you can get a good chapman you may sell it, for I never intended to keep you there against your will'.[87]

Rose was more perceptive than his father, and he invested heavily in the 1730s, a policy which paid dividends when prices rose after 1739. Sugar was one of a number of foodstuffs for which demand expanded rapidly in the eighteenth century, aided by the spread of tea and coffee drinking and the growth of the confectionery trade and re-exports to Europe. The price of muscovado fell below 30s. per cwt. for only four years from 1740–77, and it was usually above 35s.[88] By the 1740s, net output sold from the estate in Jamaica was above 100 hogsheads, and after Rose's return in 1755 the net income from the island plantation was higher than that from Sussex. In 1759, a total of 310 hogsheads were sent to England, in addition to 150 puncheons of rum.[89] This was a striking change compared with the 1730s. Table 4 details the net gain from Jamaica from 1762–77, and may be compared with that from the landed estates in Sussex. This overseas income was net profit after all costs had been met in Jamaica, and after brokerage and commission charges had been deducted by Thomas and Stephen Fuller in London.[90]

TABLE 4
Net cash income from the landed estate in Sussex
and from the Jamaica Plantation 1762–1777

	Landed estate,	*Jamaica*	*Total*
	£	£	£
1762	2014	2832	4846
1763	1774	2472	4246
1764	1556	1509	3066
1765	1459	3387	4846
1766	2106	2383	4489
1767	1916	2994	4910
1768	1629	2885	4514
1769	2156	3516	5672
1770	1641	3671	5312
1771	1441	4238	5679
1772	1977	4241	6218
1773	2024	4070	4094
1774	1472	3244	4716
1775	1629	2688	4317
1776	1600	2220	3280
1777	2186	3146	5332

Source: RF (unlisted).

5. THE GROWTH OF THE LANDED ESTATE AFTER 1740

The Fullers persisted in attempts to keep the Heathfield ironworks in production throughout the years of relative peace before 1739. In fact there had been a modest increase in Government demand for cannon in the decade before 1740, during which time they were paid for contracts worth £16,715.[91] This income, and that of the next decade, supported their landed purchases of the mid-century. After 1739, there was a huge rise in contracts which barely tailed off in the peace years before 1756 and gave them a gross income of £88,125 for the 25 years from 1741–65, or an average of £3525 a year.[92] As Table 2 indicates, their Wealden tenants gained from this upturn in work. The estimate of family income in Table 5 for the 1750s and 1760s testifies to the success of their continuation with the ironworks and the Jamaica estate through three decades of adverse conditions.

By the 1740s, the profits from iron and sugar easily exceeded those from estate rents, and

continued to do so by a growing margin until the end of iron contracts in 1763. This increased income from sugar and iron was used for a further period of Wealden land purchases totalling 403 acres in 1741–2, followed by a further 182 acres a decade later; and the family inherited 119 acres in Chiddingly and Ringmer in 1752. They also increased their purchases of marsh, adding 30 acres in 1741 and 1750, and 145 acres in Berwick in 1747.[93]

The largest additions were made in the neighbourhood of Brightling around the park at Rose Hill, and social considerations played some part in the decision. By 1704, the landholding there had amounted to 242 acres, yet by 1745 only another 38 acres and several minor tenements and messuages had been added. From 1745–52, John Fuller II bought another 830 acres, and in 1747 erected a park pale. From 1762–70 a further 500 acres were purchased in the Brightling area, much of which was woodland. By that date, over 25 separate farms and smallholdings for which deeds survive had been incorporated into the area of the park, by then stocked with deer.[94] There was a marked shift in the pattern of landholding in the second half of the century towards Brightling, especially so after the death of Rose Fuller in 1777.[95]

In this latter half century, the family continued with agricultural improvements, and they were more confident in their correspondence now that the depressed years were behind them and income from Jamaica and iron had increased. The results of the policy of amalgamation may be seen in the rental list compiled on the return of Rose Fuller in 1755. There were eight farms with rents over £100, a total of £1283, and a further ten with rents over £50; the total of these eighteen paid 75% of all rents. Eight of these larger farms were Wealden, and we have noted above the incorporation of lands on the levels, the Weald and the marshes within a single farm. The ten Wealden farms with rents over £40 incorporated 26 farms which had been noted as distinct units in earlier times, and the five large mainly lowland farms comprised eighteen units previously separate.[96] The Fullers made other improvements; their coppices were reorganized and oriented towards the small pole and stave market, the furniture trades and charcoal for non-furnace uses; they even developed their own rotation,[97] experimented with deep ploughing, and with the reorganization of the run of furrows to improve drainage.[98]

The Fullers regarded themselves as in touch with the views of the smaller Wealden landlords, and this connection probably influenced the Duke of Newcastle to give John Fuller II a Parliamentary seat in the last months of the latter's life.[99] Rose Fuller maintained the connection with Wealden farming interests and gave advice to hop-planters over the problems of weight and quality of Sussex hops, and how to deal with Parliament over regulations for the trade.[100] The family was involved in turnpike trusts, the Commission for Sewers at Rye, and they paid careful attention to the training of their estate stewards.[101]

By the 1760s, the Fullers had worked out solutions to the major problems facing Wealden agriculture which were; that farms were too small to be economic; they needed a balance between the different types of land within the Weald and access to the marsh for cattle fattening; the standard of agriculture required improvement through the introduction of new techniques and by increasing the area under arable. Wherever possible they organized their larger farms so as to include a variety of land, and marsh as well. Their continuous interest in improvement was typical of improving landlords of the time, and judging from the correspondence they took a considerable pride in their agricultural progress and bought the latest treatises for the library at Rose Hill. The increased allowances in rents for improvements, as well as for formal repairs was extended and for some years after 1750 it reached 20–30% of total rentals. They preferred to keep their tenants for long periods, and on the whole left the farms with stable rents; in fact, rent levels per acre barely rose from 1755–97, when wartime price rises persuaded John Fuller III that various, but modest, rises of around 40% were in order (Table 2).[102]

6. LACK OF INVESTMENT AT HEATHFIELD IRONWORKS AND THE END OF GOVERNMENT CONTRACTS

Several historians have commented on the contribution of overseas income to domestic British investment, particularly investment in infrastructure and in industry, and this raises the question of the uses to which the Fullers put their surplus income, particularly after 1740. They lent funds for turnpikes, and invested in agricultural improvements, both directly and indirectly through their allowance against rents, and later they invested in canal and river improvements; indeed they acted as most local gentry did in the century. The bulk of their income, however, went into land acquisition, into several City of London funds, including the East India Company, the Bank of England, the South Sea Company, and into Government stocks. These holdings were seen by the Fullers as a long term deposit and were drawn on for dowries, elections, and events such as the anti-Jacobite county subscription of 1745.[103]

However, and of particular interest, the family did not use their income to experiment with new techniques in the iron industry.

Their method of boring a gun by reaming out a rough inner hole in the cast instead of from a solid cast meant that by the end of the Seven Years' War they were behind best practice elsewhere. Virtually every year a number of their guns failed proof, on occasion many did so, and the Ordnance Board was tightening its procedures as the century wore on.[104] Their workmen found difficulty in following the gun draughts sent by the Board; 'they did not understand $4^{21}/100$" nor $3^{6}/100$" than they do Algebra':[105] their guns of the same type varied in height and weight;[106] and they continued to fill holes in the inner bore with lead, good enough for merchant guns, but absolutely forbidden by the Board.[107] Every single year presented difficulties with gun sales, contracts with the Board and with the Agents employed in London.[108] Distance from London necessitated lengthy correspondence and the delegation of detailed business decisions to Agents who were themselves involved in metal manufacture or direct employees of the Board. It was to be expected that there would be clashes of interest and accusations of bad faith.[109] The relatively slack Goverment demand for cannon in the peace years of the 1730s lent a certain fierceness to the correspondence, although at time there was a hint of weariness.[110] To offset the locational disadvantages of Heathfield, the Fullers had to use their political influence on occasion, and a number of letters attempted to capitalise on their Westminster connections; it was for example only a direct appeal to the Ordnance Board in 1749 that secured a contract for 150 tons.[111]

The Seven Years' War masked the point where only radical changes in their technique would have sufficed to keep the Ordnance contracts. Along with other Wealden producers, their pig and bar iron was too expensive and had been since 1700, and probably for some time before.[112] The Wealden founders entirely failed to develop new processes and bring their furnaces into line with charcoal furnace practices elsewhere. In none of the Fuller correspondence after 1729 was there any concern about the technological backwardness of the furnace or ancillary equipment. Larger units needed a different policy on investment than merely subsuming it under the title of repairs and would have required many thousands of pounds and perhaps a shift in location to overcome the problems, leaving aside the managerial tasks involved.

After 1765, Heathfield was reduced to irregular working every two or three years, making only small tonnages of pig which took several years to clear, and probably made no money.[113] It was a holding operation in the vain expectation of renewed contracts. Occasionally there were glimmers of hope; in 1771, Rose Fuller assumed that because the new Carron guns had been rejected (temporarily) by the Ordnance Board, the automatic alternative would be the Weald.[114] By this date his hopes only showed his ignorance of technical advance elsewhere, of which Carron was only one

example. Heathfield finally closed in 1787, though Burwash forge worked on till 1803.

It is interesting to speculate why the Fullers failed, as did their other Wealden contemporaries, to modernise their iron techniques.[115] If the Fullers had reorganised Heathfield or a similar project elsewhere, then large family resources would have had to have been sunk into it, and far more time devoted to the ironmaking side. Another part of the answer, though a very general one, may lie in the conservatism and the solid successes of the ironmaking of the past, the reorganisation of the estates, and the huge income they now received from Jamaica.

TABLE 5
Estimate of net annual cash income 1695–1779 for the Fullers
(head of family at Rose Hill)

Year	*Jamaica* (*a*)	*Iron* (*b*)	*Landed estate* (*c*)	*Other* (*d*)	*Total* (*e*)
	£	£	£	£	£
1695–1699	—	1500	750	n.a.	2250
1700–1704	—	500	750	n.a.	1250
1705–1709	300	1000	750	n.a.	2050
1710–1714	300	500	600	n.a.	1400
1715–1719	300	700	600	n.a.	1600
1720–1724	300	600	800	n.a.	1700
1725–1729	275	500	800	300	1875
1730–1734	250	1000	800	400	2450
1735–1739	300	800	800	400	2300
1440–1744	400	1500	900	500	3300
1745–1749	500	2000	1000	600	4100
1750–1754	1000	2200	1200	600	5000
1755–1759	2000	2000	1600	1000	6600
1760–1764	2270	2200	1780	1200	7450
1765–1769	3000	neg.	1850	1200	6050
1770–1774	3900	neg.	1700	1400	7000
1775–1779	2700	neg.	1800	1500	6000

Sources and notes:
(*a*) RF 15/25 and Table 4.
(*b*) On the assumption of net income being half sales income.
(*c*) RF 15/25–9 and unlisted. Figures are for rents plus sales from home farm and wood sales, after deduction of expenditure, and excluding wood sent to the ironworks.
(*d*) Income from investments in the City of London, and dowries; RF 15/28, Cash Book.
(*e*) This final total will be an underestimate for the earlier years where there is no reliable evidence of income from the City of London, and only vague statements about that from Jamaica, and the civilian iron sales. From 1730, the figures are more reliable.

7. CONCLUSION

After his return to England in 1755, Rose Fuller was 48 years old with twenty years of a slave plantation behind him. The life of a county landowner, J.P., and member of the West India lobby in Parliament had a high social prestige, and he had no need to worry about income, as the family had done in his grandfather's time.[116] It was to these areas of activity and the work of agricultural improvement that the family was now devoted. At his death, the Sussex estate comprised 5584 acres, of which over 1500 lay in the estate at Rose Hill.[117] By the late 1750s, Rose was earning over £6000 a year, and over £8000 in some years, and though this fell somewhat after 1765, the total in Table 5 is an indication of a substantial income. On his death in 1777, the estate was inherited by

John Fuller III, grandson of John Fuller I, who added 2033 acres in the Brightling area, but only 59 acres elsewhere. Both John III and his contemporary Sir John Lade squandered huge sums on their social and county life. His work for the Royal Society, the West India lobby, his patronage of Turner, and his architectural follies have, of course, long earned him a place in Sussex history.

The income pattern of the Fuller family was not typical of the Wealden gentry as a whole. They had two additional non-agricultural incomes from cannon and sugar based on the results of warfare and colonial acquisition, in the latter case brought into the family by a fortuitous marriage. The rise and fall in income from the three sources suggests four separate periods during the century. The first was the successful years before 1710 of high Government expenditure and the acquisition of the Jamaica estate; this was followed by three decades of depressed prices which coincided with a slump in the demand for cannon and in the price of sugar. Moreover, this was the period when Wealden agricultural prices were the lowest for the century. The improvements in all three sectors for the quarter century to 1763 combined with an increased income from investments in the funds gave the Fullers the income they required to become a major Wealden landowning family. The end of their cannon contracts at the close of the Seven Years' War led to a fall in income. However, the income from the landed estate and the reorganization of the woodlands coupled with that from Jamaica and the funds provided the family with continued high earnings for the rest of the century.

The major contribution that this family made to the local economy was their sustained investment in agriculture, in particular the reorganization of their farms so that they were larger and incorporated different types of land, (Wealden and non-Wealden), which made them better able to weather price fluctuations. This alone deserves to be highlighted as an important contribution to Sussex agriculture during the eighteenth century. Their failure, and that of other Wealden furnace operators, to invest in new technology for the iron industry and consider branching out to another area was of limited consequence for the regional economy as a whole, largely because of the diversification of trade and employment opportunities in the county after the turn of the half century. As a family, the Fullers did not take part in the building of the south coast towns during the late eighteenth and nineteenth centuries, though one of their farms was used as the nucleus for Polegate. In the main, they stuck successfully to their agricultural last, the total family income much assisted by their colonial connection.

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References

Note on main sources and abbreviations. The Fuller family retained as their country solicitors a Battle firm, now known as Raper and Fovargue. During the 1930s, '40s and '50s, the firm transferred large consignments of the family's archive to the care of the Sussex Archaeological Society, where the greater part was listed under the reference RF. In 1982, these records were transferred to the East Sussex Record Office (abbreviated hereafter to ESRO) on behalf of their owners, and until new lists are prepared the former references should be preceded by ESRO, SAS/. This part of the archive is cited below simply as RF.

In 1965 Raper and Fovargue made its first substantial deposit with ESRO. During the next ten years those documents in that deposit which related to the Fuller family were listed with the reference RAF/F. In 1978 the firm made another large deposit which has not been listed and is referred to by its accession number, A 2300. During 1979 it was discovered that the firm had placed some documents, including Fuller material, in the care of the Battle and District Historical Society. These documents were deposited at ESRO in the firm's name in August 1979, have not been listed, and are referred to by their accession number, A 2449. In November 1979, Major and Mrs. M. Grissell, the owners of Brightling Park, deposited at ESRO the deeds and maps which had presumably been handed to their predecessors in title when the estate was broken up. These documents have not been listed and are referred to by their accession number, A 2477.

ESRO hopes eventually to produce a complete list of all Fuller documents from Raper and Fovargue; the present references, where they exist, should therefore be regarded as temporary.

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[2]For bibliographies of Sussex agriculture covering this period, see C. E. Brent, A. J. Fletcher and T. J. McCann, *Sussex in the 16th and 17th Centuries: a Bibliography*, 2nd ed. by J. H. Farrant (Brighton, 1980), and J. H. Farrant, *Sussex in the 18th and 19th centuries: a Bibliography*, 4th ed. (Brighton, 1982).

[3]For the ironworks accounts, R. V. Saville, 'Income and Production at Heathfield Ironworks, 1683-1788', *Wealden Iron*, 2nd series, 2 (1982), and S.S.R.C. report HR 7559, 'Estate Development and Iron Founding in Sussex, 1720-1780'.

[4]References to the Jamaica estate in RF 15/25, commonplace entries and letters; RF (unlisted), accounts; and Somerset Record Office (hereafter SRO), DD/DN, Dickenson papers.

[5]M. C. Salt, 'The Fullers of Brightling Park', *Sussex Archaeological Collections*, 104 (1966), 106 (1968), and 107 (1969); H. Blackman, 'Gunfounding at Heathfield in the Eighteenth Century', *SAC*, 67 (1926); H. C. Tomlinson, 'Wealden Gunfounding: An Analysis of its Demise in the Eighteenth Century', *Economic History Review*, 2nd series (hereafter *EcHR*), 29 (1976); E. Straker, *Wealden Iron* (1931); D. K. Worcester, 'East Sussex Landownership, the Structure of Rural Society in an Area of Old Enclosure, 1733-87' (unpub. Ph.D. thesis, Univ. of Cambridge, 1950); H. R. Schubert, *History of the British Iron and Steel Industry from 450 B.C. to A.D. 1775* (1957), 208.

[6]RF 1-10, deeds of the estate, and ESRO, A 2300, survey of the Fuller estate, 1834.

[7]Tanners was purchased outright in 1617 and is not included in this figure of 100 acres: RF 2/133, 1575 lease, RF 2/148 for purchase.

[8]Differences in purchase prices per acre between the Weald and the marsh lands were as high as a ratio of 1 to 8 in the 1670s: RF 2 (Waldron), RF 6, 7 (Hailsham, Pevensey, Berwick).

[9]RF 15/25, f. 9, 'A List of all the Furnaces and Forges in England and Wales'; C. S. Cattell, 'The Historical Geography of the Wealden Iron Industry' (unpub. M. A. thesis, Univ. of London, 1973).

[10]This point is taken up in sections 2 and 3.

[11]The original orders for payments to Ordnance Board contractors are in Public Record Office (hereafter PRO), WO 51, Ordnance Bill Books. For each accounting year payments were listed in WO 48, Treasurer's Ledgers, which formed the basis for the summary totals in the Ordnance Exchequer accounts, E 351, and their duplicates in the Audit Office, AO 1. References here are to the figures in WO 51. The indexes to WO 51 are not always a guide to contents.

[12]Cannon contractors, 1686 to 1697, were John Fuller (Heathfield), Peter Gott and William Benge (Gloucester/Lamberhurst), the Western family (Moorfields, London), Baker (Birchden); shot contractors included Sir John Pelham; details in R. V. Saville, 'Some Aspects of the Role of the Government in the Industrial Development of England 1686 to 1720) (unpub. Ph.D. thesis, Univ. of Sheffield, 1978), tables 12 (a) and (b).

[13]PRO, WO 51/41-57.

[14]RF 2 (Waldron).

[15]For prices of charcoal, Sir W. Beveridge, *Prices and Wages in England from the twelfth to the nineteenth century*, 1 (1939); Lennart Jörburg, *A history of prices in Sweden 1732-1914* (Lund, 1972); and ESRO Acc. 2449, Bundle of letters for 1756, Stephen Fuller to Mr. Tapsell, 23 Nov. 1756, Stephen Fuller to the Duke of Dorset, 27 Feb 1756.

[16]For details, British Library (hereafter BL) Add. MSS. 33, 146, 33, 153-6; ESRO DUN 37/10, 37/11, 37/12, 37/8; RF 15/25, RF 15/23. Most sales from the Ashburnham woods in the 1690s went to ironfounders, including the Westerns, Thomas Dyke and Fuller: ESRO ASH 1178; and see John Evelyn, *Sylva, or a discourse of forest trees and the propagation of timber in His Majesties Dominions* (1664).

[17]Fulke Rose was a relative of a member of the party that captured Jamaica from the Spanish in 1655.

[18]For the Isted family; BL Sloane MSS. (ref. 22 below); RF 15/25. There were three daughters from the Fulke Rose-Elizabeth Langley marriage, one of whom, Anne, married Thomas Isted. Anne and Elizabeth shared the Penn estate in Jamaica; Elizabeth's share was 646 acres.

[19]RF 1 (Brightling). For history of the house at Brightling, BL Add. MS. 5679, f. 135: Thomas Fuller purchased the house in 1697, and put his nephew John Fuller in possession of it in 1705.

[20]PRO WO 51/62-76; for civilian sales, Saville (1982).

[21]This is an estimate based on subsequent correspondence, RF 15/25, f. 73, 10 August 1733.

[22]Correspondence with Sloan is in BL Sloane MSS. 4025, 4046, 4050, 4052-4, 4056, 4059; RF 15/25; and RF 16, 17.

[23]Other heads of the family won elections in the eighteenth century. John Fuller (1706-1755) sat for Boroughbridge in 1754-55; Rose Fuller (1708-1777) for New Romney (1756-61); Maidstone (1761-8), and Rye (1768-77); John Fuller (1755-1834) for Southampton (1780-4) and Sussex (1800-12). Their part in the West India lobby after 1755 attracted comment at election time, SRO, DD/DN 490. G. H. Nadel, 'The Sussex election of 1741', *SAC* 91 (1953), for an election which John Fuller (1706-55) did not win; *Sussex election 1807*, Local History Research Unit, no. 3 (East Sussex County Council, 1968).

[24]RF 15/25, f. 34v, 20 Nov 1729, the Royal Society; f. 38, 14 Feb 1730 on French history of science books. Humphrey Repton advised on the remodelling of Brightling Park: D. Stroud, *Humphrey Repton* (1962).

[25]PRO WO 51/77–126.

[26]These were years of low prices; W. G. Hoskins, 'Harvest fluctuations and English economic life, 1620–1759', *Agricultural History Review*, 16 (1968); G. E. Mingay, 'The agricultural depression 1730–50', *EcHR*, 8 (1956), and J. V. Beckett, 'Regional variation and the agricultural depression 1730–50', *EcHR*, 35 (1982).

[27]RF 15/25, f. 73, 10 Aug 1733; and letters for the years 1729–34.

[28]The figures listed in Table 2 for the rent income show marked fluctuations from year to year; this was the result both of the problems faced by Wealden farmers, and of reasons associated with the form the accounts were kept in.

[29]The upturn in prices varied on different parts of the Weald; RF 15/23, 15/25 (for Fuller and Lade estate); BL Add. MSS. 33,338 — 33,340, 33,157, 33,158 (Pelham).

[30]The accounts in RF 15/26 and 15/27 begin in 1716, when they had 23 tenants on the Weald, and probably ten elsewhere, but a complete series for the accounts is not possible before 1724.

[31]John Lade (*c.* 1662–1740) was born in Warbleton, Sussex, and later made a fortune as a brewer in Southwark. He purchased an extensive estate in Southwark and added some lands in Sussex to those he inherited in Warbleton. He was M.P. for Southwark, 1713–22 and 1724–27; in

1730 he was made a baronet. The Fuller papers contain reports on the Sussex estates owned by Lade from 1729–40, and there are scattered references thereafter on the proceedings of the Court of Chancery into whose hands Lade's executors placed the estate after his demise. RF 15/23 for list of the tenants of Sir John Lade; SRO, DD/DN 500 for list of Lade's woods in Westfield, Sedlescombe and Etchingham.

[32]RF 15/25, RF 16, miscellaneous letters; SRO, DD/DN.

[33]The following section is based on RF 15/25; 15/26 rents and payments book 1719 to *c.* 1741, lists the payment of rents to the estate, and from which 15/27 was made up. This latter lists the debit and credit of each person (tenant, etc) on each double page, and from which 15/28 was partly made up. This was a final accounts ledger. RF 15/29 and 15/30 were similar to 15/26 and 15/27, and provide information collected in 15/28. Also note, Estate rental *c.* 1722, RF 15/22, f. 33.

[34]RF 15/23, f. 31; RF 15/25, f. 29, 28 April 1729; f. 30, 15 May 1729; f. 34v, 20 Nov. 1729; f. 59v, 13 Feb. 1730; f. 86, 29 July 1735; f. 96, 14 Aug. 1736; f. 123v, 17 Nov. 1739; f. 127, 10 April 1740; f. 128, 20 May 1740; f. 128v, 15 June 1740; f.132v, 4 Oct. 1740; f. 171, 15 Sept. 1743.

[35]See Table 2. The Fullers lost no opportunity of informing all and sundry that tenants would benefit from the mining of iron ore and from its cartage to Heathfield, RF 15/25, f. 90v, Jan. (?) 1736, on the tenants of Sir Thomas Dyke, and note 15/25, f. 28, 5 April 1729, 'Beside (improvement of land) of your tenant will carry it, you will be sure of your rent at Christmas whom I shall employ before anybody'.

[36]RF 15/26–9, farm accounts.

[37]G. E. Mingay, 'The size of farms in the eighteenth century', *EcHR*, 14 (1962) notes the growth of farms on several estates in the eighteenth century, and also the shifting of land from one tenant to another, which happened occasionally on the Fuller estate as well.

[38]RF 15/26–9.

[39]Details of output, 1723–9 in Saville (1982), 49, 60.

[40]RF 15/25, letters before 1740; and 15/26–9.

[41]RF 15/25, f. 36v, 14 Jan 1729.

[42]RF 15/25, f. 104, 25 June 1737.

[43]RF 15/25, f. 36/36v, 14 Jan 1729.

[44]RF 15/25, f. 10, Articles for the tenants at will. This was a widely held attitude by Wealden landlords and one which persisted into the nineteenth century. B. Short, 'Land ownership in relation to demographic and agricultural change in eighteenth and nineteenth century Weald', in M. D. G. Wanklyn (ed.) *Landownership and power in the regions* (Centre for West Midlands Historical Studies, Wolverhampton Polytechnic, 1978), 54, notes that in the 1830s, 75% of Wealden tenants were on yearly agreements or very short term leases.

[45]RF 15/25, f. 10. ESRO RAF/F4 series of leases.

[46]ESRO RAF/F4/3, 1745, lease given by John Fuller to John Freeman of 12 Oaks Land in Brightling, 22 acres.

[47]ESRO RAF/F4/5, 1750. This was also specified in some articles at will, though written agreement was usually required for large farms only.

[48]RF 15/25, f. 10.

[49]ESRO RAF/F4/3, 1745, lease by John Fuller to John Freeman.

[50]RF 15/25, f. 10. SRO DD/DN 487, lease for a farm, £2 a year to be spent on marl.

[51]RF 15/25, f. 128v, 15 June 1740.

[52]RF 15/25, f. 30, 15 May 1729.

[53]RF 15/25, f. 32, 1 July 1729, for their one Kent farm, at Oxney; and see RF 15/25, f. 36/36v, 14 Jan. 1729; Mingay (1962), 476, notes several cases where landlords had to comply with the wishes of tenants in the 1720s. As noted in Table 2, abatements in rents contributed to fluctuations in rent income, though this is often unclear in the account books.

[54]RF 15/25, f. 85v, 29 July 1735, and see f. 128v, 15 June 1740.

[55]RF 15/25, f. 85v, 29 July 1735; f. 88v, 12 Nov. 1735; f. 91, 29 Jan. 1735; f. 96, 14 Aug. 1736.

[56]RF/25, f. 84, 18 March 1734; 15/23, f. 31, payments to Benskin; SRO, DD/DN 488, 1752, for distraint on Lade farms after the estate was placed in Chancery.

[57](Not used).

[58]W. A. Cole, 'Trends in eighteenth century smuggling', *EcHR*, 10 (1958); C. Winslow, 'Sussex smugglers', in D. Hay *et al.*, *Albion's fatal tree* (1975). There was a certain antipathy from small owners towards the gentry on the Weald, RF 15/25, f. 119v, 20 Feb. 1738; f. 110, 15 Feb. 1737; f. 199v, 2 April 1745.

[59]RF 15/25, f. 29, 28 April 1729.

[60]The hop acreage in south-east England reached 11,834 acres by 1724, and grew to 38,000 acres by 1834. The greatest proportionate growth was in Kent and Sussex: P. Mathias, *The brewing industry in England, 1700–1830* (Cambridge, 1959); D. C. D. Pocock, 'Some former hop-growing centres', *Agricultural History Review*, 13 (1965).

[61]RF 15/25, f. 96, 30 July 1736; and see RF 15/25, f. 73, 10 Aug. 1733.

[62]SRO, DD/DN, 487, limit on hops of 3½ acres for a farm in Sedlescombe.

[63]RF 15/25, f. 51, 22 Feb. 1730; f. 199v, 2 April 1745.

[64]RF 15/25, f. 57v, 27 July 1731 (Flanders); f. 79v, 11 June 1734; f. 36, 20 Dec. 1729; f. 42, 12 July 1730.

[65]RF 15/25, f. 39v, 1 May 1730.

[66]RF 15/25, f. 108v, 26 Dec. 1737. Note reference in the Ashburnham papers that 'Scotch cattle feed well in Sussex marshes', ESRO, ASH 1178, f. 260.

[67]RF 15/26–9.

[68]RF 1–10, new purchases in 1740s.

[69]RF 15/33, f. 16, rental and lands of the estate on accession of Rose Fuller, 1755.

[70]SRO DD/DN 490, 28 March 1754.

[71]RF 15/25, f.83v, 18 March 1735.

[72]RF 15/25, f. 67, 21 Nov 1732; f. 70, 15 March 1732; f. 38v, 5 Jan. 1740; f. 139v, 28 Feb. 1740; f. 35, 6 Dec. 1729 on glut of wood.

[73]This was a difficult time with several farms unlet, RF 15/25, f. 128v, 15 June 1740. On war-related increase in wood prices, RF 15/25, f. 139v, 28 Feb. 1740. These failures in farms contributed to the fluctuations in rents in this decade; see notes to Table 2.

[74]The Lade estate was large; by 1750, the Chancery court estimated its worth as £75,996, with a total rental of £3839, of which the Sussex rental was £635, SRO DD/DN 488.

[75]RF 15/25, f. 32v, 10 Sept. 1729; f. 54, 15 April 1731; f. 73, 10 Aug. 1733.

[76]RF 15/25, f. 38v, 21 Feb. 1729; f. 56, 16 July 1731.

[77]RF 15/25, f. 59v, 13 Jan. 1731/2; for details of the acreage owned by the Fullers, BL Add. MS. 12,346, List of landholders in Jamaica in 1750; PRO, CO 142/31, Landholdings in Jamaica, 1754.

[78]RF 15/25, f. 73, 10 Aug. 1733.

[79]RF 15/25, f. 61v, n.d.; F. W. Pitman, *The development of the British West Indies 1700–63* (New Haven, 1917) 13, 'On plantations whose proprietor resided in England, there was often wilful mismanagement and waste'; other discussions of the problem include, E. Long, *The history of Jamaica* (1774); R. Pares, *Merchants and planters* (1960); D. G. Hall, 'Absentee-proprietorship in the British West Indies to about 1850', *Jamaica Historical review*, 4 (1964).

[80]RF 15/25, f. 61v (n.d.).

[81]Rose Fuller (1708–77) sat for New Romney (1756–61), Maidstone (1761–68) and Rye (1768–77). He has been described as one of the 'two most important West India absentees in English politics', R. Pares, *War and trade in the West Indies, 1739–63* (Oxford, 1936); and see L. B. Namier, *The structure of politics at the accession of George III*, 2nd. ed. (1957), 134, 140; *Memoirs of William Hickey*, ed. A. Spencer, 1 (n.d.), 48; R. B. Sheridan, *Sugar and slavery. An economic history of the British West Indies 1623–1775* (Barbados, 1975).

[82]Sheridan, Appendix 5.

[83]RF 15/25, letters for 1729 to 1740 on sugar.

[84]RF 15/25, f. 74v, 12 Nov., 1733; f. 73, 10 Aug, 1733.

[85]RF 15/25, f. 73, 10 Aug. 1733.

[86]RF 15/25, f. 73, 10 Aug, 1733. There is a note in f. 50, 28 Jan 1730, that 'the plantation did not make anything till the last three years'.

[87]RF 15/25, f. 74, 12 Nov., 1733; f. 73, 10 Aug, 1733 and f. 50, 28 Jan. 1730, on advice to sell part of the estate.

[88]Sheridan, Appendix 5.

[89]RF 16.

[90]Thomas Fuller (1715-1780) and Stephen Fuller (1716-1799); main records in RF 16, 17 and SRO, DD/DN. L. M. Penson, *The colonial agents of the British West Indies: a study in colonial administration in the eighteenth century* (1924), for notes on Stephen Fuller, agent for the Jamaica assembly from 1764 to 1795; G. Metcalf, *Royal government and political conflict in Jamaica, 1729-1783*, Imperial Studies series, no. 27 (1965).

[91]PRO, WO 51/126-47.

[92]PRO, WO 51/147 ff.

[93]RF 6 (Berwick), RF 7 (Hailsham and Pevensey), RF 5 (Hellingly, Chiddingly).

[94]There is no correspondence from this time which would help to establish whether there was any difficulty in buying out the various small owners at this time.

[95]RF 1 (Brightling); RF 1/383, 8 March 1747, on the 'Park for the preservation of deer'; RF 15/25, f. 249v, 16 May 1751; f. 253v, 5 Oct. 1751.

[96]RF 15/33, list of the copyhold lands of the Fullers, 1755.

[97]SRO, DD/DN 496.

[98]SRO, DD/DN 496. RF 15/29.

[99]SRO, DD/DN 489, 28 March 1754, John Fuller's defence of county Tory principles.

[100]ESRO, RAF/F6/1 Letter book, 14 May 1774.

[101]ESRO, RAF/F6/1 Letter book, 19, 28 Feb, 1777.

[102]RF (unlisted), account books, detail rents for the 1790s.

[103]RF 15/28, Cash Book 1731-45, for holdings in Government funds. There were marked variations in the holdings from year to year and thus in the interest they received.

[104]For tightening of procedures, RF 15/25, f. 63, 27 May 1732; f. 64v, 7 June 1732; f. 127v, 3 May 1740; f. 143v, 1 Sept. 1741; f. 171v, 20 Sept. 1743: for refused guns, RF 15/25, f. 28, 23 April 1729; f. 64, 7 June 1732; f. 65v (n.d. ?1732); f. 76, 2 March 1733/4; f. 121v, 1739; f. 126, 27 March 1740; f. 186v, 28 Aug. 1744; f. 204, 14 Dec. 1745; f. 257, 15 Aug. 1752; f. 236, 1 July 1749; f. 220, 26 Sept., 1747; f. 263v, 10 Oct., 1753. SRO, DD/DN 492, April 1755.

[105]RF 15/25, f. 66, 5 Sept. 1732; on 14 May 1752 it was noted that 'My workmen will never understand 20 times the Diameter of the Ball', RF 15/25, f. 256.

[106]There are numerous examples from the Bill Books, PRO, WO 51/108 (1720), 24 Oct. 1720, sizes of 54, 6 pounders of 9'; WO 51/109 (1721-2), 9 Nov., 1721, sizes of 12, 24 pounders of 9½'; WO 51/96 (1716) for 18, 12 pounders of 9'.

[107]RF 15/25, f. 29v, 8 May 1729; f. 57, 27 July 1731; f. 121v, 1 Sept., 1739; f. 252v, 20 Aug., 1751; f. 257, 15 Aug. 1752; SRO, DD/DN 492, correspondence over Sardinia gun contracts.

[108]RF 15/25, f. 215, 10 Feb., 1746; f. 230, 11 July 1748.

[109]RF 15/25, f. 88, 2 Oct., 1735; f. 125, 1 March 1739; f. 158v, 1 Jan. 1742; f. 174v, 2 Nov. 1743; f. 203v, 26 Nov., 1745; f. 223v, 14 Dec. 1747; f. 234 (n.d. ?1749); f. 243, 23 Oct., 1750.

[110]RF 15/25, f. 87, 31 July 1735; f. 96v, 7 Sept. 1736; f. 240, 31 March 1750.

[111]RF 15/25, f. 237v, 23 Oct. 1749; SRO, DD/DN 492. The question of political influence is interesting. There are several pointers in G. Hammersley, 'Did it fall or was it pushed? The Foleys and the end of the charcoal iron industry in the eighteenth century', in *The search for wealth and stability: essays in economic and social history*, ed. T. C. Smout (1979), who suggests that social and cultural reasons may have been partly responsible for the decline of the Forest of Dean iron industry. For the Weald, the evidence suggests that political influence helped to increase the size of contracts, rather than determine overall Ordnance Board policy; see also RF 15/25, f. 68v, 5 Jan. 1732/3; f. 85v, 23 July 1735; f. 87, 26 August 1735.

[112]RF 15/25, f. 83v, 18 March 1734; f. 101v, 28 Feb. 1736/7. Cattell, ref. 9 above, gives details of the Pelhams forges' bar-iron output. We should note that Sweden and the United States maintained a charcoal iron industry in the nineteenth century and the last British charcoal iron furnace closed in 1920. A diffuse charcoal sector operated in India, though the technology was similar to the older bloomery furnace types.

[113]Saville (1982).

[114]ESRO, RAF/F6/1 Letter book 10, 15 July 1773. Details of technical advances in the century are given in C. K. Hyde, *Technological change and the British iron industry, 1700-1870* (Princeton, 1977), chs. 1-5; R. H. Campbell, *Carron Company* (1961), ch. 3; Schubert, ch. 19; T. S. Ashton, *Iron and steel in the industrial revolution* (Manchester, 1924), chs. 3, 4.

[115]David Crossley has informed me that it is possible that Eade and Raby at East Grinstead achieved productivity figures similar to those of the Carron Company.

[116]This was a standard pattern by this date, J. Steven Watson, *The reign of George III 1760-1815* (Oxford, 1960), 22.

[117]In 1777 they owned 1739 acres in the area around Brightling, of which 1569 lay in Brightling itself. To this was added 2033 acres by 1834. In the former year they owned 3225 acres in the Mayfield, Waldron, Heathfield, Warbleton, Hellingly, Chiddingly, Ringmer, Hailsham and Pevensey areas, one third of this was in Waldron; only 35 acres were added here by 1834. In the Berwick, Wilmington, Arlington and (again) Hailsham areas, they owned 620 acres by 1777, and added only 24 acres by 1834, all in Selmeston. ESRO, A 2300.

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A STUDY OF FARM BUILDINGS IN SELECTED PARISHES OF EAST SUSSEX

by Lucy Caffyn

Farm buildings have received much less attention than other forms of vernacular architecture, and this article seeks to add to the picture by looking at the farm buildings in the parishes of Chailey, East Chiltington and Falmer. The agriculture of this area has been influenced by geology as well as by national trends; and the differences in agricultural systems have left their mark in the variations in the type and form of farm buildings found in the three parishes. For example, where dairying and cattle breeding and fattening predominated there are lots of cowhouses and yards; and on the downlands where there was large-scale sheep-corn farming there are larger barns and a greater proportion of shelter-sheds. Most of the buildings date from the nineteenth century, but others of earlier dates were found, including one fourteenth-century barn. Although building methods in the three parishes were similar, materials differed, since locally available materials were used, and these varied from parish to parish.

INTRODUCTION

The study of farm buildings as vernacular architecture is still a recent development, but an important one, since these buildings can give insights into, and add to our knowledge of, past farming methods, agricultural developments and building methods and techniques. They can also illustrate the way of life of a class of people for whom other records are scarce. The recording of farm buildings is made more urgent by the fact that they are, and always have been, constantly altered and adapted so that they can be used to maximum advantage.

This article looks at the parishes of Chailey, East Chiltington and Falmer, which are contiguous and yet extend over different geological formations and thus represent the diverse physical regions of East Sussex and the differing farming economies within those regions, until *c.* 1880. This terminal date has been chosen since the agricultural depression beginning then and continuing for the next 50 years or so halted widespread investment in building and any further developments in methods and techniques. The present administrative parish boundaries were used, to avoid having to deal with detached portions. The farm buildings within the parishes were recorded and with one exception these were found to date from no earlier than the sixteenth century. Information from farmhouses has been used only where it seems to relate directly to the farm buildings. The farms were initially located from early maps[1] and were then visited and recorded following R. W. Brunskill's revised recording system.[2] A sketch plan was made of the layout, and details noted of the acreage, now and in 1842 (when tithe schedules were made out), of the location and layout of the farmstead, of the function, plan, form and materials of the buildings, and of constructional details and the type of soil on which the farm was sited. Sixty-eight farmstead sites were visited, and in the discussion of farm buildings and layouts whenever a farm is mentioned it is followed by the number which represents it on the location map. Seven farms where the buildings were in ruins or gone completely have been lettered (a) to (g).

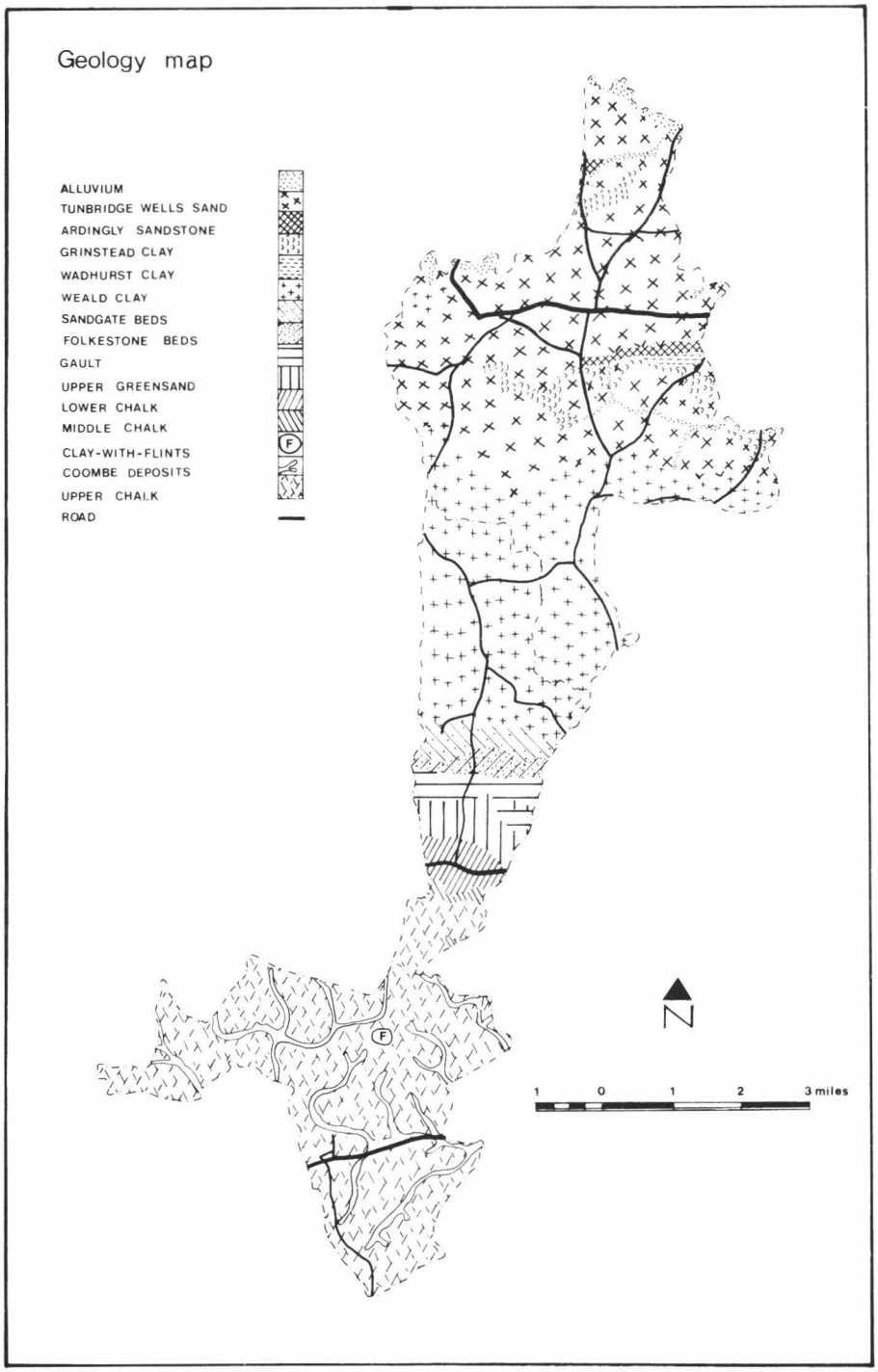


Fig. 1. Geology map.

AGRICULTURAL BACKGROUND

To understand the farm buildings most fully it is necessary to know as much as possible about their context. Other articles in *Sussex Archaeological Collections* and elsewhere have dealt with agricultural developments in the county, including Chailey, East Chiltington and Falmer,[3] so only a brief outline will be given here.

The three parishes lie on different soils and this has affected the types of agriculture which could be practised in them (Fig. 1).[4] The northern part of Chailey lies predominantly on Tunbridge Wells Sand which gives rise to heath and woodland on high land and to comparatively poor grass on the lower slopes. Rich meadows are found only on the alluvium of the valleys. South of the sand is the Weald Clay, on which lie the southern part of Chailey and the northern half of East Chiltington. This soil provides pasture, although it is wet and needs draining. Both here and further north transportation and communication were made difficult by the soil and lack of suitable building materials. Several different geological formations run between the edge of the Weald Clay and the foot of the Downs. The Sandgate Beds provide good pasture and the Gault is also rich, but the Folkestone Beds tend to be infertile. Falmer lies entirely on the Upper Chalk, which provides permanent grassland, although water is scarce and the grass is suited to sheep rather than cattle-grazing. Although the different types of soil would have mixed where they adjoined, the major outcrops retained their different characteristics, and these helped to determine the types of agriculture which were best suited to the three parishes, and which differed from an early date. In Falmer there was an emphasis on sheep from the early fourteenth century[5] while the heavier, wetter soils at the foot of the Downs were generally used as pasture for cattle.[6] Mixed farming with some emphasis on livestock was carried out in this scarpfoot land, while further north in the Weald farming was centred upon cattle.[7] Wood was also an important crop in the Weald, especially as the demand for it grew in the sixteenth century with the need for fuel in the iron industry and for fuel and poles in the hop industry.[8]

Probate inventories, which for these parishes start in the early eighteenth century, have given information about the types of farming then used, and in a few cases can be related to actual farms.[9] Although they do not mention the size of the farms some indication comes from the value of cattle, crops, etc., and in some cases acreages of planted fields are given.

For Chailey there are twelve inventories dating from 1712–1749, and from these the main activities emerge as being arable cultivation, cattle fattening or breeding and dairying. The arable, perhaps, was most important, the soil being conducive to it and improved by manure from the cattle (although on two farms there was no arable at all). Wheat and oats were the most important cereals and hay the most important fodder crop, the farmers taking little advantage of the new fodder crops available at that time. Sheep, pigs and two flocks of geese were found on the farms, and wood was another crop of minor importance (although one farmer apparently specialised in it). Hops were grown on five farms, two of them having an oast- or hop-house. Limekilns and chalk at three farms witness attempts at agricultural improvement. Oxen were still favoured as draught animals, largely outnumbering draught horses.

The situation in East Chiltington was rather different. Five probate inventories survive and reveal that the prime consideration here was dairying. All the farmhouses had provision for dairy production and even where there was no other arable production hay was grown, presumably as a fodder crop for the dairy herds. In the less significant areas of husbandry the farmers of East Chiltington were like those of Chailey, growing wheat and oats as their main cereal crop, keeping a few sheep, pigs and geese, and growing hops on one farm.

The emphasis in Falmer was different again. Only three probate inventories survive for this

parish and on all three farms there was a balance between sheep and corn, with quite a large number of fattening or breeding stock, and a dairy herd on one. The main arable crops were wheat and barley. One of the farms is remarkable for its size and value when compared to all the other farms in the study area. It is interesting in being an example of one owned by a large-scale farmer who was running a mixed farm on progressive lines, using horses as draught animals and making use of new types of fodder crops. Such large-scale farming was increasingly profitable on the chalkland as grain prices rose and the demand for Southdown wool increased. The period 1780–1830 was one of reorganization and consolidation of the downland farms to create larger farms with a mixture of land types to provide sufficient arable, sheep pasture and brookland (for hay and grazing for cattle plough-teams).[10]

By contrast most of the farms in Chailey were small and the techniques used were traditional ones. There was at least one improver, William Poole, who purchased The Hook in Chailey in 1732, and who experimented with growing various types of fodder crops and using different agricultural techniques.[11] However, Arthur Young's comments about this area in 1813 show that little progress had been made in improving methods of farming. His commentary indicates that the types of agriculture practised on the different soils were still much as they had been a century earlier; and they continued thus throughout the nineteenth century with farmers in both sheep–corn and mixed farming areas benefitting from increased demand in the 1860s and 1870s. However, the later years of the century brought an agricultural decline which hit first the grain producers, then the large-scale downland farmers, and finally the wealden cattle farmers. Until this depression ended in about 1939 investment in agriculture and in agricultural buildings was reduced to a very low level.[12]

THE BUILDINGS

The farmstead

One of the first things to strike the eye when looking at a farmstead is the way in which the buildings are clustered, and the location of the farms and their buildings can give an indication of the type of farming practised there. From the location map (Fig. 2) it can be seen that there are more farms per square kilometre in Chailey than in East Chiltington and Falmer. Looking at the geology of the area (Fig. 1) it emerges that only ten farms are located on chalk compared to 23 on clay, and 27 on the different sands. The more widely dispersed farms are also related to the higher land found in Falmer. The correlation of chalk and height above sea level does not necessarily mean that settlement cannot be intense, since in the eighteenth century there were at least two tenements of 50 acres at what is now Balmer Farm (54).[13] It reflects, rather, the type of farming which the soil and topography made possible. The high chalklands lent themselves to large-scale farming, and in Falmer this is reflected in the presence of a small number of large farms. In 1842 the average farm size in Falmer was 328 acres. The largest farm, Falmer Court (55), was 792 acres; three others were of between 300 and 450 acres, and none were below 150 acres. This contrasts sharply with East Chiltington, where there were no farms *over* 150 acres, and only three over 100 acres, the average size being 86 acres. The situation in Chailey was similar, the average farm size being only slightly larger, at 93 acres. Here there were eight farms of between 100 and 200 acres, and three of over 200 acres (the largest being Hurst Barns Farm (17) with 409 acres). That the farms were much more densely distributed in Chailey and East Chiltington than in Falmer was probably because the land was good enough to support small farmers, but not so good as to encourage larger landowners to move in and gradually consolidate estates. Whereas by 1842 the whole of Falmer formed part of the

Chichester estate, in Chailey and East Chiltington although four landowners (James Ingram, Robert Blencoe, Lord Abinger and the Earl of Sheffield) held fairly large acreages it was left as small farms, the most effective mode of farming on the clay, and none of them held more than 719 acres.

The location of farmsteads also varies, with a contrast particularly between Falmer and Chailey, as revealed in table 1 below. The differences between the downland and wealden parishes probably go back to the early days of settlement, when common-field agriculture was practised in Falmer, the villeins sharing equipment and so living together in a village to make this easier;

TABLE 1
The location of farmsteads

Position of farmstead	*Chailey*		*East Chiltington*		*Falmer*	
	no.	*%*	*no.*	*%*	*no.*	*%*
Isolated on cul-de-sac	28	62	8	53	4	50
Isolated on roadside	16	36	7	47	2	25
In village	1	2	—	—	2	25
Total	45	100	15	100	8	100

whereas in Chailey land was enclosed by settlers, who set up on their own on isolated farms from the eleventh century on, and especially in the sixteenth century.[14] Amongst others the farms of Wapsbourne Manor (32) and Warningore (51) in Chailey date back to before the twelth century, when they are first mentioned in documentary records,[15] and the farmhouses of 27 of the Chailey farms and ten of the East Chiltington farms date back to the sixteenth or seventeenth centuries, or even earlier. For the most part the farmhouses were isolated from the farmyards, particularly in Chailey, although in several cases it seems that an isolated farmhouse did at one time form part of the group of farm buildings, but was left standing alone later when the farmyard was reorganised.

In the layout of the farm buildings various combinations were used. In all the parishes 40% or 50% of the farmyards have scattered buildings, although these may not have been scattered originally. Where modern buildings have replaced the old, as at Great Homewood Farm (14) and Balmer Farm (54), an earlier L- or U-shaped yard may have been destroyed; and at others, where there are a lot of buildings, as at Cinder Farm (8) and Falmer Court Farm (55), there may have been scattered buildings in addition to an L- or U-shaped room or courtyard. Almost half the farms had a yard, but there was a greater proportion of farms with yards in Chailey and East Chiltington than in Falmer. This reflects the difference in the importance of cattle in the different areas. Sheep, which were the main livestock concern in Falmer, were kept in the fields most of the time, whereas cattle, which were more important than sheep in Chailey and East Chiltington, were often brought in to winter in the farmyard, and dairy cows would have been brought into the yard throughout most of the year for milking. There may have been yards from an early date, but those that are to be seen today appear to date in most cases from the late eighteenth century on, and particularly from the mid-nineteenth century, a period when livestock were becoming increasingly important.

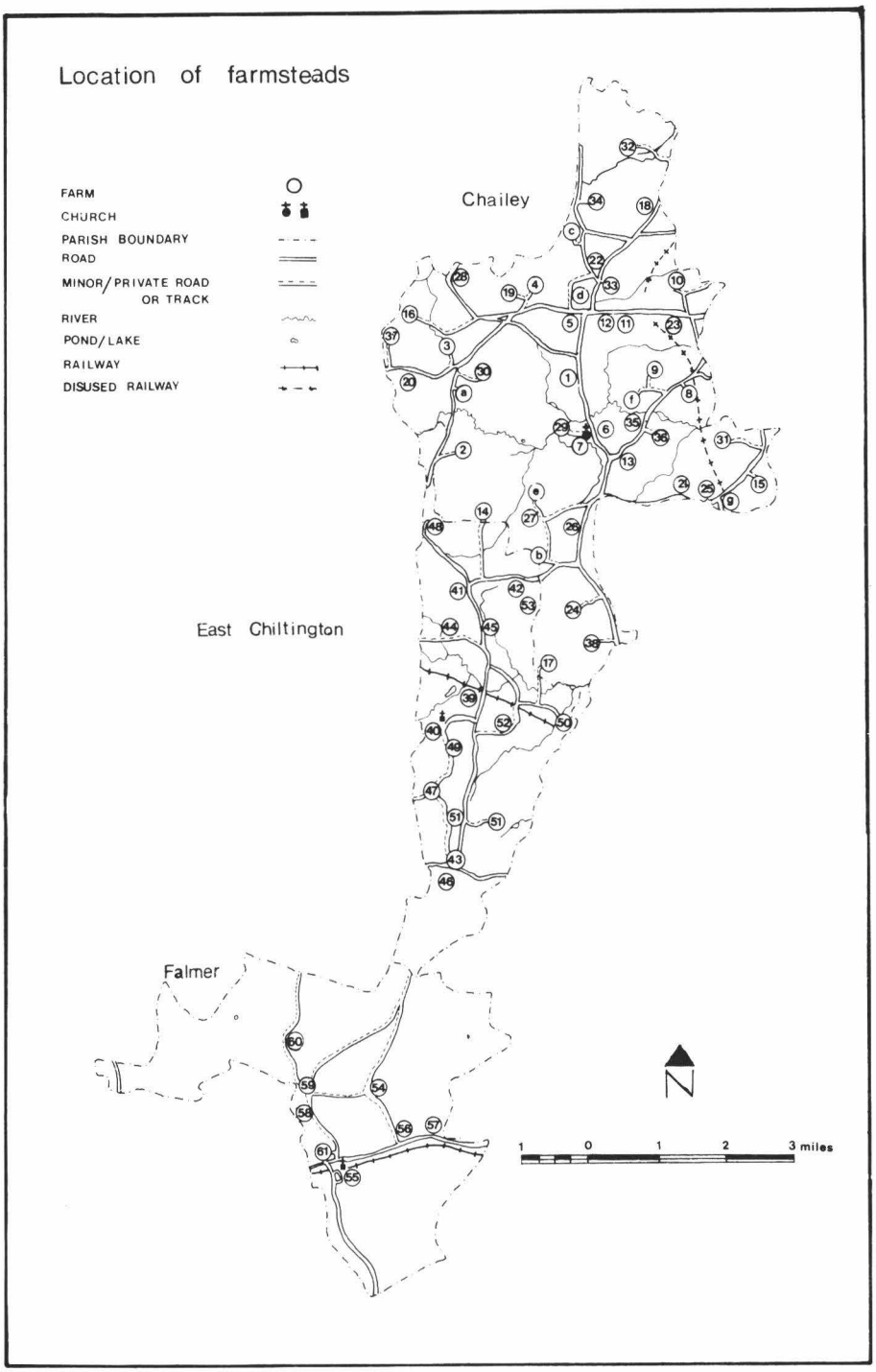


Fig. 2. Location of farmsteads.

Key to farmsteads:

Chailey
(1) Bineham Farm
(2) Bower Farm
(3) Broadstone Farm
(4) Bush Farm
(5) Chailey Garage
(6) Chailey Place
(7) Church Farm
(8) Cinder Farm
(9) Cinder Farm (2)
(10) Coxes Farm
(11) Frick Farm
(12) Frick Farm House
(13) Furzegrove Farm
(14) Great Homewood Farm
(15) High House Farm
(16) Holford Manor
(17) Hurst Barns Farm
(18) Lane End Farm
(19) Leyland Farm
(20) Longridge Farm
(21) Markstakes Farm
(22) Middleton Farm
(23) Oaklea Warren
(24) Old Barns Farm
(25) Shelleys Farm
(26) Simmons Farm
(27) Southam
(28) Teagues Farm
(29) The Moat
(30) Townings Farm
(31) Tutts Farm
(32) Wapsbourne Maor
(33) Warren Farm
(34) Warr's Farm
(35) Whitelodge
(36) Wildings Farm
(37) Wivelsden Farm
(38) Woodbrooks Farm
(a) Breens Cottages — ruins
(b) Broomfields — twentieth century farm on earlier site
(c) Joy's Farm — nothing old left
(d) Mounts Place — nothing old left
(e) The Hook — estate headquarters rather than farm
(f) Vixengrove Farm — twentieth century farm
(g) Woolgers Farm — nothing old left

East Chiltington
(39) Brookhouse
(40) Chiltington Chapel Farm
(41) Homewoodgate Farm
(42) Hurters Barn
(43) Newstead Farm
(44) North Barns Farm
(45) North Hall
(46) Novington Farm
(47) Novington Manor
(48) Shaw Farm
(49) Stantons Farm
(50) Upper Burrells
(51) Warningore Farm
(52) Wootton Farm
(53) Yokehurst Farm

Falmer
(54) Balmer Farm
(55) Falmer Court Farm
(56) Housedean Cottages
(57) Housedean Farm
(59) Ridge Farm
(60) St. Mary's Farm
(61) Swan Inn

TABLE 2
The farmstead layout

Layout	*Chailey*				*East Chiltington*				*Falmer*			
	no.		*%*		*no.*		*%*		*no.*		*%*	
Scattered	18		40		6		40		4		50	
L-shaped:												
joined	6	9	13	20	4	5	28	34	3	3	37½	37½
unjoined	3		7		1		7		—		—	
U-shaped:												
joined	11	15	24½	33	1	2	6½	13	1	1	12½	12½
unjoined	4		8½		1		6½		—		—	
Courtyard:												
joined	2	3	4½	7	2	2	13	13	—	—	—	—
unjoined	1		2½		—		—		—		—	
Total	45		100		15		100		8		100	
With yard	20		44½		8		53		3		37½	

The water supply of each farm was largely determined by topography. The Chailey farms were plentifully supplied by streams, springs, wells and, in particular, by ponds. Ponds were the main source of supply for East Chiltington too; but in Falmer wells were the major supplier, and, of the two ponds one was a dewpond. There were probably other dewponds which no longer survive, since they were made from the seventeenth century on, and soon fall into disrepair if not constantly maintained.[16] Where a stream provided the water supply the farmstead was never sited nearer to it than about 10 m presumably because of the danger of flooding, and also because the alluvial soil near it would provide inadequate foundations for buildings and yet good agricultural land which could not afford to be wasted.[17]

The barn

Of the actual buildings of the farmstead the barn is the most imposing. It is also one of the most ubiquitous buildings. In Chailey there are 31 barns among 38 farms, in East Chiltington eleven among fifteen farms, and in Falmer seven among eight farms. They range in size from the two bay barn at Middleton Farm, Chailey (22) to the fourteen bay barn at Falmer Court Farm (55), which is over 50 m long (Figs. 4 and 5). There is no apparent correlation between the sizes of barns and the periods when they were built, barns of different sizes being found at similar periods within each parish, but the range in size and location of each type reveals an interesting distribution. Of the four barns of seven or more bays three, including the two largest, are in Falmer (at Falmer Court [55] and St. Mary's Farm [60]). These two large barns are the only ones in the area to have more than one threshing floor. The smallest Falmer barns are of five bays, whereas in Chailey five-bay barns are the largest type, and the majority are of four or three bays (although some of the three-bay barns are as large as the ones of five bays, for example the barns at The Moat [29] and at Wildings Farm [36]). In East Chiltington there are three- and five-bay barns in almost equal proportions, with one large seven-bay barn at North Barns Farm (44). Another of the East Chiltington barns, at Wootton Farm (52), was extended from its original five-bay form with aisles and additions. With four

TABLE 3
Barn sizes

Size	*Chailey*	*East Chiltington*	*Falmer*	*Total*
2 bay	2	—	—	2
3 bay	12	4	—	16
4 bay	8	—	—	8
5 bay	7	6	3	16
7 bay	—	1	1	2
9 bay two threshing floors	—	—	£	£
14 bay two threshing floors	—	—	1	1
Fodder mill/barn	1	1	—	2
Total*	30	12	6	48

*Some farms have no barn; three have two barns (in one case the second being a fodder barn).

exceptions the Chailey five-bay barns all belonged to farms which in 1842 were well over 100 acres. It might be thought that the even larger barns of Falmer reflected the even larger sizes of the farms. This is partly so, but other factors also seem to have had effect. St. Mary's Farm (60) for example has a nine-bay barn with two threshing floors, yet in 1842, near to the time of construction, the farm was only 151½ acres. This contrasts with Hurst Barns farm in Chailey (17) which had only a five-bay barn despite its large size of 409 acres. Such a contrast is probably the result of the fact that cereal production was of more importance in Falmer than on the Weald Clay. It is interesting that the two fodder mills/barns are found not on the larger downland farms, but at Shaw Farm (48) and Hurst Barns Farm (17) on the clayland, where the emphasis was on cattle. Livestock management became increasingly efficient in the nineteenth century when these fodder mills were built, and traces of the horse engine which would have powered different preparation machines at Shaw Farm (48) still survive in the cobbled horse track and central post.

The largest barn, that at Falmer Court Farm (55), is also the oldest. This barn dates back to the fourteenth century, although after a fire in the sixteenth century the middle part was rebuilt. Its size is probably due to the fact that this was the manorial barn and needed to be large to house the demesne produce. Since the twelfth century the manor had belonged to the Priory of St. Pancras in Lewes, so it may also have been used to hold the tithes collected by the priory. Barns were used not only for storage, but also to house sheep, cattle and horses. In the Rape of Hastings, the other side of East Sussex, barns have frequently shown evidence of having housed cattle,[18] and in Chailey the barns at Old Barns Farm (24) and Hurst Barns Farm (17) seem to have had feeding racks and housed cattle at an early date. Because of the loss and/or rebuilding of earlier barns the evidence for them comes largely from the limited documentary sources. In the study area the earliest mention is of 'barnes' at Wootton Farm (52) in 1671, and at Stantons Farm (49) in 1741.[19] By the seventeenth century barns are thought to have been 'numerous', and '. . . many yeoman farmers who rebuilt their dwellings during this period used other profits to rebuild their barns.'[20] Of the barns recorded several are earlier than this; and from the evidence, as set out in the table below, it seems that there was more barn building (probably much of it *rebuilding*) at an earlier date in Chailey and

TABLE 4
The dates of the barns

	Chailey	*East Chiltington*	*Falmer*
Pre-sixteenth century	—	—	1
Sixteenth century	2	3	—
Late sixteenth/early seventeenth century	4	—	—
Seventeenth century	6	3	—
Eighteenth century	11	—	—
Late eighteenth/early nineteenth century	—	1	—
Nineteenth century	7	5	6
Total	30	12	7

East Chiltington than in Falmer. This may well reflect the growing prosperity of wealden farmers in the later sixteenth and seventeenth centuries which led to the 'Great Rebuilding' of many of their houses.[21] In Chailey the barn building continued in the eighteenth century reflecting the continuing well-being of livestock farmers. The fact that in East Chiltington there is only one eighteenth-century barn and this dates from very late in the period may reflect the specialism in

dairy farming which the probate inventories reveal in the early and mid-eighteenth century, when very little arable farming was done and so few barns recorded. The later dates of the barns in Falmer may be deceptive, since older barns may well have been replaced as part of an estate policy of rebuilding which does not seem to have been affected by the fluctuating fortunes of the sheep—corn farmers. The nineteenth-century barns in Chailey and East Chiltington may again replace earlier ones; but also reflect the fact that money was available to spend on them.

Many of the barns in all the parishes had lofts, generally only on one side of the threshing floor, or part of one side, (which is the case for twenty out of the 30 barns with lofts). A smaller number had lofts on both sides, or part of both sides (7), and three (two of them fodder mills/barns) had a loft throughout. The doors at either end of the threshing floor were both of full height in over half of the barns. Proportions varied however, as although about half the barns in Chailey had both doors full height, in Falmer this was the case for over 80% of the barns, while only 27% had them in East Chiltington. Here a full height door one side only predominated (55%), whereas Chailey had only 32% like this, and Falmer none. This difference may reflect, again, the different emphasis on arable cultivation in the three parishes, the full height doors at both ends of the threshing floor making the entry and exit of loaded carts easier, or it may simply reflect different building traditions. There are only two barns with a single winnowing door at one end of the threshing floor instead of double doors, one being the barn at the Old Forge, Falmer (58) and the other being the field-barn at Warningore Farm, East Chiltington (51). Other variations are the large sliding doors at Novington, North Barns and St. Mary's Farms (44, 45 and 60), all built about 1850, and the double lintel over the doorways of the barns at Housedean Cottages (56) and Housedean Farm (57), which were presumably used to prevent sagging. The doors of several barns (two or three in each parish) are raised a couple of feet above the ground, and in the doorposts, are grooves to hold planks. This construction would have enabled the doors to swing clear of any manure in the yard, and also meant that the doors could be open for threshing, yet the planks would stop any farmyard fowl from wandering in.[22] Such doors occur at barns dating from the seventeenth century on, although they may have been a later addition to the earlier barns, and were probably originally used at other barns and have since been replaced. The barn at Southam (27) is the only barn with a porch, although where a barn had an aisle with low eaves and a full height door on that side the doorway might project above the main roof, as at Wildings Farm (36). Alternatively the full height door would be recessed, with the low-roofed aisle projecting either side of it, as at Wootton Farm (52). At three weatherboard barns the boards have been angled to give a slight projection over the doorway (at Old Barns Farm (24), Simmons Farm (26) and Hurters Barn (42)).

Such constructional details and differences were the result of the different materials from which the barns were built. Aisles are found only at weatherboard barns, where presumably the walls were not strong enough to support the weight of the roof alone. The only non-timber aisled barn is at Falmer Court (55), where the span of the roof is so great that even though the wall are of flint they would be unlikely to be able to bear its weight. The building materials used were those which were at hand. Thus, on the chalk, flint was used, with brick to provide regularity around openings, at corners, and at the base and top of the walls. All the Falmer barns are flint, with slate or tile and one thatched roof. In East Chiltington a variety of materials were used. There are flint, weatherboard and brick barns in almost equal proportions, with slate or tile roofs, and one case of a barn built of Sussex Marble, where the farm (North Barns Farm (44)) is near to an outcrop of this stone. In the wooded parish of Chailey the vast majority of barns (84%) are of weatherboard, with a few of brick and one a mixture of brick and sandstone. Many of the weatherboard barns now have a brick or sandstone (or mixed) base. At some this appears to have existed at an early date, at others it was added later. The early method of

weatherboarding was to have a frame with fairly large squares (about 3 ft. square) across which wide boards were fixed. Later, in the eighteenth century, narrower boards were used, and they were fixed to studs of smaller scantling which were closer together (about 12–8 in.). In two barns in Chailey there are signs of early half-timbered parts, but it seems in most cases that although the roof timbers and main posts might survive from an early period the actual walling and roofing materials were replaced several times. Tile was the most common roofing material in Chailey, with some slate. Ventilation slits could only be built into solid walls, so whereas they were used in all the Falmer barns, they are only found in 27% of the East Chiltington barns and in 6% of the Chailey barns. Instead some of the Chailey barns had windows or pitching holes (18%), these always being rectangular. The location of the pitching hole of one East Chiltington barn, at Novington Farm (45), is interesting, as the barn has been built with its end into the slope of the down, so that the pitching hole at this end is at ground level.

The prevailing wind in this area comes from the south. This means that if a barn was sited to protect the yard from the wind it would also shade it from the sun. Perhaps this is why there is no consistency in barn orientation in any of the parishes.

Out of the 49 barns only 14 (29%) stood on their own. The rest were attached to another building at one or more ends or sides. In Falmer over half of the barns stood alone, two were attached to shelter sheds, and one to a cowhouse. In East Chiltington attached barns predominated, being attached to cowhouses, shelter sheds and stables in an equal proportion. In Chailey attached barns again predominate. Here cowhouses account for nearly 50% of the attachments, loose boxes for 20% and shelter sheds for 16%. There are a few stable and granaries attached (9% and 5%), and in three cases the barn is placed between a stable and cattle accommodation. Cowhouses and loose-boxes would have been the main consumers of straw from the barn, so it would make sense to build them as close to the stable as possible. That this was not done in Falmer was because there were very few cows, and so little provision for their accommodation — the one cowhouse that there was in this parish did in fact adjoin the barn. This difference is therefore another one which results from the different types of agriculture practised.

Cowhouses

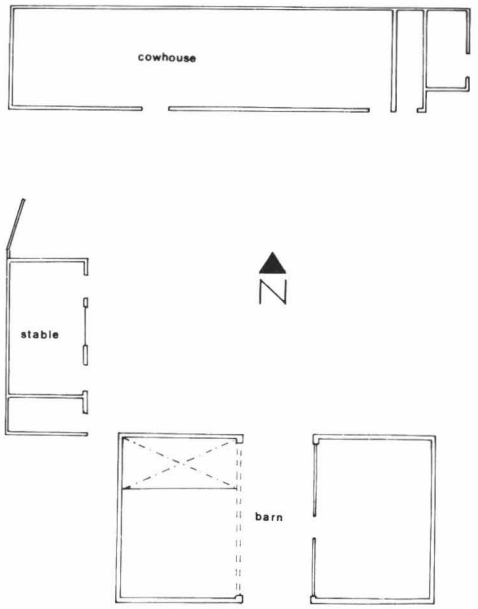
As has been noted already there was only one cowhouse in Falmer. In Chailey and East Chiltington there was on average one cowhouse to each farm, although some farms had more than one, while others had none. This distribution reflects the different emphasis on cattle in the different areas.

The most common type of cowhouse is one in which the cows stood along the length of the building facing the back wall (71% of the cowhouses in Chailey and 73% in East Chiltington were of this type). In all except three of these longitudinal cowhouses, there was no feeding passage and the cows were fed from behind. Apart from this type there were four examples of a cowhouse in which the cows faced the side walls of the building, backing onto a central passage from which they were fed and manure was removed. This type seems to have been a later development, occurring for the first time at Housedean Farm (57) in the early nineteenth century. A third type of cowhouse found only in Chailey is one in which the cowhouse was divided up into boxes. Generally the boxes seem to have been inserted in an earlier building and this type is probably associated with the increasing importance of fattening and breeding in this area in the nineteenth century.

The Falmer cowhouse had a loft partly in the side walls. There are only three other cowhouses with lofts, and these are all in the roof only. Such lofts improved heat insulation at the expense of ventilation, although this, in any case, seemed of little regard: only in two Chailey cowhouses was there even provision as basic as raised alternate ridge tiles. All the cowhouses have been much

Farmyard plans

Woodbrooks Farm, Chailey (38)



Southam, Chailey (27)

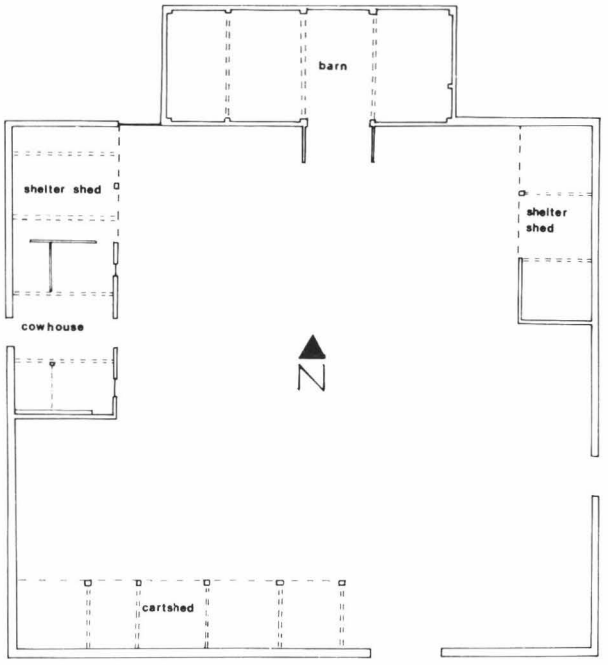


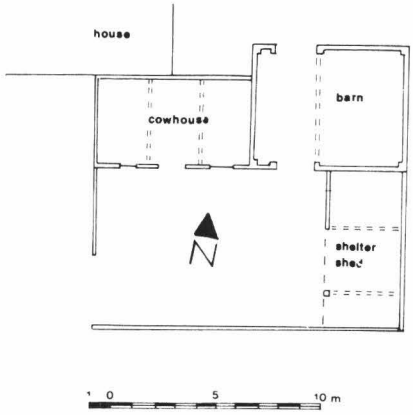
Fig. 3. Farmyard plans.

altered, presumably in response to governmental demands since tuberculin testing was introduced in the 1940s. Evidence of original stall divisions remains only in the cowhouse at Southam (27) (Figs. 3 and 4), where the stalls were about 5 ft long and 6 ft wide. In Chailey, where so many of the barns were of weatherboard, only 10½% of the cowhouses were of this material. A few were of a mixture of board and brick or stone, and there is one of sandstone and brick, but the majority (63%) are of brick. In many cases this seems to have replaced earlier weatherboarded buildings (e.g. at Chailey Garage [5] and Woodbrooks Farm [38]). In East Chiltington a third of the cowhouses are of brick, and only 13% have any weatherboard on the building at all. Although Leonard Mascall in the sixteenth century recommended that cattle stalls be built so that they opened to the south, the cowhouses, like the barns, follow no particular orientation, and those that are to be seen today seem to be more representative of those which Young saw in the early nineteenth century and described as being 'ill-contrived' and exposed to the elements.[23] The earliest cowhouse is one at Newstead Farm (43) which seems to have been built originally in the seventeenth century. A few others seem to be eighteenth century, but the majority date from the nineteenth century. It may be that few were built before then, for the seventeenth and eighteenth century wills and deeds mention barns and stables, but no cowhouses (or 'hovels' as they are known locally), although they may have been classed as some of the 'appurtenances' which are mentioned. Alternatively, it may be that the nineteenth-century cowhouses are replacements of earlier cowhouses. In Chailey and East Chiltington the cowhouses are found on farms irrespective of size, and they appear at farms of under 100 acres as often as on those of over 100 acres.

Stables

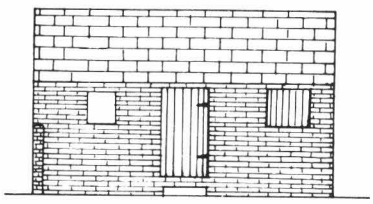
Like the cowhouses, stables are found at farms irrespective of size, so long as they were more than about 50 acres or so. The one exception to this is at Chailey Garage, which was a coaching inn and had two coaching houses and a stable, with only six acres of land attached to it in 1842. Half of the farms in Falmer had a stable, and these would have been needed to house not only the riding and carriage horses, but also the draught horses, which were beginning to be used alongside the draught oxen from the early eighteenth century on (as shown by the probate inventories). In East Chiltington 66% of the farms had stables and in Chailey over 75%. That the number of stables, unlike cowhouses, is fairly well spread throughout all the parishes is probably explained by the fact that horses were used for riding and haulage even where draught animals were not needed for arable farming. This would have been the case in East Chiltington. In Falmer all the stables had boxes for the horses, set either side of a passage (the two boxes at Housedean Farm [57]), or with separate entrances (the two boxes at Balmer Farm [54]). In East Chiltington boxes again predominate (60%), in most cases each box being provided with a separate entrance. It has been suggested that from the last quarter of the nineteenth-century looseboxes were preferred to stalls for hackney horses, since they were inactive in the stable for long periods and could benefit from the greater opportunity of exercise in a loosebox rather than a stall.[24] However, although this may explain the prevalence of boxes over stalls in the East Chiltington stables, where horses were used more for haulage than in the fields, boxes were still the generally preferred form (used in 73% of the stables). There are two cases of the horses and carriage(s) being kept in the same buildings, there being two coaching houses at Chailey Garage (2), and a carriage section in the early eighteenth-century stable at Chailey Place (6). More of the stables had lofts than cowhouses — thirteen in Chailey, six in East Chiltington, and one in Falmer. Despite the risk of pollution from rising foul air, grain was stored above the stables at Chiltington Chapel Farm (40) and Stantons Farm (49). Although only a small proportion of the stables had ventilation holes or windows which would help overcome the effect of

Middleton Farm, Chailey (22). Farmyard plan



Middleton Farm, Chailey (22). Cowhouse

SOUTH ELEVATION



Southam, Chailey (27). Cowhouse and shelter shed

EAST ELEVATION

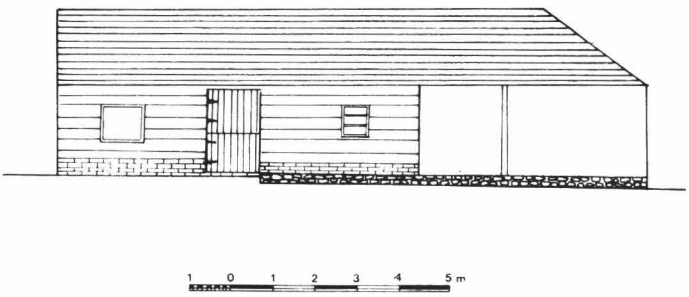


Fig. 4. Farmyard plan and cowhouses.

the loft many of the boxes with separate entries had heck-doors, the upper part of which could be left open to give light and ventilation. Although these are generally of twentieth-century manufacture they may well have been preceded by doors of the same type.

There were stables in this area from at least the seventeenth century, when in 1671 a description of Wootton Farm (52) mentioned the 'stables' which were 'in very good repayre'.[25] Two of the stables at Cinder Farm (8) show signs of a seventeenth-century date, one having two seventeenth century-type roof trusses, the other retaining a piece of wattle and daub walling on a sandstone base characteristic of the same century. The stable at Stantons (49) still has two half-timbered walls, infilled with wattle and daub. Stantons was a substantial farm of an early date and has a barn of the late sixteenth century. It seems that the stable was built not much later, although it was altered in the eighteenth century. The rest of the stables in the area were built in the eighteenth and nineteenth centuries, that at Homewoodgate Farm (41) being built in the early years of the nineteenth century at the same time as the farmhouse was given an extension.

Like the cowhouses the stables are generally built of solid materials—flint in Falmer; brick in East Chiltington with two of flint, one of weatherboard, and the half-timbered and brick one at Stantons Farm (49); and brick for 66% of the Chailey stables, the rest, apart from two weatherboard ones, being of a brick and stone combination. As with the barns and cowhouses no particular orientation was preferred. Over half of the stables are isolated and where they are attached it is generally to some other livestock building, especially cowhouses; although in four cases they are attached to the barn, which would have shortened the distance over which straw and hay would have had to be carried.

Granaries

The granary was not an essential building to the farm. A survey of seventeenth-century houses in the Rape of Hastings revealed that in over 75% of the sample crops were stored in the house, generally in the garrett.[26] This was still the case in Chailey, East Chiltington and Falmer in the eighteenth century. In 1727 Edward Pollington had £2 worth of wheat in his house, and at Woodbrooks in 1736 there was a sheaf of oats in the garrett. A year later, in John Hill's probate inventory, twenty bushells of oats were recorded as being in the garrett, and a further two bushells of wheat in the milkhouse chamber.[27] This being the case it is not surprising that there are not many granaries in the area—one in Falmer, four in East Chiltington, and ten in Chailey. The earliest one is at Chiltington Chapel Farm (40) and it dates from the sixteenth century. At nearby Stantons Farm (49) there is a granary over the late sixteenth-century stable, and the two buildings may have been built by the same farmer, since both farms were owned by one family at that time. None of the other granaries seems to be earlier than the mid- to late eighteenth century, with half built in the nineteenth century. They may have been built as grain yields increased and more room was needed for storage than the house could provide. Alternatively, they may represent a changing trend to store grain in a granary rather than in the house; or they may simply be replacements of earlier granaries. They appear, for the most part (80%), on farms of over 100 acres. There are three on farms of less than about 100 acres, two of these being under 50 acres. Most of the largest farms in each parish (twelve out of the eighteen largest) have a granary, so it seems that there is some correlation to size, and no doubt granaries on other large farms have been destroyed.

The granary was invariably raised above ground level to make it harder for vermin to get at the grain, and to give good ventilation. Half of them were raised over cartsheds, and in these examples there are piers in the cartshed to reduce the span of the floor joists and so help strengthen the floor which had to carry a heavy weight. Granaries over cart- or implement sheds were preferred to those

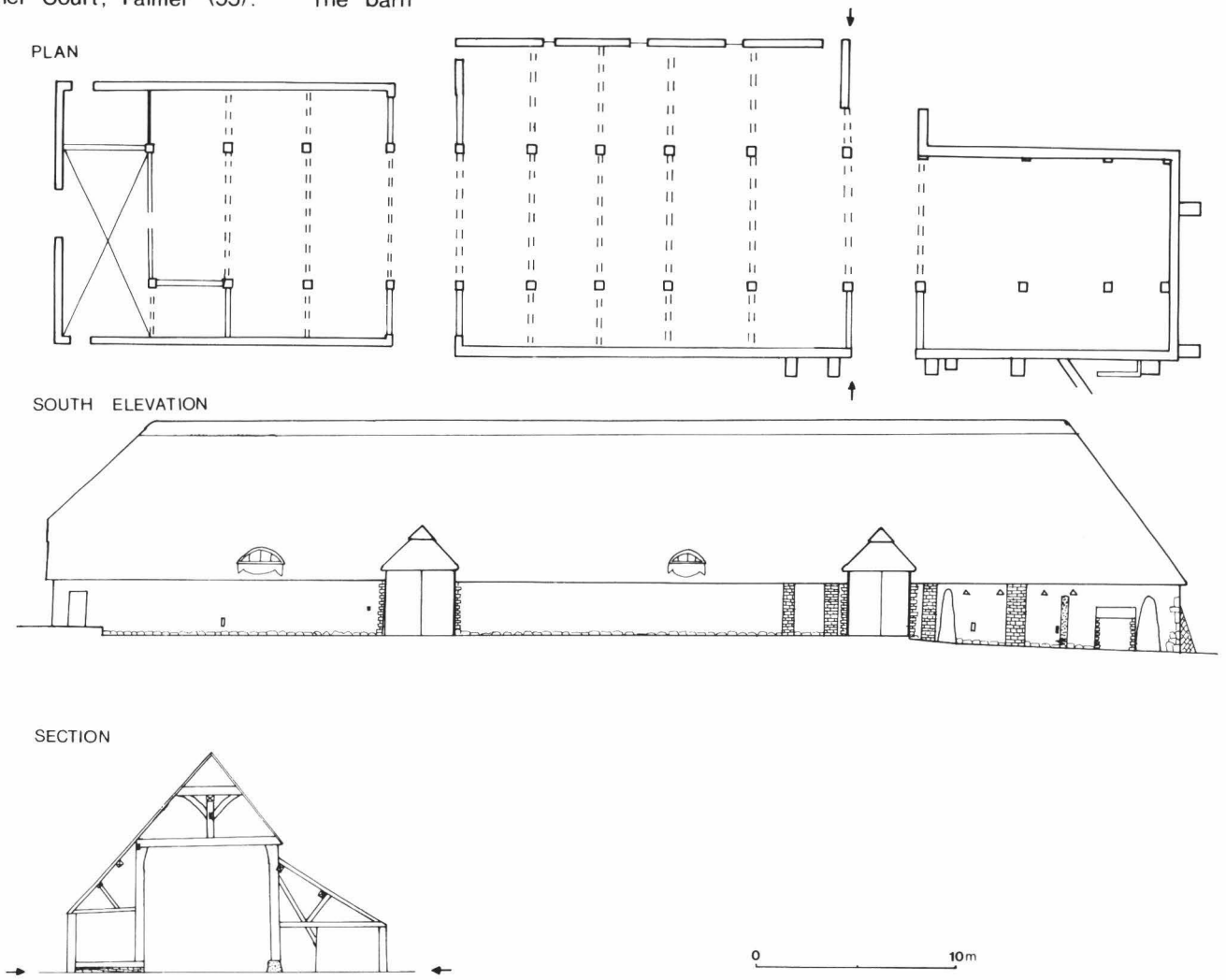


Fig. 5. Falmer Court barn.

over cowhouses or stables, since in the latter the grain would be contaminated by foul air rising from below. Nonetheless, there are two examples of granaries over stables in East Chiltington, and one granary over a loosebox in Chailey. Another granary is raised high over a shelter used for hay. At Wildings Farm (36) the granary is raised only a foot or two above the ground on sandstone staddle-stones. This granary is also unique in being the only granary in the area to be wholly of weatherboard. There are three flint granaries, and the rest are either of brick; a combination of brick and stone or weatherboard; or, in the case of Stantons Farm (49), of half-timber. It is not surprising that solid-walled granaries were preferred, since it was necessary to protect the grain from damp as well as vermin. At Wildings Farm (36), the one case where the walls are not solid, the granary is lined with horizontal boards instead. The floors of the granaries are of close-fitting boards. Only in two do the corn compartments survive, although in three others the trusses, with a broken tiebeam, acted as divisions. Entry was usually through a door in one end (in 79% of the granaries), being at the side in only one case, and from inside the building below the granary in two others. Windows, which would have given light to work by, appear in two-thirds of the granaries. They vary from being unglazed openings or having wooden slats or shutters, to domestic-type glazed windows of either the casement or horizontal-sliding sash variety. Over half the buildings stand on their own, and where they are attached tend to be next to non-livestock buildings, probably for the same reasons as for not being positioned over lifestock accommodation. In the two cases where the granary is attached to the barn there is access between the two buildings; indeed at Towning Farm (30) the only way into the granary is from the barn. Such entries would have speeded up the process of moving threshed grain from the barn to its storage place in the granary.

Cartsheds

Like granaries cartsheds are not found on many farms (only on sixteen), and again tend to be found on the larger farms of over about 100 acres (88%), with all the farms on which they are found being over 50 acres. The earliest cartshed is that underneath the sixteenth-century granary at Chiltington Chapel Farm (40), and the rest seem to date from the late eighteenth century, and mostly from the nineteenth century. That there was a need for such shelters earlier in the eighteenth century is shown by the probate inventory of Nathaniel Webb, perhaps of Falmer Court Farm (55), made in 1740, which listed waggons, carts, harrows, ploughs, wheels, rollers, hay cutters, yokes, chains, posts, rails, shovels, ladders and 54 rakes;[28] but any sheds of this period must have been replaced. The cartsheds frequently had a side entry (63%) and less commonly an end entry (25%). Generally they seem to have been built out of odds and ends of materials. One was built wholly of flint, one of sandstone, and three of brick, but the rest were of a mixture of brick, stone, flint, slate, weatherboard, vertical board and half-timber. At Old Barns Farm (24) and Southam (27) the cartsheds were made using the yard wall as two sides, so saving on building materials. None of them had lofts; but it is interesting to note that all but two were orientated so as to give protection from the prevailing, rain-bearing, south wind.

Shelter sheds

Somewhat surprisingly the shelter sheds, unlike the cartsheds, were not necessarily built to provide protection from the prevailing wind. Such protection was given by only fifteen out of the 35 shelter sheds (43%).

These buildings were found on farms irrespective of size, although there were more per farm in Falmer than in the other two parishes, and more in Chailey than in East Chiltington. This may be because of a higher survival rate in Falmer, but it is probably also due to the different type of

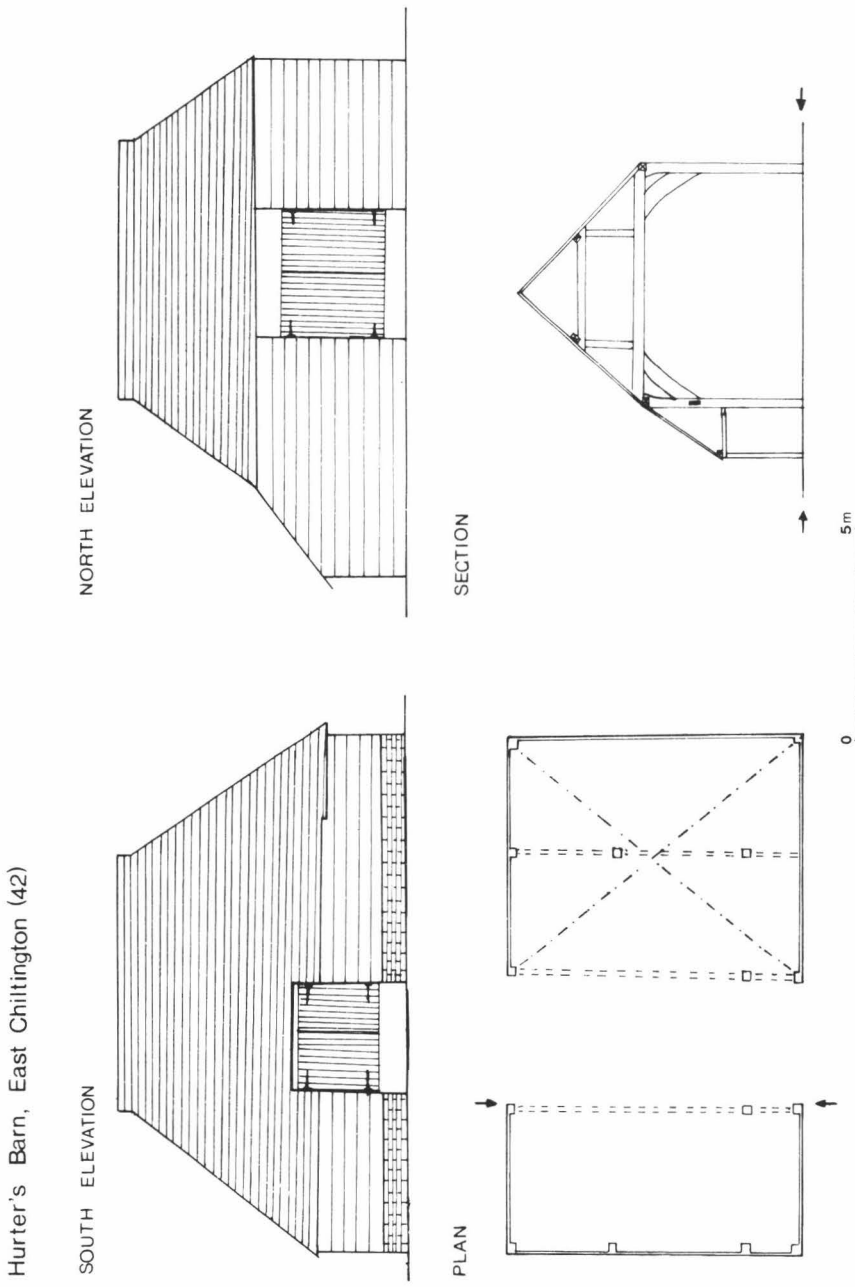


Fig. 6. Hurter's barn, East Chiltington.

agriculture practised. Here shelter was needed for sheep rather than cows, and this was provided by the shelter sheds, whereas in Chailey and East Chiltington it was provided mostly by cowhouses. Over one-third of the shelter sheds served areas other than the farmyard, although in only six cases (17% of all the shelter sheds) were they at any distance from the farmstead. One of the most interesting of these is at Warningore Farm (51) where the shelter shed is attached to a field barn and has a chimney in one corner, perhaps enabling feed to be prepared for the animals that would have been in the building.

Of the shelter sheds 40% are isolated, the rest being attached to other farm buildings, most commonly to a barn, or else to a cowhouse. The materials they are built of are flint in Falmer; flint, brick and weatherboard in East Chiltington; and brick and weatherboard and some stone and vertical board in Chailey. The wall posts are frequently based on a brick plinth, which in some cases is a later insertion. Bearing in mind the insubstantial nature of these sheds it is not surprising that 69% of them are no earlier than the second half of the nineteenth century; and only two are earlier than the nineteenth century (one at Bineham Farm [1] and the other at Cinder Farm [8]).

Others

Looseboxes are found on farms irrespective of size, and built of the different materials generally in use in each parish. They date from the nineteenth century, and would have been used to house horses or cattle, and in particular those which were being fattened up for slaughter. They would also have been used to house calves and to isolate sick animals. The majority of the looseboxes in this area (sixteen out of twenty) are in Chailey, reflecting the greater emphasis on fattening and breeding here than in the other two parishes.

The only *oast-houses* to be found in the area are also in Chailey. A survey of Wootton Farm (52) in East Chiltington in 1671 mentions a 'Hop Kiln' and a 'Hop roome', but hop production is mentioned in only one East Chiltington probate inventory compared to several cases in Chailey. It is in the north of this parish, at Wapsbourne Manor (32), that the two oasthouses that have survived are sited. The earlier of these two oast-houses is a two-storied, rectangular, brick building, dating from the seventeenth century. The roof is hipped and originally had gablets at each end, which is an early roof form in this area. The fire for smoking the hops was in the northern half of the building and would originally have been set under an inverted square cone. This cone would have directed hot air upwards to the square, slatted drying-floor above, which still exists.[29] The drying-floor was open to the upper room, although separated off by a low wall. The hops would have been laid out on it, and the hot air directed out through the roof by another square cone. Attached to the west side of the early oast-house is another, of the square, eighteenth century type. The drying process was the same, and again the slatted drying-floor has survived. At one time there was a cowl on top of the hipped roof which would have been a later addition.

Pigsties occur slightly more frequently than oast-houses, at three Chailey and two East Chiltington farms. At Markstakes Farm (21) all that is left is the outer wall of a row of pigsties, with three feeding holes. Elsewhere the pigsties occur in ones or twos, and consist of a low, gabled shelter with a small yard.

No evidence survives of dovecotes or fowlhouses, but there was provision for *pigeons*, apparently made in the nineteenth century. At North Barns Farm (44) there are pigeon boxes in the gable of the cowhouse, and there are pigeon boxes attached to the cowhouse at Warningor Farm (51), and in the barns at Wapsbourne Manor (32) and Wildings Farm (36). In the latter the pigeon box is fixed to the roof of the porch over the doorway.

Another nineteenth-century provision is the separate *dairy*. Until this time dairying work

seems to have been carried out satisfactorily in the house, and most of the eighteenth-century probate inventories mentioned a milkhouse in connection with the house. Only two nineteenth-century dairies survive, however, one in Chailey and one in East Chiltington.

There are three other minor buildings of note. One is the small *game larder* at Wildings Farm (36), which is built of brick with a tile roof. The inside walls are lined with tiles and the roof provided with a louvre to keep the building cool. Secondly there is the *kennel* at Frick Farm House (12). It is built of brick with tiny casement windows, and is set inside an iron-railed compound. The third building is at Housedean Cottages, and is a railway *warehouse* which was built at the original Falmer railway station about half a mile away in 1840, and in 1880 was moved to this farm, where it was used for storage.

Materials

As will have been noticed, the materials of which the farm buildings were made varied according to what building materials were available locally. Thus in Falmer there is flint and some weatherboard, and in East Chiltington weatherboard, brick, some flint and half-timbering, and one farm built of the local outcrop of Sussex Marble (North Barns Farm [44]) described by Young as 'an excellent stone for square building'.[30] In Chailey there is a similarly diverse variety, including sandstone and vertical boards (although without the flint). It is likely that in many instances half-timbered wall were later replaced with weatherboard, as happened in part of the barn at Wapsbourne Manor (32).

In timber construction the scantling of the timber used gradually became smaller, and curved braces were replaced by straight ones. These changes occurred during the course of the seventeenth and early eighteenth centuries, although there were always exceptions. For example, ogee shaped braces and struts were used at the late eighteenth-century barn at Townings Farm (30). Another change that was taking place in the seventeenth and eighteenth centuries was the type of tiebeam—wall plate—wall post construction. Instead of the wall plate being embedded in the wall post it became a bridge between the wall post and the tiebeam. The eighteenth century also saw the introduction of the practice of sharply jowelling the top of the wall posts. Wind braces went out of use or were replaced by diagonally laid plank braces, and such plank braces also replaced the wall braces. The earliest type of weatherboarding used wide planks (about 12in wide) fixed to a frame, which consisted of large squares (about 2ft 6in to 3ft square). During the latter part of the seventeenth century onwards the boards became narrower (about 7in to 9in), and the frame was made up of posts of smaller scantling. These formed rectangles rather than squares and contained even thinner vertical struts about 12in to 18in apart, onto which the boards were nailed. At Wapsbourne Manor (32) one early weatherboard square has had two struts fixed into it (which appear to have been window mullions) to close it up somewhat before the narrower type of boards were fixed to it.

Brick was not regularly used until the eighteenth century. Before that such bricks as were used were soft. They varied in size, although they were always narrow (about 2½in wide and 9in to 9½in long). The eighteenth-century bricks were more regular in size and colour and harder. A pleasing effect was often obtained by using glazed, grey-blue headers in Flemish bond. During the nineteenth century more decorative effects were created, as at one of the barns at Wildings Farm (36) where the bricks project around the doorways and at the eaves to provide a dentil decoration.

Slate, tiles, pantiles, corrugated iron and corrugated asbestos were all found used as roofing materials. In Falmer slate was used more frequently than were tiles, and there was one thatched roof, that of the barn at Falmer Court Farm (55). Here the rafters have been stained by the tar from

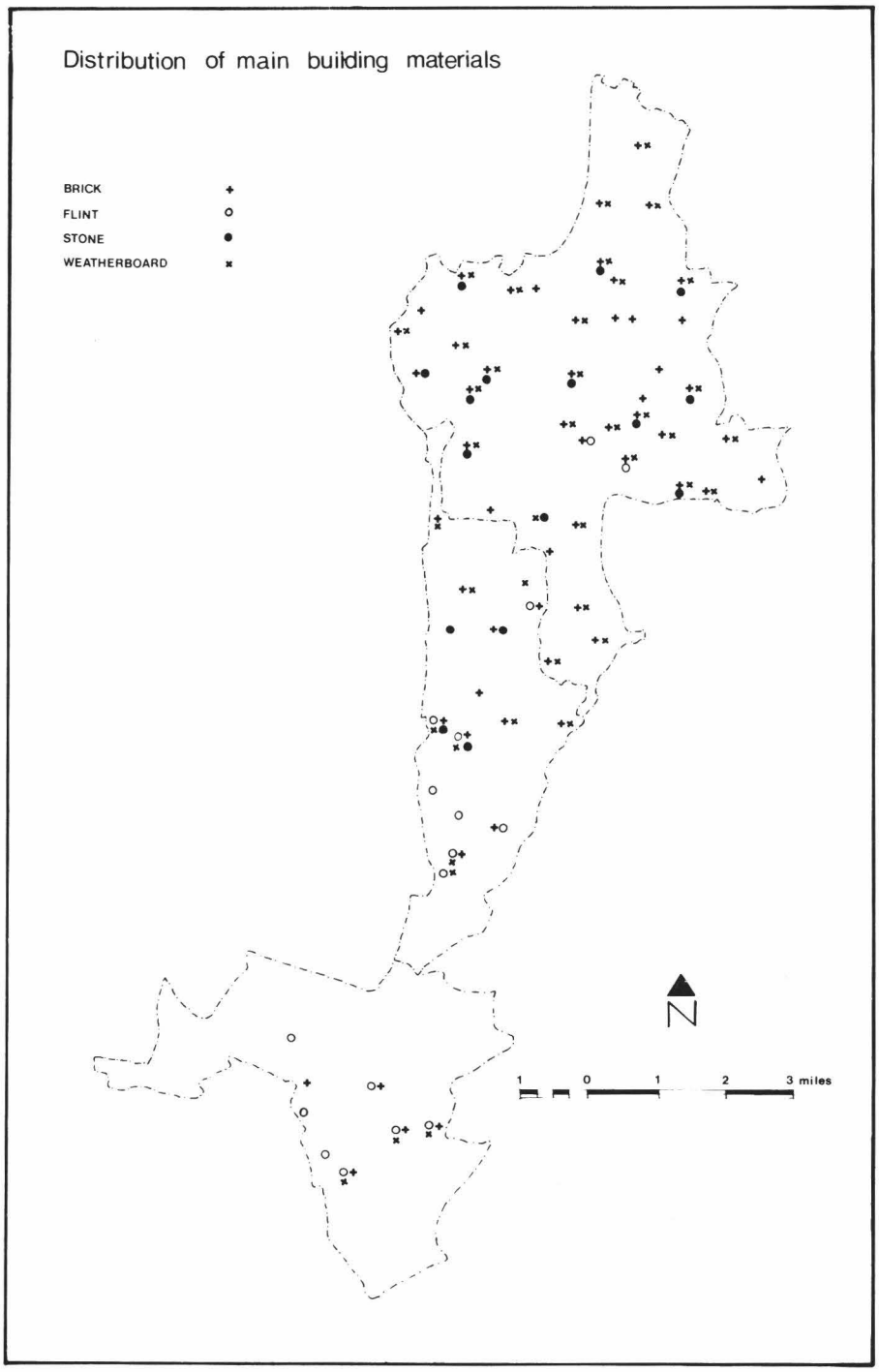


Fig. 7. Distribution of main building materials.

hemp ropes which were used for tying thatch to the rafters from the middle of the nineteenth century. In the early nineteenth century Arthur Young wrote of the South Downs that, 'the winds have been known to strip . . . the covering from all thatched buildings',[31] so it is not surprising that in most cases thatched roofs have been replaced. The slate which now forms the main roofing material of Falmer would have had to be brought into the area, and probably became popular in the early years of the nineteenth century. In East Chiltington slate is less favoured than tile, and in Chailey tile is by far the most common roofing material. The clays in this area were suitable for brick and tile-making and so tiles would have been used from an early date.

The earliest type of roof construction found in the area is a hipped roof with gablets. Half-hipped, hipped and gabled roofs were used in Falmer, and in East Chiltington and Chailey there were many different combinations of these basic types. The half-hipped roof was the most popular type for barns in Falmer and Chailey, but for barns in East Chiltington and other types of building in all three parishes, gabled roofs predominated.

Several different types of roof truss were used throughout the area, although a few types were more common than others. The crownpost trusses in Falmer Court Farm barn (55) are the earliest trusses and the only ones of their kind in the study area. There are a couple of examples of queen post roofs (at Wapsbourne Manor barn [32] and in one of the coaching houses at Chailey Garage [5]), but the most frequent type of roof construction was that which used queen struts and through purlins. This type seems to have been used particularly in the late seventeenth and eighteenth centuries. In the nineteenth century other types became predominant, in particular common rafter roofs with a collar and tiebeams every six, seven or eight pairs of rafters, using a plank ridge piece. Iron king pins, bolted to the underside of a tiebeam, were used in several buildings, and in others a king post, again bolted to the tiebeam, and from which struts ran to principal rafters. It seems that many earlier buildings were re-roofed during this century, and plank ridges were added to roofs which before had had no ridge piece. Unlike the roofing or walling materials these types of roof truss were used in equal proportion in all three parishes.

CONCLUSION

The study of farm buildings in Chailey, East Chiltington and Falmer has produced some interesting results. Firstly there is the difference in the building materials, which were dictated by the local supplies of flint, stone, timber and clay. The comparative uniformity of the buildings in Falmer and the use of non-local materials is probably due to the fact that they were built by one estate owner, for whom costs were less of a dominant factor than they were for the small-holders of the Weald, and who would have been more aware than they of national fashions.

The pattern of land-holding and size of farming units varied between the parishes, and was linked to the geological differences which dictated the most effective types of agriculture. The latter in turn, affected building requirements, and so different types of buildings are related to the different farming areas—cowhouses in Chailey and East Chiltington, looseboxes in Chailey, and shelter sheds and large barns in Falmer.

As in so much of Sussex there is a significant variety of geology and soils in the three parishes studied, and this has resulted in different types of agriculture and available building materials, and hence given rise to the diversity in building types and styles which are found within this small area.

ACKNOWLEDGEMENTS

I would like to thank the many farmers and occupiers who allowed me to spend time looking around their farm buildings, and without whose co-operation this study could not have been undertaken. I would also like to thank John Bleach, the staff of the East Sussex Record Office, David and Barbara Martin and Dr. R. W. Brunskill, for their help and advice.

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A PREFABRICATED CAST-IRON TANYARD BUILDING AT BRIGHTON ROAD, HORSHAM, WEST SUSSEX

by F. G. Aldsworth, BA, FSA

The building stood in a County Council Depot on the north side of Brighton Road, Horsham, about 900 m west of the town centre[1] and was dismantled in March 1982 for re-erection at the Chalk Pits Museum, Amberley, West Sussex.

The oldest part of the structure (Figs. 1–4 and Plates 1 and 2) was found to be 27.68 m long and 10.78 m wide, and comprised nine bays separated and supported on eight pairs of hollow cast-iron columns (NC1–8 and SC1–8) with brick piers at the corners. Immediately below the eaves on the north and south elevations were a series of cast-iron panels, 1.45 m in height, each with semi-circular headed openings and wooden louvres (N1–9 and S1–9). It can be shown that the cast-iron components in the building were not on their original site and that they had been adapted to suit their latest use. The pillars bear the cast inscription 'DEWER LONDON 1842' and there is evidence to suggest that they had originally formed a building, or part of a building, in the Bermondsey area of south-east London and were moved to Horsham in about 1880 (see below). The first two bays at the west end had been converted into offices by the erection of a brick dividing wall between pillars in the north and south walls (NC2 and SC2) and the insertion of a brick facade, with windows, a door and a chimney, between the brick corner piers at the west end. There was a comparatively modern brick extension, which included a smithy, at the east end. The remaining areas between the pillars in the north and south elevations were weather-boarded above a dwarf brick wall and openings had been incorporated into this in order that the structure could be used as a store (Plates 1 and 2).

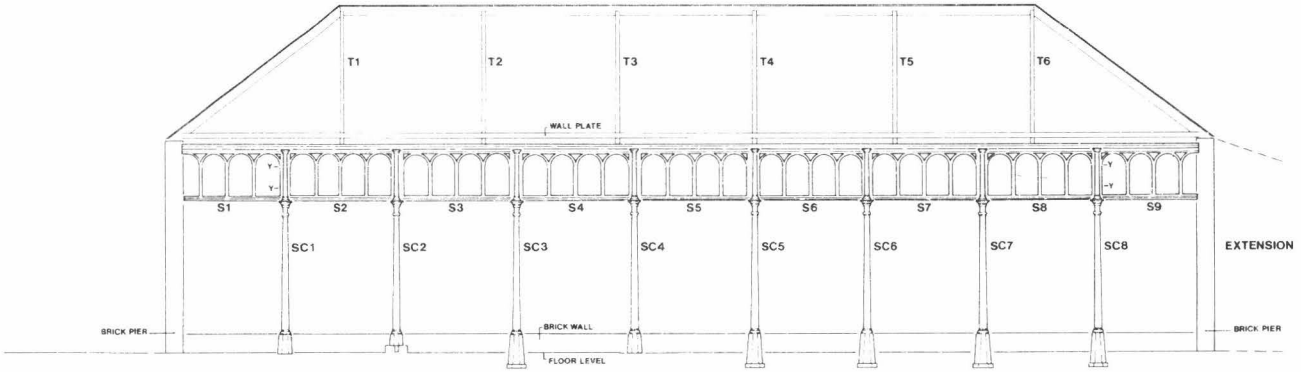
The hipped roof, of slate over close-boarding with clay ridge tiles, was supported on six wooden trusses (T1–6), each with tie beam, centre post, raking struts, and principal rafters, with purlins and a ridge piece (Fig. 2). The trusses had been placed directly on the cast-iron panels and supported timber wall plates. At each end of the building a substantial timber beam, attached to the north and south wall plates by a dragon-post assembly, originally served as a tie beam between the corner piers and supported the hipped roof ends. When the end walls were infilled in brick these became end wall plates. The roof structure was later strengthened by the addition of wooden centre posts under four of the trusses (T2, T3, T4 and T5) and tubular iron supports at either end of two of the trusses (T4 and T6). There can be no doubt but that this roof was not an original feature of the cast-iron structure and presumably dates either to its reconstruction at Horsham or later.

The original form of the building, prior to its removal to Horsham, is not clear although some deductions can be made on the assumption that all the surviving cast-iron pieces originally formed the whole or part of a single structure — as will be seen, however, it is not entirely clear that this is the case. The hollow columns which also acted as rainwater downpipes, are in two pieces. The upper sections are 1.36 m long and include pairs of flanges at their upper and lower ends between which the side panels were located. Small chamfers at their lower ends allow them to sit in shallow circular

A PREFABRICATED CAST-IRON TANYARD BUILDING

BRIGHTON ROAD, HORSHAM.

SOUTH ELEVATION



NORTH ELEVATION

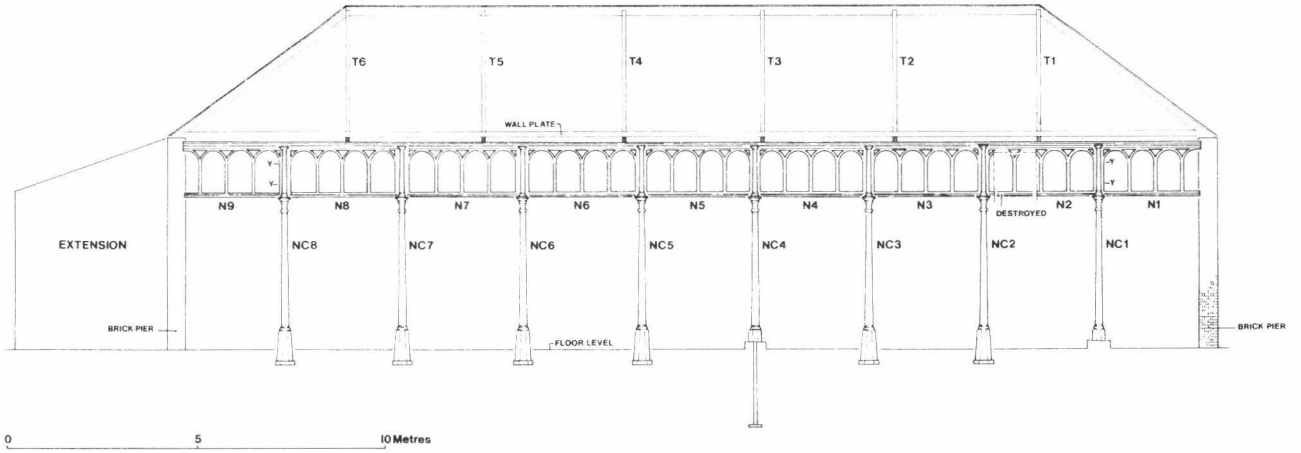


Fig. 1. Horsham tanyard building — elevations.

recesses, about 1 cm deep, in the upper end of the lower column sections (Fig. 4). There appears to have been no other method of securing the two column sections together and in the Horsham reconstruction timbers had been forced into the central hollows in an attempt to keep the sections together. Eleven of the sixteen lower column sections are of the same design. They are 4.44 m long and include a hollow octagonal base section, 90 cm high, with a flange. There is a circular hole, 14 cm in diameter, in the bottom of each of these which may have been intended as a rainwater outlet, although holes in the side of each base appears to have had the same function. Two of the remaining five columns have base sections 50 cm high (SC1 and SC4) whilst the other three have base sections 30 cm high (NC1, NC4 and SC2). In all these five cases the shorter base sections appear to have been cast in their existing form and seem not to have been cut down for re-use. They each have a circular hole in the base and two of them (NC4 and SC2) have cast-iron tubes, 16 cm in diameter, inserted into them. One of these (NC4) is 2.28 m long and terminates in a solid square block of iron whilst the other (SC2) has been broken off and survives to a length of 14 cm.

The eighteen louvred, cast-iron, side panels, each 1.45 m high, have small projections at the bottom corner, measuring 5 cm × 3 cm × 2 cm long, which locate in rectangular holes in the top of the lower pillar sections (Fig. 4). Since the end panels (N1 and N9, S1 and S9) were cast to terminate before the completion of the fourth semi-circular headed opening, it seems likely that they were intended to be secured into brickwork, as in the Horsham reconstruction, and there is no other evidence to suggest that any of the lower or upper column sections were intended for use in a corner position. These same four panels, each 2.62 m long at the top and 2.58 m long at the bottom have bolt holes at one end (marked Y on Fig. 1) which appear to have been intended to secure these panels to upright columns although there is no evidence for securing holes in any of the surviving

Plate 1. Horsham tanyard building — south elevation.

upper column sections. The fact that these four panels also had only one gully in the upper edge, as opposed to the usual two, suggests, with the other evidence, that they may have come from a different building. The form of the original structure is further confused by the fact that four of the upper column sections (SC3, SC4, SC8 and NC2) were chamfered to take a panel on only one side and four of the lower sections have correspondingly only one hole in their top surface and these would appear to have been intended for use at the end of a side. The inclusion of a gutter in the panel sections and downpipes in the columns suggests that the surviving pieces formed external walls and were not part of an internal arrangement.

Two distinct bay sizes were found and these were dictated by two panel lengths — six panels (N2, N3, N4, S5, S6 and S7) are 2.97 m (9 ft 8⅝ in) long and eight (N5, N6, N7, N8, S2, S3, S4 and S8) are 2.83 m (9 ft 3⅜ in) long. The columns were set in concrete with their centres at intervals of either 3.14 m (10 ft 3⅝ in) or 2.99 m (9 ft 9¾ in) apart on the north and south elevations and at a distance of 10.44 m (34 ft 3 in) apart across the width of the building. Assuming that the surviving pieces represent a substantial part of a rectangular building which was open on all sides, then a structure seven bays long and two bays wide, six bays long and three bays wide, or five bays long and four bays wide, could be constructed with brick corner piers. A gutter on all four sides would suggest that the structure was not gable-ended but hipped, in which case an odd number of bays across the width would seem unlikely. It may be, however, that none of the surviving pieces was used at the end of the building, in which case a structure nine bays long, perhaps with brick gable ends might be envisaged. A rectangular building open at ground level but with louvred openings above was common in nineteenth century tanneries and several gable-ended examples are included in a drawing of the Grange Tannery, at Bermondsey, published in 1876.[2] These buildings were normally used to provide cover over tanning pits.

The form of the original roof of the building, prior to its reconstruction at Horsham, is also unclear, except that the flange between the gutter and the gully which occurs on all but the end panels contains a series of bolt holes, each about 1 cm in diameter and 20 cm apart. These were probably used to secure bolts or tie rods forming part of a light, iron-framed roof. Timber-framed roofs on cast-iron buildings are known, as for example, on Nine Elms Goods Depot of 1837[3] but it seems more likely that in the Horsham example it was iron-framed and probably supported a covering of corrugated iron. The first patent for this material was to Henry R. Palmer in 1829 and in the same year the corrugated iron works of Richard Walker was established in Grange Road, Bermondsey,[4] close to the tanneries later occupied by Samuel Barrow and Brother in the area where the Horsham building is thought to have been first erected. Hot-dip galvanizing, a precaution against rust, was patented in 1837.

The building appears to have been erected in the tannery on the north side of Brighton Road, usually referred to as the Upper Tanyard, sometime between 1875 and 1896, i.e. the survey dates of the first and second editions of the Ordnance Survey twenty-five inch maps. Pigot's *National Commercial Directory* of 1832–4 indicates that the tannery was then worked by Henry Moon, a name which survives in the adjoining Moon's Lane. Two leases dated 26 November 1724 and 2nd July 1737 recently passed by Mr. E. Harrison of Gibbings, Harrison & Co. Ltd., to the West Sussex Record Office,[5] are title deeds presumably of lands which later became the site of the tannery. Mr. Harrison, whose family held the tannery from about 1890 to 1912, has also passed two other documents relating to the site to the Record Office. The earliest is dated 17 March 1800[6] and records the sale of an estate on Horsham Common by the Duke of Norfolk to George Michell, of Petworth, and his trustees. The property had apparently been occupied by Robert Grace, a tanner of Horsham, and the use had passed at his death to his daughter, Harriet, who married George

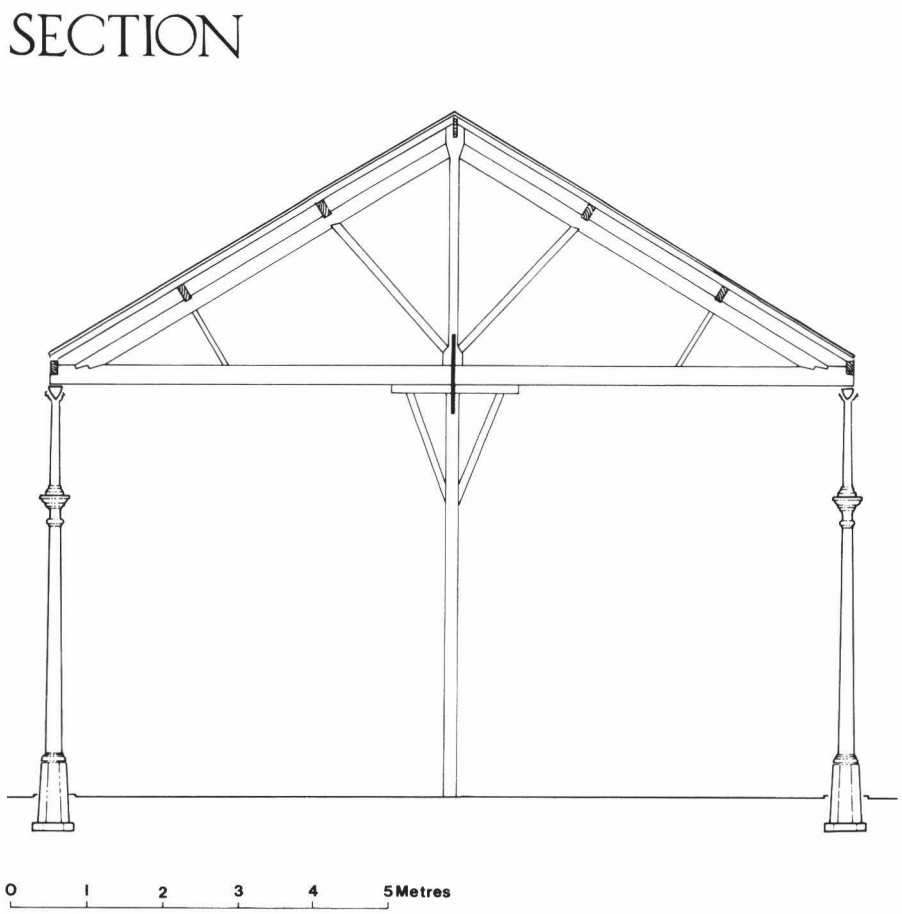


Fig. 2. Horsham tanyard building — cross-section.

Michell. The land was used by Michell for 'the storage of bark and the drying of leather'. The second document is an indenture of 9 July 1802[7] being a mortgage of the same premises by George Michell and his trustee George Phillips, to John Plummer and Philip Casemore. The earliest recorded use of the site as a tannery, however, is 1787[8] when reference is made to encroachments on Horsham Common, by Robert Grace, tanner, and the erection of large buildings for the drying of leather and bark. The encroachments had apparently been made within the last twenty years.

It should be noted that there was also a tannery immediately opposite on the south side of Brighton Road, usually referred to as Lower Tanyard, at least from 1719 until it closed between 1832 and 1844.[9]

According to *Kelly's Directories* the Upper Tanyard had passed to Thomas Marchant Moon, tanner and farmer, by 1852 and remained with him at least until 1874. In 1878 it was occupied by Fleming and Clerk but it had passed to Samuel Barrow & Brother by 1882. Barrow's still occupied the site in 1887, but by 1890 it had passed to Gibbings, Harrison & Co. of Westgate, Chichester and Horsham. It remained with this company until it was sold to West Sussex County Council on 14 February, 1912.

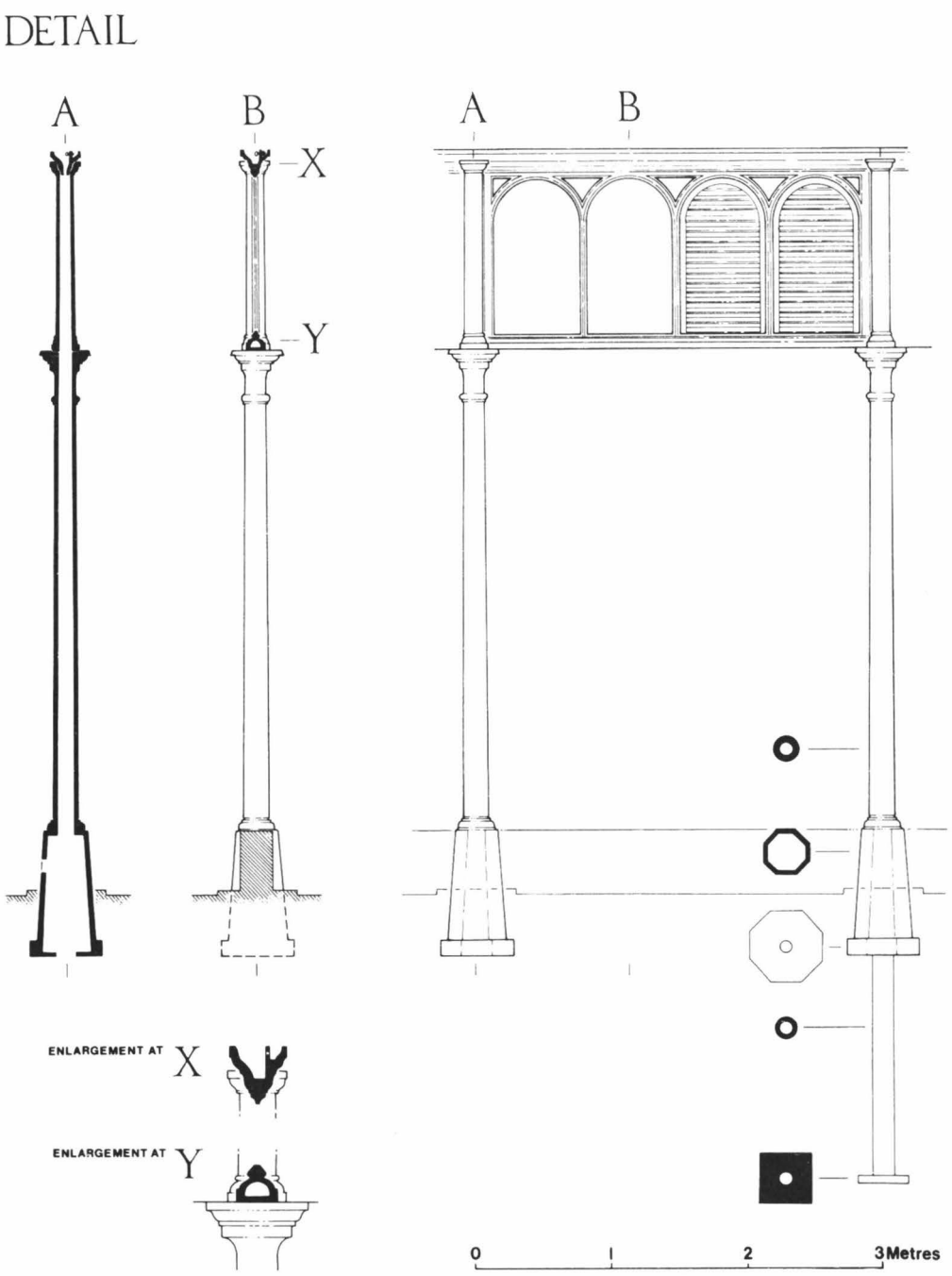


Fig. 3. Horsham tanyard building — detail of components.

Since the map evidence indicates that the building was erected between 1875 and 1896 it must have been erected by one of three occupiers — Fleming & Clerk (1875–80), Samuel Barrow & Brother (*c.* 1880–90), or Gibbings, Harrison & Co. (1890–96). Mr. Edward Ernest Harrison of Gibbings, Harrison & Co. Ltd., Terminus Road, Chichester, retains minute books of his family's company, which had tanneries at Chichester and Horsham. These commence in 1890 but there appears to be no direct reference to the erection of the cast-iron framed building in question. However, it seems likely that it is the structure referred to as 'Bark Barn', which was to be 'clad with iron sheets' according to a resolution on 20 May, 1896 and onto which 'a new mill house' was to be added according to a resolution of the 9 September in the same year.

There is a local tradition that the building had originally been erected at Smithfield Market in London, but there do not appear to have been any iron-framed buildings at Smithfield prior to the opening of the new market in 1896.[10] The name cast on the pillars is Dewer and this company is listed as iron-founders of Old Street, London, in the 1840s. The Horsham building is, in fact, more like the tanneries characteristic of the Bermondsey area of London and Mr. Harrison is of the opinion that the structure may have been moved to Horsham by Samuel Barrow and Brother, who held the Brighton Road tannery from about 1880 to about 1890. Samuel Barrow had his main business at Bermondsey, the centre of the English tanning industry, and the involvement of the family in the tanning industry there is described in 1894.[11] In 1876 the company had offices and warehouses in Weston Street and Maze Pond as well as tanneries at The Grange and in Grange Road. These properties have been identified on the first edition of the Ordnance Survey twenty-five inch maps from the addresses given in Post Office Directories, but, despite the inclusion of a rather splendid bird's eye view of The Grange Tannery in the company's advertisement in 1876[12], it has not been possible to recognize the Horsham building as one which formerly stood on any of these sites. There were, in fact, a large number of tanneries in Bermondsey in the late nineteenth century and the structure could have been removed from any one of these although the most likely explanation would be that it was acquired from one of the tanyards destroyed when the approach road to Tower Bridge was constructed. Much of the Bermondsey area, including the site of The Grange and Grange Road tanneries has been redeveloped for housing and industry and it has not been possible to locate any surviving mid or late nineteenth-century tanyard buildings.

Samuel Barrow and Brother also had a tannery in Linkfield Street, Redhill, Surrey, at least from 1867 until 1909. The first and second editions of the Ordnance Survey twenty-five inch map show the tannery there but there is no evidence to indicate that any buildings were removed from the site between the dates when these two maps were surveyed, i.e. 1869 and 1896.

In about 1920 Samuel Barrow and Brother became Barrow, Hepburn & Gale, of Weston Street, Bermondsey and they later moved to 73 Audley Street, London, as Barrow, Hepburn Group Ltd., Tanners.

The Horsham structure is an important survivor in the development of prefabricated cast-iron buildings. By the date of its casting in 1842, British designers and manufacturers could turn to over fifty years experience in cast-iron technology since its successful use in the iron bridge at Coalbrookdale in 1777–80. But whilst cast-iron had been used in bridges and a few railway stations for much of this period, its use in other buildings had been quite limited, especially in the south of England, until the 1840s when it was first used extensively in railway stations and the Royal Dockyards at Portsmouth, Chatham and Sheerness.

During the latter part of the eighteenth century, the first serious and sustained attempts were made to devise systems whereby most timber components in a building could be prefabricated, marking a transition from ad hoc building, to planned, multiple production. Early examples include

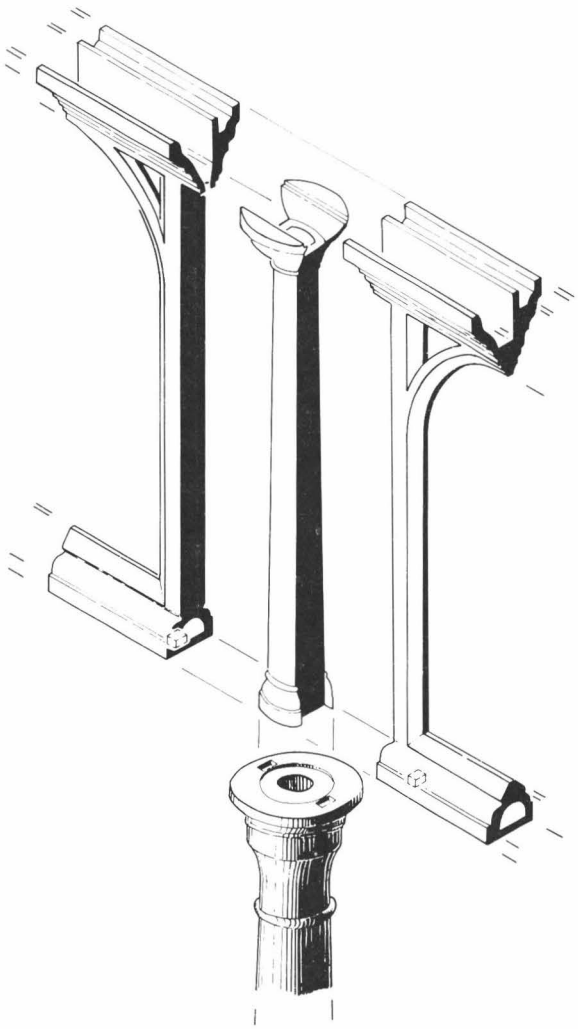


Fig. 4. Horsham tanyard building — detail of construction.

emigrant houses and portable colonial cottages. Prefabricated hospitals were sent as far as Australia and Tasmania, and in 1792 a complete settlement, including a church, warehouses, a range of shops, and two hospitals were sent to establish a new colony in Sierra Leone. In the early nineteenth-century, iron components, such as lintels, windows, columns, arches and trusses were gradually incorporated and by the 1820s experiments were being carried out to evaluate the use of cast-iron as a wholesale substitute for wood in a range of large buildings. The earliest use of isolated cast-iron columns, like those used in the Horsham Building, was in the 1790s, notable Sussex examples being those added to the Royal Pavilion, Brighton, by Nash in 1818–21. One of the earliest cast-iron houses to be designed was the surviving Commissioner's House in the Royal Naval Dockyard, Bermuda, completed, probably as an experimental structure, in 1827, and here iron was used almost exclusively for framing.

The name 'Dewer London 1842' on the Horsham columns is the foundry which also cast the iron sections for the great domed hall of the Coal Exchange which stood in Lower Thames Street, London, until 1962. The Coal Exchange was designed by J. B. Bunning and built between 1846 and 1849. The Horsham building was erected four years before the Coal Exchange design and is, therefore, an important survivor although neither the Coal Exchange nor railway stations provide close analogies to the tanyard building. It is more closely related to prefabricated structures that were designed for Balmoral Castle by E. T. Bellhouse in 1851; Paxton's Lily House at Chatsworth of 1849–50; and the Crystal Palace of 1850–51, although it was altogether simpler and less sophisticated than these where cast-iron was used for a whole range of structural elements. The lower column sections are closely paralleled by those in the Corn Exchange, Sudbury, Suffolk, built in 1841.

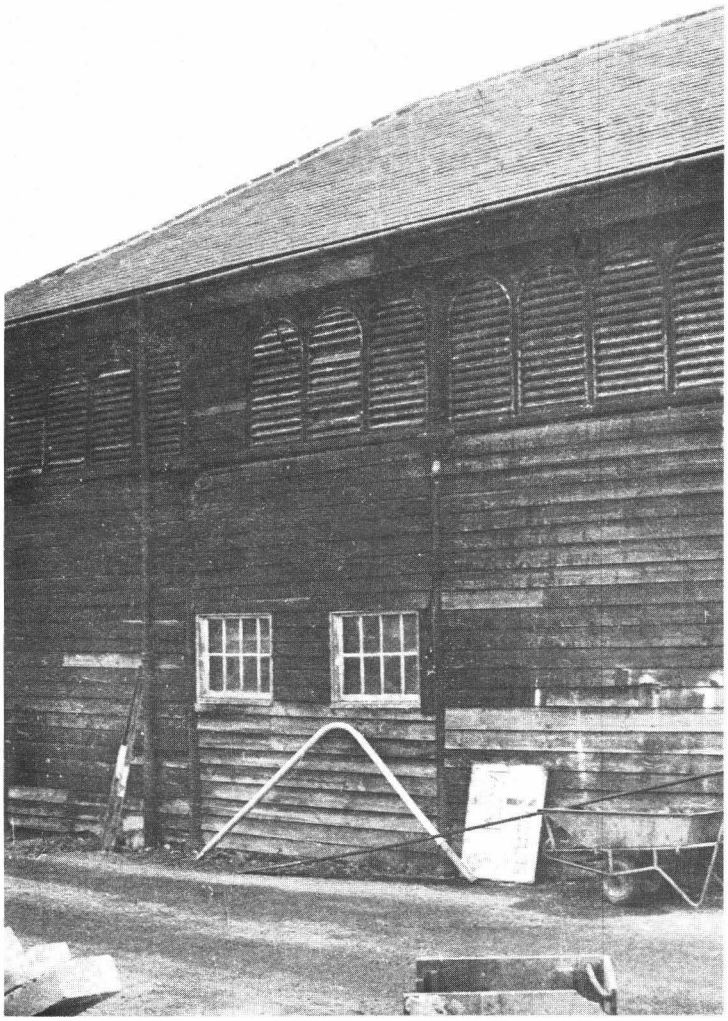


Plate 2. Horsham tanyard building — detail showing cast-iron components

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Author: F. G. Aldsworth, Archaeology Officer, County Planning Department, West Sussex County Council, County Hall, Chichester, Sussex.

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[1] National Grid Reference TQ 1803 3022.
[2] *Post Office London Directory* 1876, p. 81.
[2] Gloag, J. & Bridgewater, D. 1948 *A History of Cast Iron in Architecture*, Figs. 196 and 197.
[4] Herbert, G. 1978, *Pioneers of Prefabrication: The British Contribution in the Nineteenth Century.*
[5] *WSRO* MP 1848; ibid. Add. MS. 28751
[6] *WSRO* Add MSS 23793.
[7] *WSRO* Add MSS 23794.
[8] *Horsham Borough Court Book*, Arundel Castle MS. HO 2246, p. 60.
[9] I am grateful to Dr. T. P. Hudson for this information.
[10] I am grateful to Mr. C. Manton for this information.
[11] *Southwark and Bermondsey Illustrated* 1894, p. 19.
[12] *Post Office London Directory* 1876, p. 81.

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.

A 'Bout-Coupé' handaxe from Billingshurst, Sussex

The handaxe described in this note was discovered by Mr. James Sherlock of Billingshurst and was added to his collection of mainly Mesolithic flints gathered from various local fields. Mr. John Hurd 'rescued' the implement when, after the death of Mr. Sherlock, the collection was used to fill in pot holes in the drive, and the family of the late Mr. Sherlock donated the handaxe to the Sussex Archaeological Society. The writer is grateful to Mr. Hurd for all the information which he has supplied.

There is no precise information concerning the provenance of the handaxe. It is marked with the name 'ROWNER', which is the name of a farm about 1½ miles north west of Billingshurst (O.S. sheet TQ02 072 269) which has the River Arun and the now disused Wey and Arun canal running through it. One of the canal locks is called Rowner Lock. It may be that the handaxe was dug up during the excavation of the canal, or alternatively that it was recovered in a field or by the river. The north part of the Arun Valley contains extensive gravel spreads with six terraces lying up to 30 m above the present day alluvium. Terraces 1 to 4 have been dated to the Ipswichian (last) Interglacial (Woodcock 1981, 96). The terraces consist of sand and gravel derived from the Lower Greensand and Wealden outcrops. However, there is no evidence to suggest that the handaxe was in any way associated with the river terraces.

The implement shown in Fig. 1. It is a typical '*bout coupé*' handaxe as described by Roe (1968) having a squared butt with fairly angular corners, a blunt tip, and a flattish profile with a regular plan form. The handaxe is fully bifacial with even flaking on both sides. The cutting edge runs the whole way round the circumference of the piece and is straight. There may have been a slight twist at the tip, but ancient damage makes this difficult to decide for certain. Patination and staining make it impossible to tell the true colour of the flint used, there being no recent damage to reveal the interior. The dimensions of the handaxe are: length 111 mm; breadth 82 mm; thickness 28 mm measured along the edges of the containing cube in alignment with the major axis as drawn. The handaxe weighs 220 g.

The flatter face of the handaxe (Fig. 1a) shows intermittent orange-brown staining giving a mottled appearance, and one or two of the flake ridges show orange iron stains. One fracture scar in the centre of this face has the appearance of being an old thermal scar, and this would suggest that the implement may have been manufactured on a large naturally fractured 'pot lid' flake rather than on a man-made flake or on a nodule or cobble. There is no tranchet scar on this face. The more convex face (Fig. 1c) has a widespread orange-brown stain overlying a white patina. The tip has a large tranchet scar which has hinged upwards, and there is a prominent ridge running across the

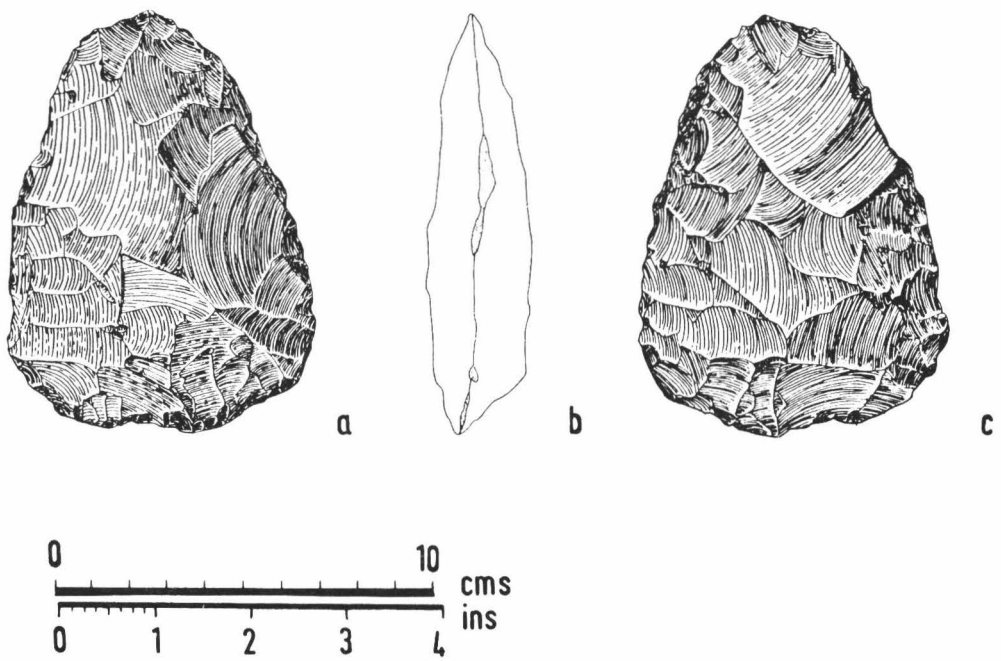

Fig. 1. The handaxe from Billingshurst.

butt. There is a small patch of weathering on one edge of this face.

The importance of the *'bout coupé'* class of handaxes has been discussed by other authors, principally Roe (Roe 1981a, 250–67, also Mellars 1974, Shackley 1977). The only other classic example to come from Sussex is the large rectangular handaxe from Woods Hill, West Chiltington which has been illustrated by Grinsell (1929). This handaxe is now in Worthing Museum. Roe mentions five other examples of possible *'bout coupé'* handaxes from Sussex; Wilmington Hill, Friston, Burlough 'Castle', Alfriston and Alfriston Tye (Holden and Roe 1974), and one possible broken *'bout coupé'* from Hassocks (Roe 1981b). Woodcock (1981), using a somewhat broader definition, suggests that there may be as many as eighteen or nineteen *'bout coupé'*-like implements from Sussex, the majority of these coming from the Cuckmere Valley and the Chalk Downland between the River Ouse and the Pevensey levels. He also records one example from the Ashdown Forest (Woodcock 1983) and two from Worthing.

Unfortunately the majority of British *'bout coupé'* handaxes occur as single undatable finds, although often they are found close to a known 'Mousterian' site. A few are recovered in association with 'Mousterian' artefacts from sites such as Kents Cavern, Devon (six *'bout coupés'*) and Oldbury, Kent (five *'bout coupés'*). Those examples which are dated belong either to the end of the last (Ipswichian) interglacial or, more commonly, to the last (Devensian) glaciation. Typologically the *'bout coupés'* form a class which is clearly different to any of the well known British Lower Palaeolithic handaxe types, but which is somewhat similar to some of the early Continental 'Mousterian of Acheulian Tradition' handaxes such as the *'Café au lait'* series from Le Tillet (Bordes 1954). It is apparent that in its classic form the *'bout coupé'* may reasonably be regarded as a typical Mousterian artefact, and consequently identified as such even when occurring as an isolated find. Therefore one would expect a Middle Palaeolithic date for the Billingshurst handaxe.

J. A. Tyldesley

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— — 1983 'A Palaeolithic handaxe from the Ashdown Forest', Archaeological Notes, this volume, below.

A Palaeolithic handaxe from Brinsbury, North Heath, Pulborough

The extremely fine Acheulian Ovate handaxe shown in Fig. 2 was discovered in 1981 by Master Michael Jollicliffe at the West Sussex School of Agriculture, Brinsbury, North Heath, Pulborough (TQ 0610 2215). It was found some 500 mm deep, projecting from the side of a small ditch which drained into a small feeder stream to join a tributary

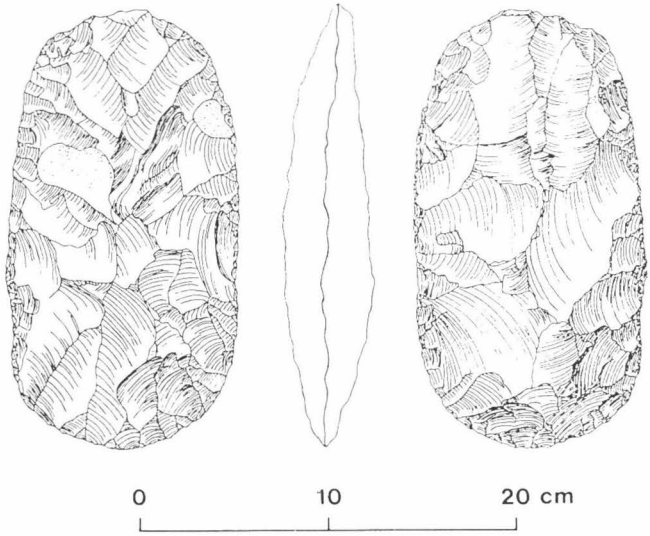

Fig. 2. The handaxe from North Heath, Pulborough.

of the River Arun. No other artifacts were noted in the vicinity. The site is at approximately 50 m O.D.

The handaxe has been particularly skilfully made, both sides exhibiting the well controlled shallow flaking typical of the bar-hammer technique. It shows some patination and very heavy ochreous staining. The maximum existing dimensions of the implement are: length 241 mm, breadth 129 mm, and thickness 55 mm.

The handaxe is in a remarkably fresh condition, is only very slightly abraded, and can have moved little, if at all, from the point where it was originally abandoned. This may be significant, in view of its position close to the 15 m contour and its patina suggestive of deposition in a river gravel environment, since remnants of the fourth terrace of The Arun are known to exist at just this elevation (Bull 1932, 1936; Kirkaldy and Bull 1940). This terrace is generally considered to be of Ipswichian date (Thurrell, Worssam and Edmonds 1968, 112; Woodcock 1981, 96–8). However, if the implement derived from the slightly higher fifth terrace of the Arun, a somewhat earlier Hoxnian date must be proposed.

Typologically the handaxe is unhelpful, for it offers no clue as to its age. It cannot be parallelled with other handaxes in the immediate area (Woodcock 1981, 297–307) for its size, in particular, sets it apart. It could be of either Hoxnian or Ipswichian date, and there are many examples in Dr. Roe's recent study to illustrate this point (Roe 1981).

The handaxe is now in Horsham Museum.

Acknowledgements

The author is indebted to Mr. E. W. Holden and Mrs. S. M. Standing for bringing the implement to his attention and to Mrs. Standing for providing the illustration.

A. G. Woodcock

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A Palaeolithic handaxe from the Ashdown Forest

The implement illustrated here (Fig. 3) is an important one, since it is the only authenticated example of a Palaeolithic handaxe from the Ashdown Forest. The only other known implement of Palaeolithic date is a Levallois flake in Plymouth Museum marked 'Ashdown', and there is some doubt as to whether this came from the Forest area, or even from Sussex itself.

The handaxe was found at TQ 472 313, in about 1930, by the late Mr. Harry Humphrey, a commoner, while engaged in digging the shallow 'gravel' beds that occur on the Ashdown Forest and which used to be exploited by commoners under licence from the Lord of the Manor. The site, at *c.* 200 m O.D., is on fairly level ground, sloping gently to a valley-head to the north *c.* 100 m away. The implements maximum existing dimensions are: length 193 mm, breadth 105 mm, thickness 48 mm, and its weight 1005 g.

The handaxe is manufactured from grey tabular flint, most probably derived from the surface of the South Downs, some 25 km to the south. It has only just begun to patinate, and is but slightly abraded, with some rounding of the flake ridges. Its condition suggests that it has not moved far from the place where it was abandoned.

The implement has been worked over both surfaces, except for a patch of cortex in the centre of each face, and has a cutting edge which runs all round the circumference. Many of the flakes have been stone-struck, and it is only along one edge (the inner edge shown in the illustration) that there is evidence for the soft hammer technique being used. The relative thickness of the handaxe, its crudeness and variability of finish, must bring into question whether it was even completed. Could the implement have received its initial trimming on the Downs, with the intention of applying the finishing touches later, or is it merely the product of an inexperienced and uncritical maker?

Typologically the handaxe, with its sub-angular butt, is immediately reminiscent of the *'bout coupé'* class of implement, though admittedly much larger than most of the examples. It is perhaps most closely paralleled by an equally large, sub-rectangular handaxe from the lower brickearth at Iver in Buckinghamshire, which A. D. Lacaille called a *'bout coupé'* cleaver and compared to certain north French pieces (Lacaille and Oakley 1946, 442–3). The lower brickearth deposits, from which the Iver handaxe was recovered, have tentatively been ascribed to the Ipswichian. It may be significant that neither of these handaxes is absolutely symmetrical, the more refined workmanship being concentrated along the more convex of the longer edges.

The only Sussex parallel is a large celt-like implement from the Horseshoe, Eastdean (TQ 562 958) which, although originally published as Neolithic (Smith 1931, 75 and 6), seems, on balance, more likely to be of Palaeolithic date (Woodcock 1981, 352–4).

The date of the Ashdown Forest handaxe must be the subject of some speculation. The distribution and likely date of *'bout coupé'* and *'bout coupé'* like handaxes in Sussex has already been discussed by various authors (Roe 1974; 1981 a and b; Woodcock 1981) and the bulk of the Palaeolithic finds in the Wealden area appear to be of Ipswichian or early Devensian date. Typologically a Middle Palaeolithic date would certainly seem appropriate for this particular handaxe.

The handaxe has been given to the Asdown Forest Centre at Wych Cross, Forest Row.

Acknowledgements

The author is indebted to Mr. C. F. Tebbutt for drawing his attention to this implement.

A. G. Woodcock

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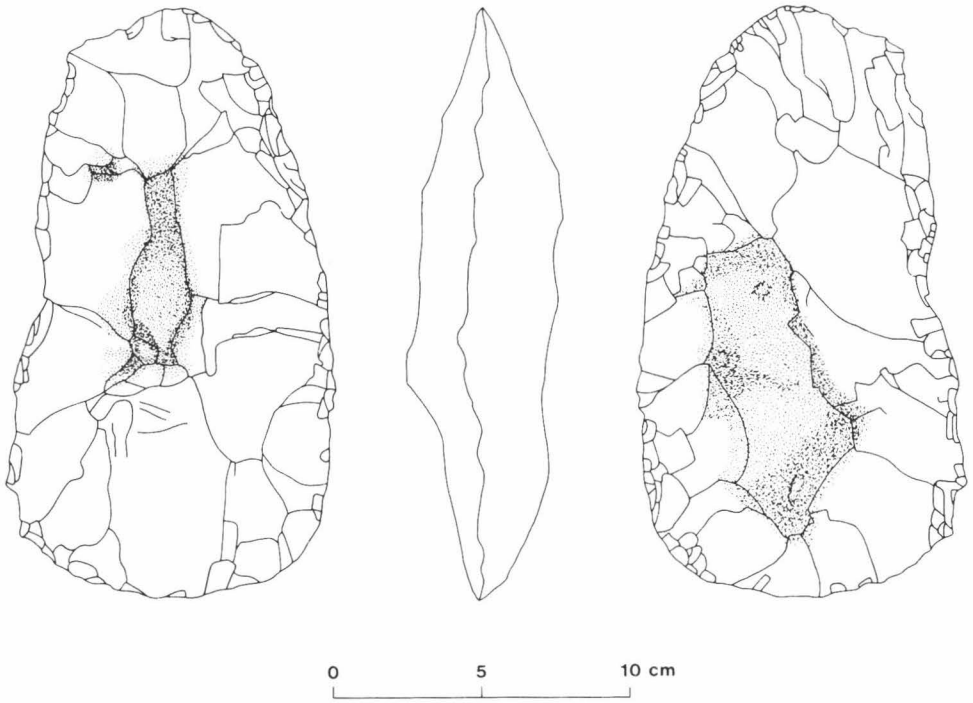

Fig.3. The handaxe from the Ashdown Forest.

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A multi-period stone age site on Ashdown Forest

The Site

The site (STQ 435 324) is on that part of Ashdown Forest with the ancient name of Broadstone Warren, the Broadstone car park partially covering the site. It is at approximately 185 m O.D. on the north-facing slope of the ridge, 15 m above, which runs between Wych Cross and Colemans Hatch. The part not occupied by the car park is covered mainly by heather, with a small mixture of bracken, through which run a number of footpaths. The use of these paths has allowed severe water-caused erosion to take place, in some cases down to the underlying solid Ashdown Sandstone.

Sections exposed by the erosion disclose a podsol profile consisting of an upper layer, *c.* 5 cm in depth, of richly organic peat sharply defined from an underlying layer of bleached fine white sand derived from the solid rock below. The white sand varies in depth from 25 cm to 38 cm, the lower part often showing iron staining.

The site was discovered by one of the authors in 1968 (Tebbutt 1974) when the area over which flint artefacts occurred was found to be approximately 1 ha. No excavations have taken place but since the original discovery the area has been visited frequently, especially after heavy rain, and all flints found were collected. Find spots within the area were not accurately recorded as almost all finds had been washed out of their original positions and lay in the small stream beds along the eroded footpaths. A small number of flakes were, however, found *in situ*, all of which were in the lower half of the peat layer or just at its junction with the white sand.

It is perhaps significant that the slope on which the site occurs is relatively slight but immediately below it the ground slopes more steeply and within 50 m of the occupied area the whole of the valley comes into view. The site indeed commands one of the most extensive views on the Forest, from which on clear days the line of the North Downs is plainly visible. This topography is paralleled on other prehistoric sites on the Forest and would clearly be of advantage to people interested in hunting game or with domestic flocks and herds, but it does presuppose a degree of clearance of the wild wood.

The Artefact Population

The whole of the artefact population for Broadstone Warren is made of flint that ranges in colour from a clear black to an opaque white. These characteristics suggest an origin on either (or both) the North and South Downs.

The artefacts may be summarized as follows:

Tools:	Microliths	71
	Scrapers	14
	Burins	1
	Pieces with Distal Truncation	10
	Pieces with Micro-denticulation	1 + ?1
	Denticulated Pieces	2
	Notched Pieces	14
	Rod with abraded ends	1
	Pieces with casual retouch	21
	Stemmed and winged arrowhead	1
	$= \sum$	137: tools
By-products:	Micoburins	15
	Miss-hits	4
	Burin-spalls	3
	Notch-spalls	2
	$= \sum$	24: by-products
Debitage:	Blades	117
	Flakes	624
	Flakes from polished axes	2
	Broken pieces	1876
	Crested pieces	65
	Cores	21
	Core fragments	8
	Pseudo-burins	7
	Broken flint	1
	$= \sum$	2721: Debitage
	GRAND TOTAL	2882 pieces

While microliths predominate amongst the tools, the presence of a stemmed and winged arrowhead and of two flakes derived from the reworking of previously polished axes means that we cannot be certain that other retouched categories in this collection were discarded by Mesolithic, rather than Neolithic, users of this location.

The microliths too may be of various ages and 23 of the 71 specimens can be categorized as follows:

Obliquely backed pieces	11
Obliquely backed pieces with additional retouch on the leading edge	3
Piece with two oblique truncations giving a trapezoidal outline	1
Small lanceolates	3
Large convex-backed piece	1
Small scalene triangle trimmed on three edges	1
Concave basally retouched pieces	3
$= \sum$	23: classified microliths

The other 48 microliths were too shattered to be described by shape.

The large convex-backed piece is 13 mm broad and could as easily be of Upper Palaeolithic as of Mesolithic date. Some or all of the obliquely backed pieces could be Early Mesolithic in age or they may have originally accompanied the three basally retouched pieces. The small lanceolates and the scalene triangle may once have belonged together also. If these observations are correct the backed pieces could have been discarded at the site as a result of at least three separate visits.

The large number of (broken) discarded microliths—just over half the total of retouched pieces— confirms the hunter use of the site suspected from its location. That the flint left derives from the North and/or South Downs suggests that groups using the Broadstone Warren site were at some moment located so as to be able to exploit one or other of these flint sources. Similarities in microlith types between sites nearer the centre of the Weald basin and sites on its perimeter adjacent to the Chalk appear to confirm a model that presupposes exploitation of both microareas by the same bands.

Clearly the chronology of the use of the Broadstone Warren site can only be recovered by excavation. Its clarification must, however, be expected to contribute towards our understanding of land use patterns within this area of the Weald during the early Post-glacial.

The material described has been deposited with the Sussex Archaeological Society at Barbican House, Lewes.

C. F. Tebbutt and R. M. Jacobi

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A flint-working site at Terwick Mill, Trotton, West Sussex

An extensive Mesolithic, and possibly earlier, flint-working site has been discovered on the south bank of the River Rother in the vicinity of Terwick Mill.[1] Finds, recovered by the Ayling family, who worked the mill for sixty years, and the surviving son, Edward Ayling, aided latterly by the writer, include finished axes, scrapers, points of several types, numerous 'spokeshaves', and waste flakes. Six items are illustrated (Fig. 4) and these comprise a tranchet axe (No. 1), a pick (No. 2), a circular scraper (No. 3), two 'spokeshaves' of different diameters perhaps for finishing arrow shafts and wooden spearpoints (Nos. 4 and 5) and a most unusual pointed tool of elliptical cross section, longitudinally ground and with the point polished (No. 6), which R. M. Jacobi considers may be of an earlier period than Mesolithic. Many of the tools are multipurpose and only a few microliths were found.

The site lies less than a mile west of the flint-working sites on Iping Common[2] and adds to the ever-increasing amount of evidence to support the view that the sandy soils of the Rother valley were occupied at least as early as the Mesolithic.

M. W. Wholey

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[1]National Grid Reference SU 8306 2215.

[2]Keef, P. A. M., Wymer, J. J., and Dimbleby, G. W. 1965 'A Mesolithic site on Iping Common, Sussex, England', *Proceedings of the Prehistoric Society* 31 pp. 85–92 (site at SU 8486 2214). A second site was excavated in the same vicinity (SU 8465 2162) by O. H. Knowles in 1960. The finds and notes are in Chichester District Museum.

Prehistoric flint mines on Nore Down, West Marden

In a recent note[1] the writer drew attention to an earthwork on Nore Down which in general form resembles

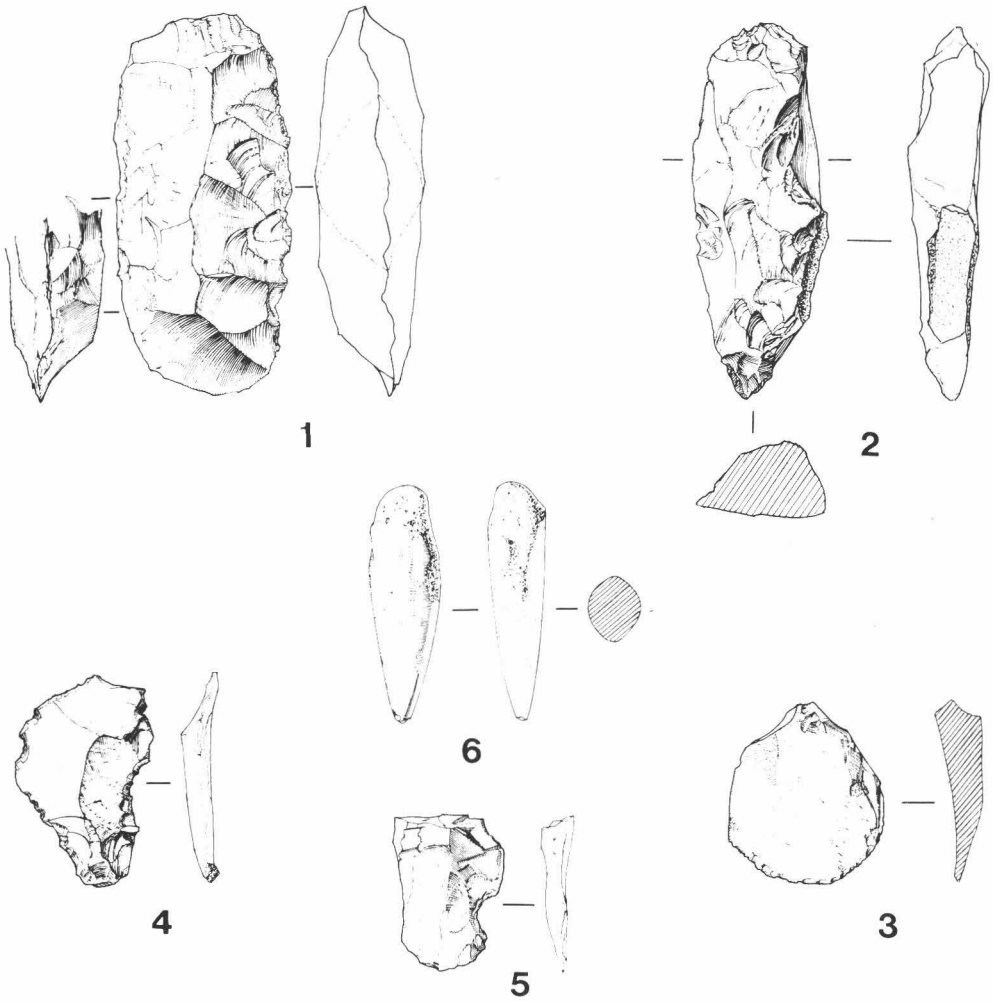

Fig.4. Flintwork from Terwick Mill, Trotton. (× ½)

a Neolithic oval barrow with flanking ditches.[2] In February 1982 a trial trench, 1 m wide and 9 m long, was dug across the northern 'ditch' of the earthwork by members of the Haslemere Archaeological Group, under the supervision of the writer, with the kind permission of Mr. M. J. Burgess of Locksash, Compton.

What initially appeared to be a ditch, some 5.4 m wide, turned out to be a vertical shaft, some 4.2 m across, which had been dug into the chalk to a depth of at least 2.5 m, and it soon became clear that the earthwork was not an oval barrow but the result of prehistoric flint mining which comprised two lines of shafts dug parallel to one another (Fig. 5).

The trial trench appears to have been dug across the centre of a shaft, the true form of which was seen as a curving worn face at a depth of 2 m beneath the surface. It had been cut through two seams of flint, at depths of 0.8 m and 2.2 m, and presumably continued downwards at least as far as a third seam. The lowest fill, encountered in the trial trench, comprised large blocks of chalk and a few large nodules of flint (Layer 5) and this appears to have been thrown into the disused shaft immediately after being excavated from an adjoining shaft. Above this were layers of small pieces of chalk, presumably representing silt (Layer 4); a layer of loam with small pieces of chalk (Layer 3); a layer of loam containing large flint nodules and small pieces of chalk, possibly the result of ploughing in a clay with flint capping (Layer 2); and a turf covering (Layer 1). The flint nodules encountered in the lowest fill are difficult to account for since the purpose of the mine appears to have been to abstract flint but perhaps the discarded pieces were too small.

A quantity of waste flakes in layers 2 and 3, and a spread of these in the adjoining woodland and nearer the earthwork where the surface had been disturbed, indicates knapping of a Neolithic and/or Bronze Age nature. No finished tools were encountered.

The discovery of flint mines on Nore Down, West

NORE DOWN, WEST MARDEN
PREHISTORIC FLINT MINES

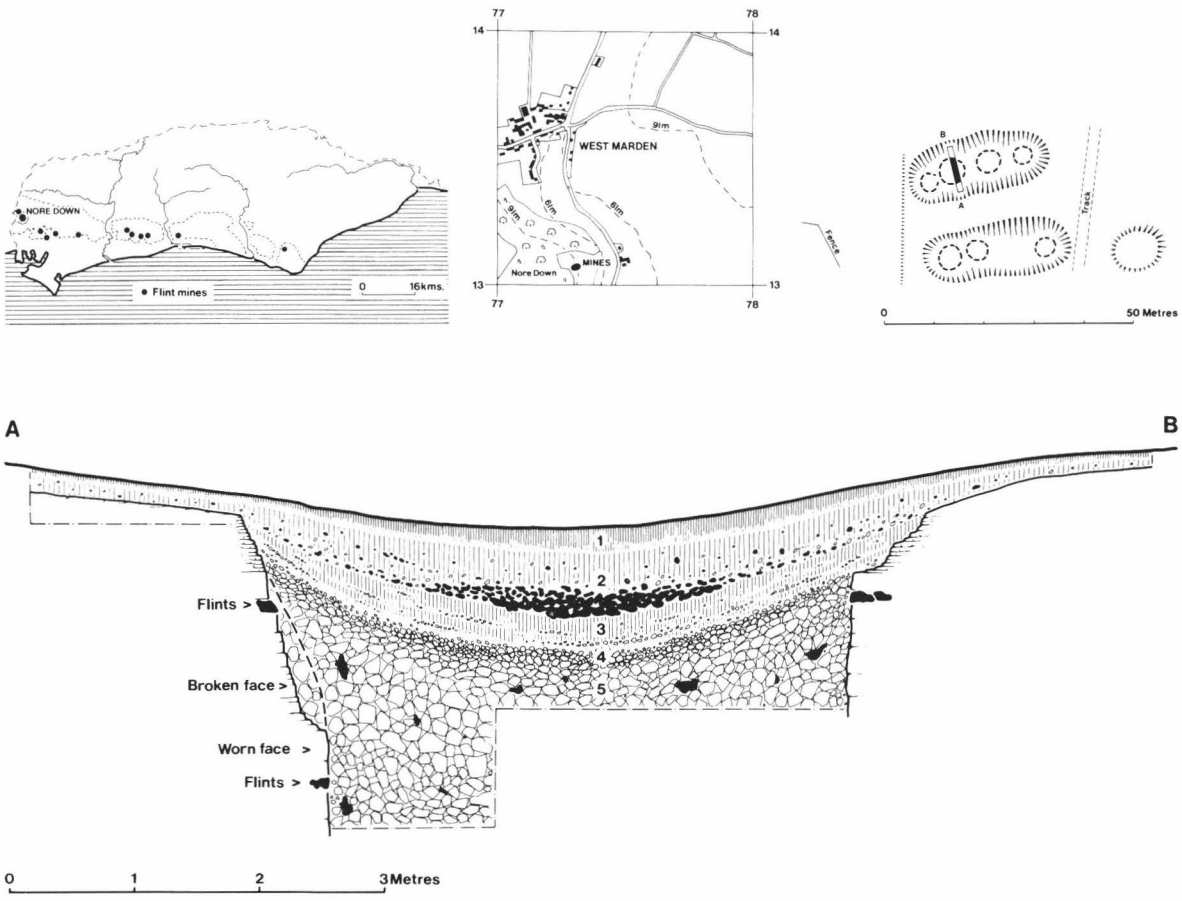

Fig.5. Flint mines on Nore Down, West Marden.

Marden, extends the distribution of known sites in Sussex further west than previously recorded, although Drewett has identified a possible single shaft at Compton, a little north-west of Nore Down.[3] The other examples shown on the map (Fig. 5) are at Stoke Down, Funtington;[4] Bow Hill, Stoughton;[5] Lavant Caves;[6] Long Down, Eartham;[7] Harrow Hill, Angmering;[8] Church Hill, Findon;[9] Blackpatch, Patching;[10] Cissbury, Worthing;[11] Slonk Hill, Shoreham;[12] and Windover Hill, Wilmington.[13]

F. G. Aldsworth

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[1] *Collections* 117 1979 p. 251 and Fig. 18.

[2] National Grid Reference SU 7731 1306.

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[4] Wade, A. G. 1923 Stoke Down flint mines *Proceedings of the Prehistoric Society* 4 pp. 82–91; Curwen, E. C. 1954 *The Archaeology of Sussex* pp. 119–20.

[5] Curwen, E. C. 1928 *Sussex Notes and Queries* 2 pp. 80–81, and 1933–34 pp. 246–7; *Curwen 1954* op. cit. p. 120.

[6] Notes and photographs of 1893 investigation in Goodwood MS in West Sussex County Record Office; *The Antiquary* 28 1893. pp. 22 and 160; *Victoria County History* 1 1905. pp. 326–7; Allcroft, A. H. 1916. Some earthworks of West Sussex *Collections* 58 pp. 66–90; *Curwen 1954* op. cit. p. 121; *SAS Newsletter* No. 33

1981, p. 234, No. 34 1981, p. 244 and No. 35 1982 p. 253.

[7]Salisbury, E. F. 1961 Prehistoric flint mines on Long Down, Eartham 1955–58 *Collections* 99 pp. 66–73.

[8]Curwen, E and E. C. 1926 Harrow Hill flint mine excavation 1924–25 *Collections* 67 pp. 103–38; Curwen, E. C. 1927 Probable pressure-flakes of Antler from Harrow Hill. *Collections* 68 p. 273; Holleyman, G. 1937, Harrow Hill excavations 1936 *Collections* 78 pp. 230–51; *Curwen 1954* op. cit. pp. 112–13; Ratcliffe-Densham H. B. A. 1972 Finds from Harrow Hill, Patching *Collections* 110 p. 127.

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[10]Goodman, G. H. *et al.* 1924 Blackpatch flint-mine excavation 1922 *Collections* 65 pp. 69–111; Pull, J. H. 1932 *The Flint Mines of Blackpatch.*

[11]Numerous investigations and reports, but summarized in *Curwen 1954* op. cit. pp. 106–12.

[12]*Drewett 1978* op. cit. p. 27.

[13]Curwen E. C. 1928 The antiquities on Windover Hill *Collections* 69 pp. 94–101; Holden E. H. 1974 Flints mines on Windover Hill, Wilmington *Collections* 112 p. 154.

The proposed Maresfield and Uckfield Bypasses: a fieldwalk survey including Maresfield Park and Cave

During 1981–82, at the request of East Sussex County Council, the fieldwork group of the Wealden Iron Research Group undertook to walk the lengths of the Maresfield and Uckfield bypasses along the routes then proposed. The aim was to discover whether any visible features of archaeological importance were likely to be affected when the road was constructed. It was decided to walk the route from north to south, a distance of some twelve kilometres, starting at Lampool Corner (TQ 462 253).

Almost immediately the first feature of interest was found, at the east end of Cave Wood. This wood is situated on a steeply rising escarpment containing large stone quarries which have apparently not been worked for many years, and has at its north-east corner a locally well known cave TQ 4609 2515 (Fig. 6, A; Fig. 7). The cave is entered by a rock cut doorway-shaped entrance, facing north, on the outside of which can be seen the remains of iron hinges. Inside one enters a straight passage, about 1 m wide and 7 m long, with a sharp turning to the left at the end. The right hand wall is finely tooled but that on the left is more irregular and appears to be the face of a natural rock fissure. Immediately at the left turn the passage leads into a roughly circular chamber with a level floor from which, on its southern side, another doorway-shaped exit leads to a second chamber. There is, however, no sign that a door was ever hung here. At the far right hand side of this chamber another projected passage had apparently been begun, at right angles to the entrance passage. This does not proceed very far, and ends in a rough and untidy way as if unfinished. The fact that the straight entrance passage does not point directly to the first chamber may mean that the original rock fissure led naturally into an interior cave, now artificially enlarged. Skilled masons working in the adjoining stone quarry could have constructed the present cave.

There seems to be no local tradition for the use of the cave, other than the inevitable 'use by smugglers'. An ice house was suggested but Mr. H. F. Kirby, the octogenarian grandson of a former head keeper of Maresfield Park was told by his grandfather that the ice house was by Marshalls Lake (at c. TQ 457 250). The remains of another ice house still exist in the grounds of a house at TQ 4632 2485. During the 1939–45 war the cave is said to have been fitted up as an air raid shelter.

A study of ancient Maresfield maps was made in an attempt to trace the earliest reference to the name Cave Wood. Norden's 1595 map of Sussex shows an empaled park at Maresfield, but the earliest use of the name 'Cave' was found on a map of Maresfield Park of 1820[1] where 'Cave Plantation' is marked on the northern park boundary with 'Old Deer Park'. On the parish Tithe Award map of 1840 the area is designated 'Wilderness and Pleasure Grounds' but on the 6 in Ordnance map of 1873 it appears as 'Cave Wood'.

For the present, speculation must remain as to the origin and purpose of this carefully made artificial cave in what was once Maresfield Park. Its proven existence in the early nineteenth century suggests an eighteenth-century grotto or folly, or even a secret society meeting place under the auspices of the occupants of the Park.

South of the steep escarpment of Cave Wood the route passes to the west of Flitterbanks Farm, still within the former area of Maresfield Park. The first field (Fig. 6, B) was arable at the time of walking and proved to be of great interest. Along its eastern boundary fence lies the line of the London–Lewes Roman road.[2] This was immediately apparent by the scatter of bloomery furnace slag, originating no doubt from the metalling of the road. The slag was found, with decreasing frequency, to have spread some way down the slope to the west. Other artifacts picked up from the surface are listed below (for full description see Appendices).

22 worked flint flakes including eight showing secondary working (Fig. 8, 1–4) all of possible Mesolithic to Bronze Age date

Fragment of flat bronze axe of Bronze Age date (Fig. 8.5)

Two sherds of Roman pottery

One sherd of unknown origin, possibly Saxon

Six sherds of thirteenth/fourteenth century

One sherd of probable fifteenth/sixteenth century

A number of sherds of sixteenth/seventeenth-century Sussex ware and post-medieval stoneware.

As the site appears as an empaled park in Norden's map of 1595, the above evidence seems to support the existence of an earlier medieval settlement significantly alongside the Roman road.

South of Flitterbanks Farm the route lay over grass fields or scrub woodland until the eastern end of Furnacebank Wood was reached (TQ 464 234). Here it had been deliberately aligned to avoid the many ironworks remains in the wood.The next site of possble interest was on Budlett's Common (TQ 469 231) (Fig. 6, C) where a roundabout and slip road to Uckfield is planned. Here was some very irregular and disturbed ground. The subsoil appears to be sand, and the irregularities were judged to be the result of sand quarrying. Continuing southwards the route was again over woodland or grass ley, passing just to the west of the pre-historic rock shelter site at TQ 464 216 currently being excavated by Martin Hemingway. Two branches of the dismantled railway were crossed just before the River Uck was reached. South of the river the proposed route follows, for over one kilometre, the valley of the Ridgewood Stream, a tributary of the Uck. On its left bank at TQ 467 197 a small spinney was noted (Fig. 6, D). Here the steam had the

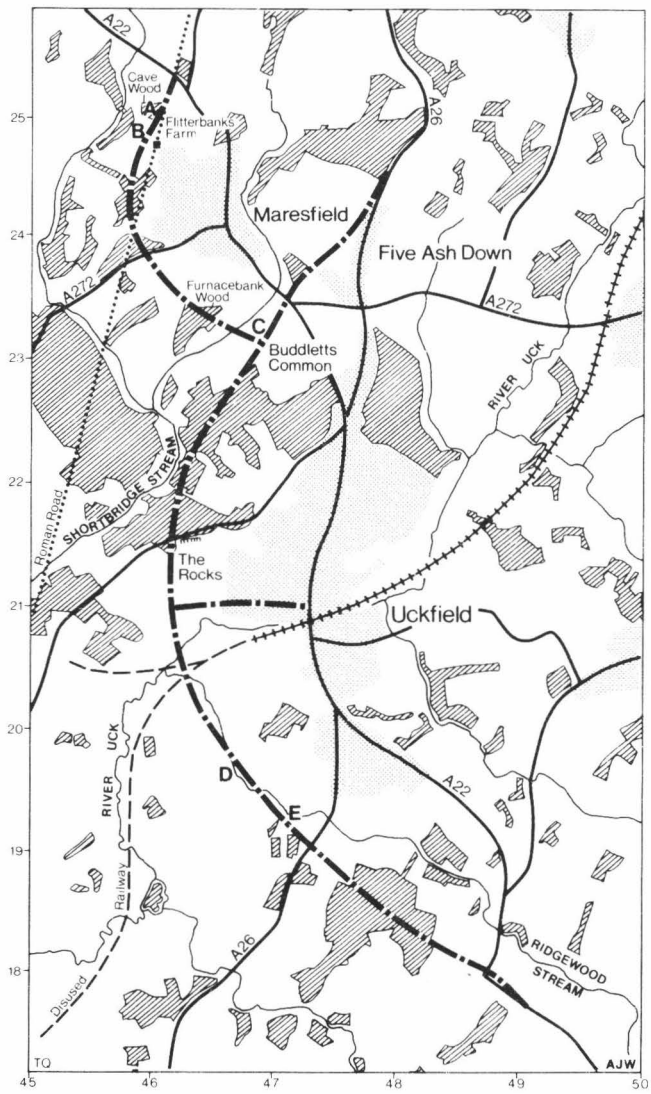

Fig.6. Archaeological finds along the line of the proposed Maresfield and Uckfield bypasses. (Areas of woodland are shown hatched, built-up areas stippled).

appearance of having been diverted and the spinney floor was irregular. No signs of iron working were found, and it is suggested that a water mill, perhaps a fulling mill, might once have existed here.

The route now begins to swing to the east, leaving Ridgewood Stream to its north, and at TQ 471 192 (Fig. 6, E) it crosses the northern end of a small wooded quarry where broken bricks and a deep layer of burnt clay indicate the site of a former brickworks. Crossing the A26 Uckfield to Lewes road the route passes through a large block of woodland which appeared to be archaeologically featureless save for a single sherd of medieval pottery picked up at TQ 478 185. The present A22 road was reached at Iron Peartree (TQ 488 180).

We would recommend, that if possible, the cave be preserved, and that construction work on the field immediately south of Cave Wood be watched. The finds will be deposited with the Sussex Archaeological Society.

Acknowledgements

We gratefully acknowledge the help of the following: Miss L. Funnell for her map research and, with Mr. R. Lee, the arrangement of the walks; Mr. A. Streeten for his discussion of the pottery; Mrs. M. Tebbutt for typing and

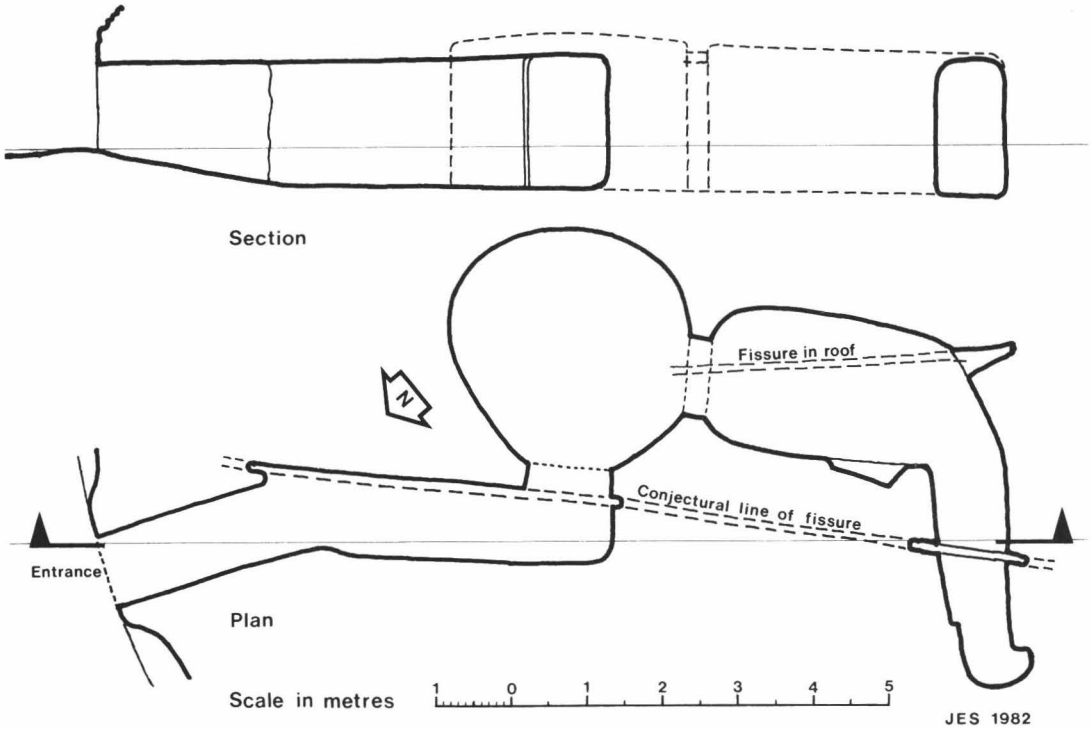

Fig.7. Plan and section of the cave in Cave Wood, Maresfield.

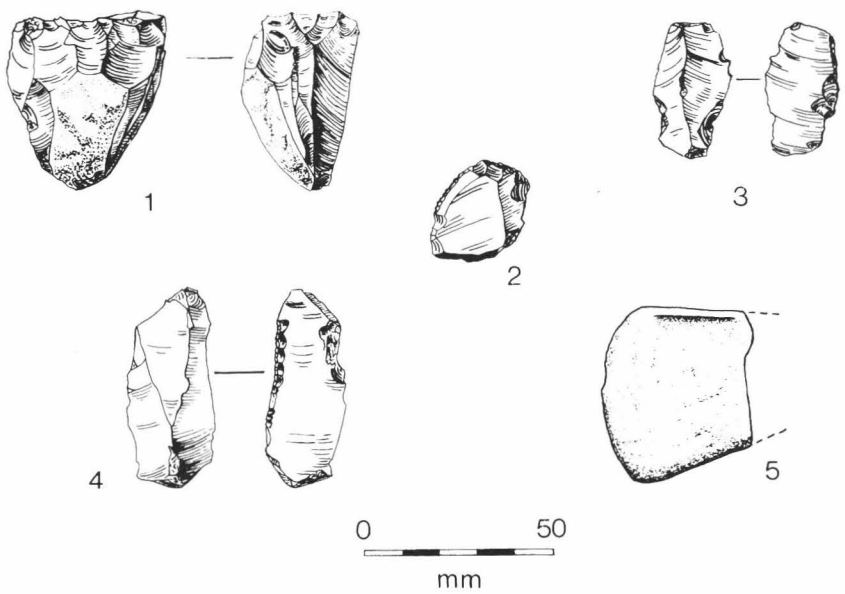

Fig.8. Prehistoric artefacts found at site B, to the west of Flitterbanks Farm.

drawing of finds; Mr. D. Cornwell, owner of the cave, and the many farmers and others who gave permission for access to their lands; East Sussex County Council for arranging the survey of the cave and supplying maps of the road route.

C. F. Tebbutt and A. G. Woodcock

Appendix 1 (see Fig. 8) Prehistoric implements by A. G. Woodcock

22 worked fragments of flint came from this area. All are unpatinated, or only very slightly patinated. The collection includes a prismatic core (Fig. 8, 1) from which a number of blade-like flakes have been removed. The remaining artifacts are flakes, eight showing signs of deliberate retouch as opposed to the damage through use found on all examples. Six of the implements are convex scrapers (e.g. Fig. 8, 2), the retouch extending round a conveniently curved portion of the flake's perimeter. One (Fig. 8, 3) may have been intended as an arrowhead but broken before completion. Another (Fig. 8, 4) is a thick bladelike flake with retouch along one edge; this piece shows evidence for two phases of working. There is nothing to suggest that the flints are of the same age, and they could well belong to a range of dates from the Mesolithic to the Bronze Age.

The most important find made during the course of the survey was the expanded cutting edge of a broken, thin-butted or Type B, bronze axe (Fig. 8, 5) of the Migdale-Marnock metalworking tradition (Britton 1963; Coles 1968–69). Although the surface of the axe is somewhat eroded, a very slight flange can be traced along one edge. This is no doubt the result of the final finishing process of grinding, forging and hammering. It is interesting to note how many examples of similar types of axe have been found in a deliberately broken condition (Coles 1968-69, 33) and may therefore represent votive offerings. Although no thin-butted axes have ever been found in a grave with a beaker, they do belong to this period and probably date from around 1800 B.C. It is therefore not inconceivable that this axe might be contemporary with some of the flintwork previously described. Grinsell (1931) lists nine flat axes from Sussex: Burgess Hill, Burwash, Lewes, Ore, Pevensey (?), Seddlescombe, Selsey, South Heighton and Willingdon Hill (Whitley 1890), and a further example is known from Shepherdsfield (Green 1976).

Appendix 2 Post-Roman pottery, by Anthony D. F. Streeten

Several different periods are represented, each by a few fragments. One possible grass-marked sherd is quite different from the Middle Saxon pottery found at Millbrook, Maresfield (Streeten in Tebbutt 1982) but it may indicate a Saxon presence.

Thirteenth/fourteenth-century wares comprise both coarse and finer oxidized sand tempered fabrics similar to those found at Upper Parrock, Hartfield (Streeten in Freke 1979a, 117). Thin section analysis has not been undertaken, but the vessels are more likely to have come from the Earlswood kiln in Surrey than from the somewhat nearer production centre at Streat, East Sussex, which has been investigated recently by Mr. C. Ainsworth (Pers. comm.).

Later wares include both fine sandy and hard-fired earthenwares attributed to the late fifteenth/early sixteenth century. The fabrics are different from those produced at the Lower Parrock kiln, Hartfield (Streeten in Freke 1979b, 114).

Post-medieval wares comprise seventeenth-century yellow/green glazed Surrey white ware, together with eighteenth-century and more recent stonewares. Notes about the pottery have been deposited with the finds.

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[1]E.S.R.O. 420/26/1/1.

[2]I. D. Margary, *Roman Ways in the Weald* (1965), 147.

Sussex Lithics in the Hewlett and Ami Collections in Canada

The Hewlett and Ami Collections are two substantial collections of European prehistoric flintwork and stone tools purchased by the Royal Ontario Museum (Hewlett Collection purchased 1927) and the National Museum (Ami Collection purchased 1924). The bulk of the Sussex lithics came from Beachy Head, so were examined by the author in December 1980 as part of the Bullock Down Project. The Beachy Head artifacts have been described in the Bullock Down Monograph (Drewett 1982). This note describes the remaining lithic material from Sussex. The number in brackets after the site name is the Museum Record Number. No grid references are given for the sites as the exact locations of the find spots are uncertain. The site names are as written on the artifacts.

Royal Ontario Museum

1. *Willingdon Hill* (Q 169118 and Q 169119)
   - 1 broken polished flint axe
   - 1 polished flint axe reworked as a flake axe
   - 8 flaked axes
   - 1 short end scraper
   - 1 fine greywacke polished axe-like tool with blunted 'cutting' edge. Sussex petrological survey No. 180. (Fig. 9 No. 2)
   - 2 pieces of rough workshop waste
   - 1 retouched flake
   - 1 flaked pick

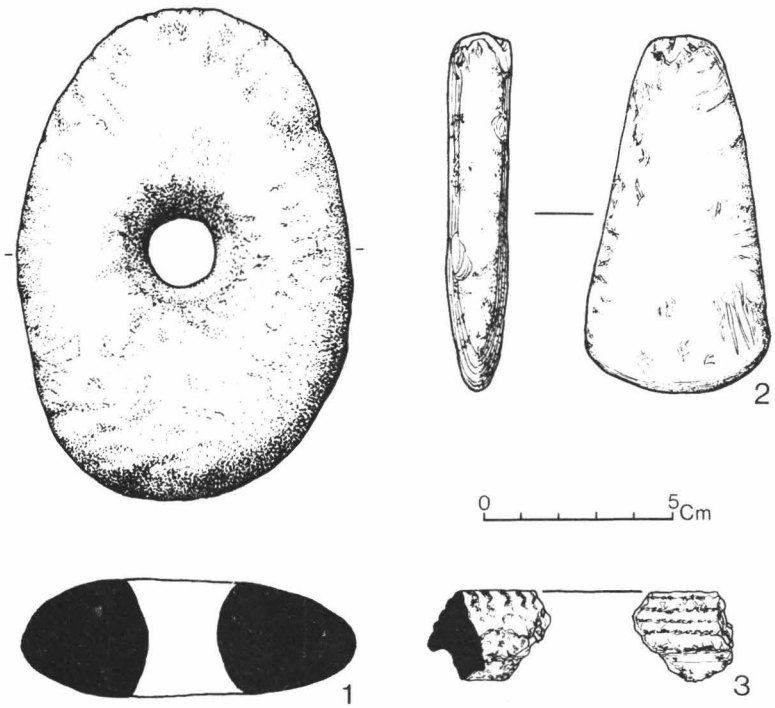

Fig.9. No.1 — shaft hole axe; no.2 — greywacke polished axe-like tool; no.3 — early third millennium sherd from Long Down.

2. *Exceat* (Q 169118)
   2 broken polished flint axes
   3 axes reflaked from polished flint axes
   2 flaked axes
   1 piece of rough workshop waste
   1 retouched flake
   1 sandstone spindle whorl (probably Medieval).

3. *Crowlink* (Q 169118)
   5 polished flint axe fragements
   1 side scraper
   1 side and end scraper
   1 fabricator
   1 piece of rough workshop waste
   1 retouched flake

4. *Litlington* (Q 169118)
   1 discoidal flint knife
   6 flaked axes
   1 flake from a polished flint axe
   1 serrated blade
   3 retouched flakes

5. *Pig Dean* (Q 169118)
   3 polished flint axe fragments
   3 flaked axes
   3 flaked picks
   5 serrated flakes
   1 long end scraper
   1 side scraper
   3 borers
   5 notched flakes
   11 retouched flakes

6. *Seaford* (Q 169119 and Q 169124)
   1 reflaked polished flint axe
   1 flaked axe with transverse cutting edge
   1 serrated blade
   1 retouched flake

7. *East Dean* (Q 169124)
   14 flaked axes
   1 retouched polished flint axe
   1 broken retouched polished flint axe
   1 flaked axe with transverse cutting edge
   1 serrated flake
   1 short end scraper
   1 flaked knife
   3 retouched flakes

8. *West Dean* (Q 169124)
   1 broken polished flint axe

9. *Cissbury* (Q 169124)
   1 piece of rough workshop waste
   23 flint flakes

10. *Plumpton Plain* (Q 169124)
    2 flint flakes

11. *Park Brow* (Q 169124)
    2 flint flakes

12. *Steep Down* (Q 169124)
    1 flint flake

13. *West Chiltington Common* (Q 169124)
    1 flint flake

14. *Wick Farm, Eastbourne* (Q 169124)
    1 serrated flake

15. *Bignor Hill* (Q 169124)
    1 flint flake

16. *Jevington* (Q 169124)
    1 reflaked polished flint axe
    43 flaked axes

17. *Newhaven* (Q 169124)
    1 reflaked polished flint axe
    1 polished flint axe
    1 shaft hole tool. Petrological group XIII. Sussex petrological survey no. 178. (Fig. 9 No. 1)

18. *Birling Gap* (Q 169124 and Q 169126)
    1 butt end of a polished flint axe
    1 small flaked axe
    1 borer

10. *Birling Farm*
    1 flaked axe

20. *Alfriston* (Q 169124)
    3 flaked axes
    1 serrated flake

21. *Peak Dean* (Q 169124)
    1 retouched flake

National Museum of Canada, Ottawa (Ami Collection, Case 29)

1. *Bishopstone* (407)
   1 reflaked polished flint axe

2. *Crowlink* (381)
   1 short end scraper

3. *Near Lewes* (381)
   1 broken flaked axe

4. *South Downs* (405)
   1 small flaked pick made from edge of polished flint axe

Few of these artifacts can be closely dated. The flaked axes with transverse cutting edges from Seaford and East Dean are probably pre-4300 B.C. in date. The polished flint and stone axes are likely to date from *c.* 4300–3000 B.C., while the shaft-hole tool from Newhaven is probably post-3000 B.C. in date. The remaining artifacts could be of practicaly any date from *c.* 4300–1400 B.C.

Acknowledgements.
Fig. 9 was drawn by Lys Drewett. Our visit to Canada was partly supported by a grant from the British Academy Small Grants Research Fund in the Humanities. Considerable help was given during our stay in Canada by Dr. A. D. Tushingham, Dr. J. Hayes Dr. T. C. Young and Mr. W. Pratt, all of the Royal Ontario Museum, and Dr. D. Keenlyside, Mr. R. Pammett and Mrs. J. Langdon of the National Museum of Man, Ottawa. Dr. A. Woodcock arranged for the thin sectioning of the two stone implements.

Peter Drewett

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An Early 3rd Millenium Sherd from the Long Down Flint Mines, West Sussex

During 1981, Miss Loraine Knowles, formerly Assistant Curator of Chichester Museum, drew my attention to a sherd brought into the Museum by Mrs. Jones of Emsworth, Hampshire. It was found on the ploughed eastern fringe of the flint mines at Long Down (SU 931 092). The sherd (Fig. 9 No. 3) is made of a sandy clay matrix with large pieces of calcined flint filler. Twisted cord impressions are visible on the outer and inner surfaces of the rim. The sherd is from a round-based bowl belonging to the Peterborough tradition with a probable date of *c.* 2500–3000 B.C. It is only the tenth spot find of such pottery in Sussex. Although the sherd almost certainly post-dates the original excavation of the flint mines it may well relate to secondary use of flint waste around the mine shafts. The sherd has been retained by the finder.

Peter Drewett

A Bronze Age Cremation Urn from East Harting

Sherds from this bucket urn with finger-tipped cordon (Fig. 10) were found by Mr. John Hosking in September 1982 whilst ploughing 200 metres west of East Harting Farm.[1] When the site was examined by the writer the vessel was found to have been disturbed and scattered by ploughing over a number of years but sufficient survived *in situ* to show that the urn, containing a cremation, had been inverted in a pit which survived about 40 cm in diameter and up to a depth of about 15 cm in the bedrock, known locally as 'clunch'. No trace of a barrow was seen at the findspot which lies on the south end of a small hillock.

The vessel is heavily tempered with calcined flint filler and sufficient survived to show that it conforms to Ellison's Middle Bronze Age type 10.[2] It has been donated to Chichester District Museum.

F. G. Aldsworth

[1]NGR SU 7948 1947.

[2]Ellison A. 1978 The Bronze Age in Sussex in Drewett P. L. *Archaeology in Sussex to AD 1500* pp. 30–7; Ellison A 1980. The Bronze Age *Collections* 118 pp. 31–41.

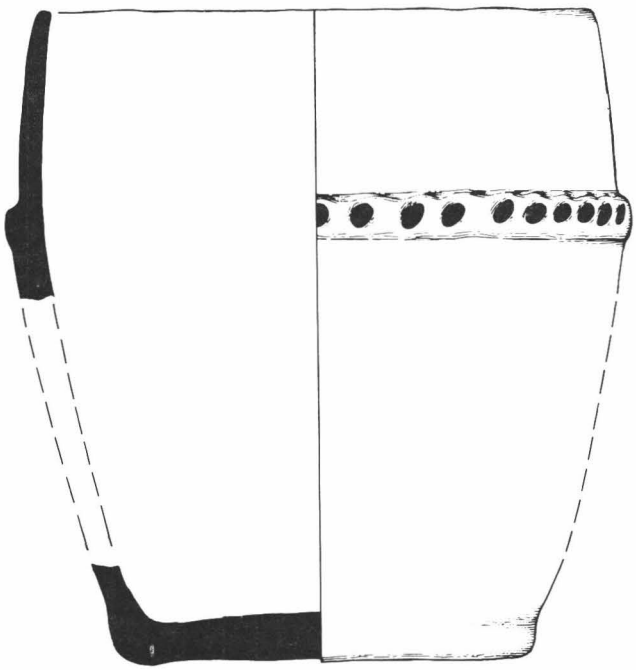

Fig.10. A Bronze Age cremation urn from East Harting (¼).

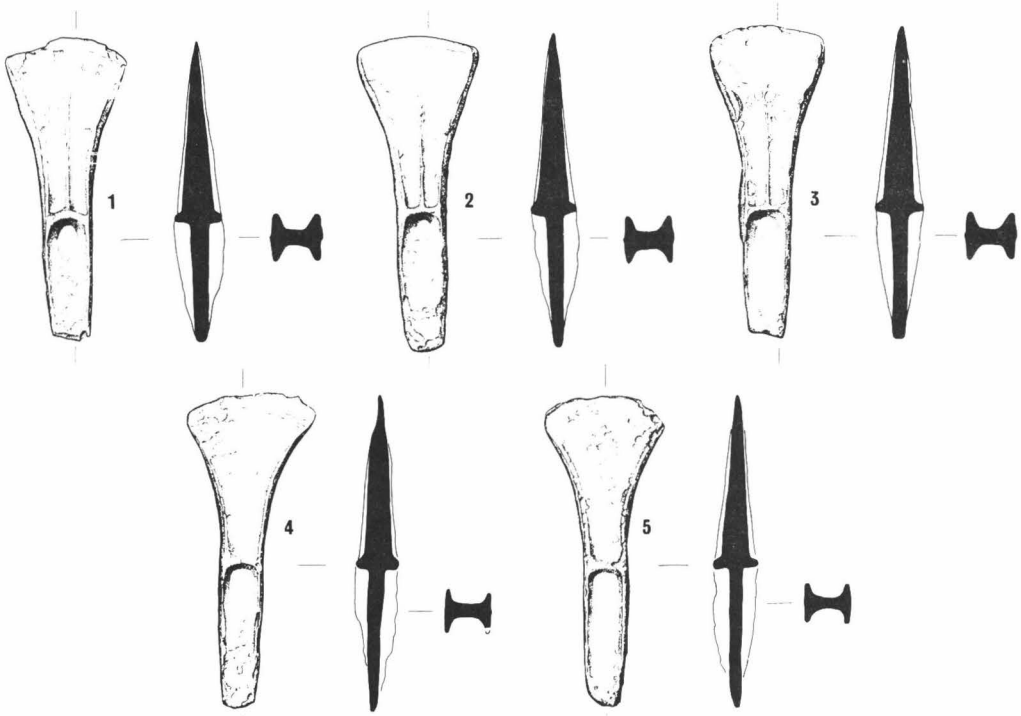

Fig.11. A Bronze Age hoard from Yapton (½).

Plate 1. A Bronze Age hoard from Yapton.

A Bronze Age hoard and settlement at Yapton

A hoard of five palstaves (Fig. 11 and Plate 1) was found in May 1982 on the surface of a ploughed field to the south-west of Yapton village,[1] by Mr. P. Day, of Bognor Regis, immediately after sub-soiling. All five items have the appearance of being unused and in the process of being finished by the removal of the casting flanges and the hammering out of the cutting edges. Three of the axes (1–3) have a mid-rib and were almost certainly produced from the same mould, whilst the other two (4 and 5) are plain but may also be from one mould.

(1) *Palstave with mid-rib*, 16 cm long and 6.3 cm wide across the expanded cutting edge. Weight 425 g.

(2) *Palstave with mid-rib*, 16.7 cm long and 6.3 cm wide across the expanded cutting edge. Weight 445 g. The bronze used in the manufacture of this axe has a high tin content.

(3) *Palstave with mid-rib*, 16.5 cm long and 6.3 cm wide across the expanded cutting edge. Weight 430 g.

(4) *Palstave*, 16.8 cm long and 6.8 cm wide across the expanded cutting edge. Indentations near the cutting edge indicate that the blade had been partially hammered out to produce a fine cutting edge, prior to deposition. Weight 430 g.

(5) *Palstave*, 16.6 cm long and 6.3 cm wide across the expanded cutting edge. Weight 405 g.

After the crop had been removed a small excavation was undertaken in October 1982 on the precise site of the find, as identified by Mr. Day, and this revealed that the hoard had originally been placed in a small pit about 20 cm in diameter and this survived to a depth of a little over 10 cm in the underlying clayey-brickearth. The pit contained fragments of bronze and green bronze mould being all that survived of the hoard *in situ*. A sub-soil plough mark was traced east-west through the pit and another, at right angles, had just missed the pit to the east. A scatter of flintwork, including roughouts, reworked flakes, and wasters, found in the excavation and in the surrounding area, together with one sherd of coarse-gritted pottery and burnt flints, probably indicate a Bronze Age occupation site.

A scatter of Romano-British pottery and coins, including a silver of Honorius (A.D. 393–423), to the immediate north-east, indicates Romano-British occupation in the same area and there are traces of enclosures visible as cropmarks on air photographs Meridian 1963 108087–88.

A bronze lump, possibly a piece of 'cake' from a founder's hoard has also been found by Mr. Day about ¾ of a mile to the south-east.[2]

F. G. Aldsworth

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[1]National Grid Reference SU 9668 0238.

[2]NGR SU 987 016.

A Late Bronze Age Founder's hoard from Madehurst

A bronze hoard was found in April 1979 on Rewell Hill, Madehurst, by Mr. J. Bolton, of Scotland House, Binsted, as a result of using a metal detector, and was taken to Chichester District Museum for identification. The precise find site was indicated to me by the finder under a clump of yew trees about 45 m north of a prominent beech tree on the parish boundary and about 50 m west of a prominent corner of the earthworks in Dalesdown Wood.[1] An attempt to purchase the hoard by the museum was unsuccessful.

The hoard re-appeared in a list of antiquities for sale by Fox and Co., of 30 Princes Street, Yeovil, Somerset, in the magazine 'Popular Archaeology' in January 1982 and has kindly been inspected for me by Dr. Ian Burrow, field archaeologist for Somerset County Council.

The material seen both in 1979 and 1982 comprises the butt end of a late palstave 6.7 cm long, the cutting edge of another, and ten lumps of melted scrap.

F. G. Aldsworth

[1]Grid reference SU 9952 0972

A Circular Enclosure within Cissbury Ring

Immediately adjoining the west side of the Neolithic flint mines within the Iron Age hillfort is an earthwork which appears to have escaped the notice of H. S. and C. Toms, who surveyed the site in the 1920s (Thoms H. S. and C 1926 The Cissbury Earthworks *Collections* 67 pp.55–83, and E. C. Curwen 1954 *The Archaeology of Sussex* pp.106–12).

The feature, centred at TQ 1374 0784, comprises a circular ditch, 21 m in overall diameter and about 3 m wide, surrounded by traces of a bank which is most noticeable on the east side and on the west the spoilheap of a flint mine appears to impinge on, and may post-date, the earthwork.

There is no evidence to indicate that the feature is of recent origin and in form it resembles *either* one of the more unusual forms of Bronze Age burial mound—a disc or possibly a ring barrow—*or* a small Neolithic henge monument of Class I with a single entrance—*or* a hut platform.

F. G. Aldsworth

An Armorican Socketed Axe from Hollingbury Hill

The purpose of this note is to publish (strictly, to republish) an Amorican socketed axe from Sussex, and to draw attention to the significance of its findspot, Hollingbury Hill.[1]

The axe in question is in the Ashmolean Museum, Oxford (Accession No. 1927.2660) and formed part of Sir John Evans' collection of bronze implements. Evans' original label reads:

Hollingbury
Hill
Brighton
Roots Coll. 1981

This axe was mentioned by Dixon in *Sussex Archaeological Collections* for 1849, when it was said to be in the collection of M. F. Tupper, Esq. (Dixon 1849, 268 and Fig. 7).

Description

A looped socketed axe with a long, parallel-sided body that is rectangular in cross-section (Fig. 12). The cutting edge of the blade is set at right angles to the long axis of the socket mouth. The top of the mouth is unevenly finished. The casting seams are clearly visible on the sides of the body. The

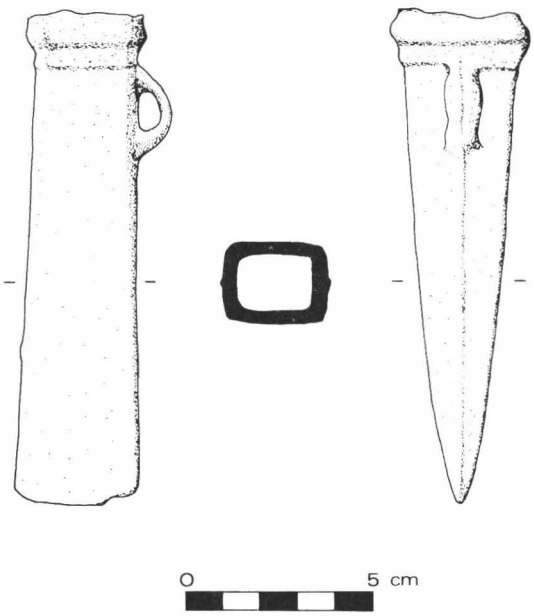

Fig. 12. An Armorican socketed axe from Hollingbury Hill.

blade is blunt. Traces of a white mineral substance adhere to the inside of the socket; these may represent the remains of the clay casting core. The axe has a patina which is mainly light green.

Length: 130 mm. Width at Blade edge: 32 mm. Dimensions of socket: 37 mm x 32 mm. Weight: 320 g.

Discussion

This implement is an example of a Late Bronze Age 'Armorican' or 'Breton' axe. The type has been fully discussed by Briard (1965, 247–71). The Hollingbury example appears to be a member of Briard's 'type moyen ou type de Tréhou', the commonest of the varieties of Armorican axe (ibid., 258–9). Armorican axes were produced in extremely large numbers in Brittany and Normandy, where literally thousands are known from hoards. They are also found widely, but in relatively small numbers, across much of north-western Europe. A number are known from the British Isles, particularly from the south coast of England (Dunning 1959). One of these axes was found only a few kilometres from Hollingbury, 'near the church' in Brighton (Dixon 1849, 268 and Fig. 12; Evans 1881, 115).

The fact that these axes are of highly standardized form and size, are frequently found unsharpened and sometimes retain their clay casting-core, has led to the suggestion that they were not intended for use, but formed some kind of primitive currency units (Briard 1965, 270).

Armorican axes date to the final phase of the Bronze Age: in British terms to Burgess' Llyn Fawr phase (Burgess 1979, 276) or O'Connor's LBA 4 (O'Connor 1980, 235–6), in absolute terms roughly the seventh century B.C.

Precise details of the findspot of this axe do not seem to have been recorded, but it seems reasonable to assume that it was found either within, or in the immediate vicinity of, Hollingbury Camp, the hillfort which crowns Hollingbury Hill (Curwen 1932). Hollingbury is of course well-known for its early timbered rampart (Cunliffe 1974, 229–31) and the site has produced pottery which is perhaps to be dated to the seventh or sixth centuries B.C. (cf. Barrett 1980, 311; Champion 1980, 46).

The Hollingbury axe is therefore of interest as it can probably be added to the similar axes from All Cannings Cross, (Piggott 1973, 407), Danebury (Cunliffe et al. 1979, 239), Hengistbury Head (Cunliffe 1978,29) and Mount Batten, Plymouth (Clarke 1971, 141) as a further example of an Armorican axe from a settlement context dated to the latest Bronze Age or earliest Iron Age, and because it demonstrates the involvement of Hollingbury in a cross-channel trade with Armorica at this period.

Roger Thomas

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[1]I am grateful to Dr. Andrew Sherratt of the Ashmolean Museum for permission to publish this item, and for his help with this note.

Miss P. A. M. Keef's excavations at Harting Beacon and nearby sites 1948–52

Following Miss Keef's death in 1978, a considerable number of documents (typescripts, letters, photographs, drawings, etc.) dealing with her archaeological work came into the possession of Mr. John Budden of Manor Farm, Chalton, Hampshire. He kindly allowed the author access to those documents relating to Miss Keef's five seasons' of

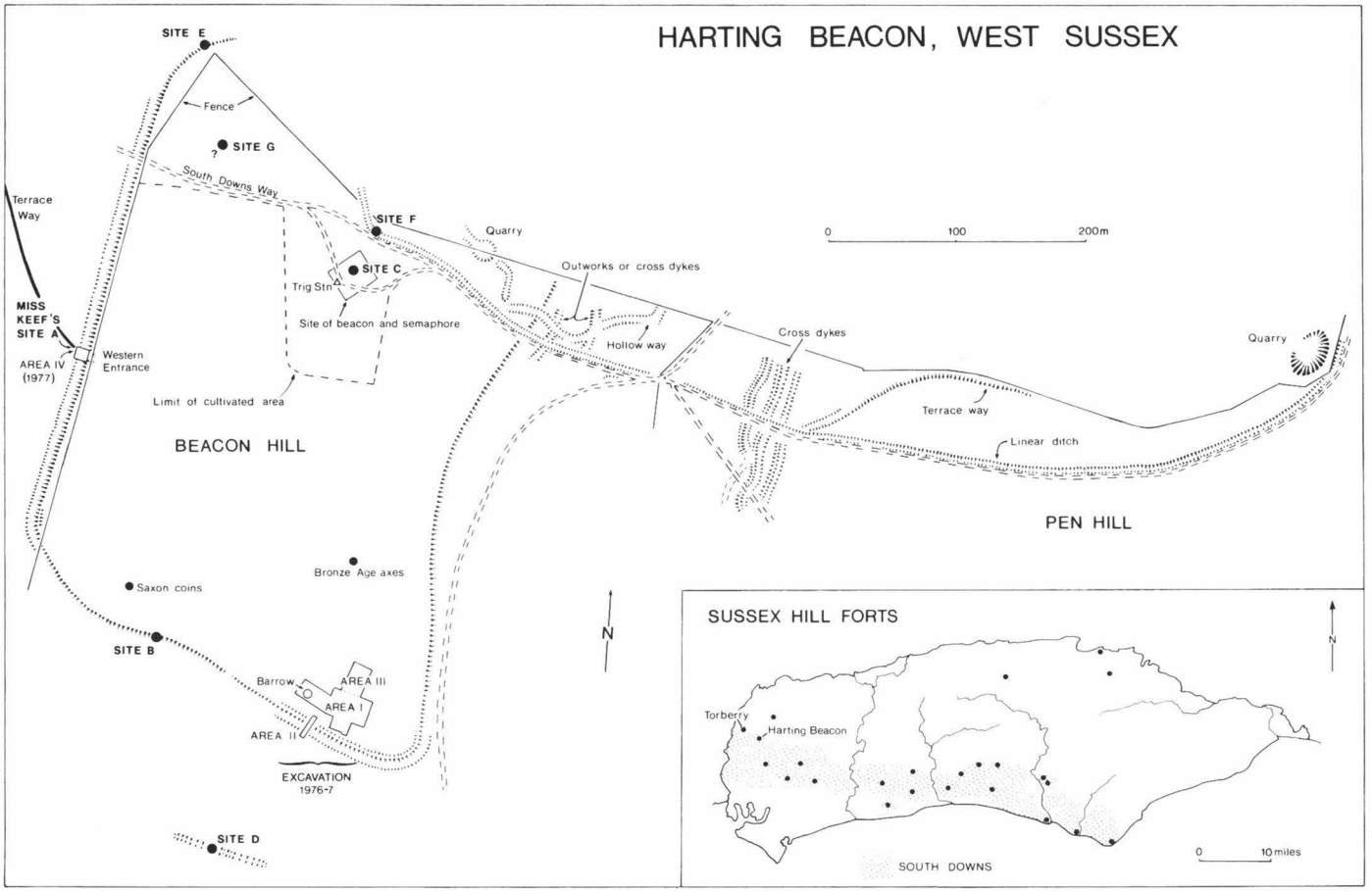

Fig. 13. Plan of Harting Beacon hill fort, showing Miss Keef's excavations 1948–52, (sites A–G), and the 1976/7 excavations (from survey by F. G. Aldsworth).

excavation at Harting Beacon and sites nearby. No reports on these excavations have ever been published, apart from a note on two gold penannular rings from Harting Beacon in the *Antiquaries Journal* (Keef 1953) It was therefore considered worthwhile to summarise the results of her investigations, and to relate them to the later excavations at Harting Beacon (Bedwin 1977 and 1979). Unfortunately, all the finds, apart from the two gold rings in the British Museum, are missing.

HARTING BEACON

A rough typescript exists, including a pottery report by Sheppard Frere, plus plans and sections. There is in Barbican House an alternative source, a typescript written entirely by Professor Frere, which he describes as a 'resumé' of the excavations, and from which the excavator herself emerges with little credit. Seven sites were investigated, though in some cases the word 'site' covers a number of widely-spaced trenches. These sites will be considered in alphabetical order (Fig. 13).

Site A

This includes not only the western entrance to the hill fort, but also a number of sections through the sloping terrace way below it. Miss Keef's drawn sections through the ditch terminals at the entrance match those already published (Bedwin 1979, Fig. 4). The two gold penannular rings (Keef 1953) are shown to have been deposited with early Iron Age pottery (Bedwin 1979, Fig. 6; lower). The range of species represented by the animal bones was the same as those found in 1977, with the addition of roe deer. Miss Keef's original claim (1953) of a late Iron Age or Roman re-cut in the ditch at the entrance is not pursued; indeed it is implicitly refuted by Frere's pottery report.

The sections across the terrace way show that, in its lower stretches, it is rather wider than is apparent from the surface.

Site B

A single section was cut through the southern rampart. The findings were similar to those of 1976 (Bedwin 1977). Substantial post holes were located along the front edge of the rampart, *c.* 2 m apart.

Site C

A number of narrow trenches were dug to investigate the small rectangular earthwork associated with the telegraph of Napoleonic date on the summit of Beacon Hill. A small, shallow ditch was unexpectedly found running north-west/south-east, diagonally across the centre of the earthwork. The ditch silts do not appear to have contained any dateable artefacts, but the ditch was cut by an oval pit, 1 m x 0.6 m, containing early Iron Age pottery and part of a Kimmeridge shale disc (dimensions unrecorded).

Site D

This was the examination of a short stretch (*c.* 60 m) of interrupted bank and ditch, *c.* 100 m due south of the hill fort's southern defences. In surface appearance at least, this earthwork has the characteristics of a causewayed enclosure, and Curwen apparently thought that it could be Neolithic. Excavations here were on a very small scale and did not succeed in dating the earthwork. This is particularly unfortunate as it is now ploughed flat.

Site E

This consisted of a single narrow section through the defences near their extreme north-west corner, plus an area *c.* 5 m square immediately behind the rampart.

The section showed the rampart as having largely eroded away, and the ditch was broad but shallow, *c.* 2.5 m across at the top and 0.7 m deep.

The area behind the rampart was described by the excavator as a 'hut-shelter', though the evidence presented in the plan, i.e. two post holes plus some 'flint cobbling', is quite inadequate to support this. Some early Iron Age pottery was found, plus clusters of flint flakes, calcined flint and a few quern fragments.

Site F

This was a narrow section across the enigmatic linear ditch which begins inside the hill fort on Beacon Hill, runs down through its feeble eastern defences, then cuts through three cross dykes on the ridge below, before running up over Pen Hill to the east. The drawn section shows a shallow and irregular ditch with an early Iron Age sherd in what is called the 'rapid silt'. There is some mention also of an eastern entrance to the hill fort but the present surface indications do not appear to the present writer to substantiate this claim.

Site G

These were four shallow depressions within the unploughed north-west corner of the hill fort. There is, unfortunately, no precise location given for these, nor any indication of how widely separated they were from each other. The plan of one only has survived (the 'best preserved one'); two large post holes are shown, plus a number of others which do not appear convincing to the present author. Finds included early Iron Age pottery and much flint-working debris.

PEN HILL

Miss Keef mentions a Romano-British pottery scatter on Pen Hill; this has also been reported by Martin Bell in his survey of Elsted parish (Bell and Tatton-Brown 1975).

BRAMSHOTT BOTTOM

This is a small, almost square earthwork, *c.* 40 m across, situated on level ground in the valley immediately to the west of Harting Beacon (just off the area covered in Fig. 13). A section through the earthwork showed that it consists of a small continuous ditch and bank, with the ditch internal to the bank. It is thus similar to a number of 'valley bottom entrenchments' first recognised by Toms (1927). Miss Keef claims to have found Romano-British pottery here (albeit in small amounts), though no further details are given and there is no information about the status or function of the site. Note that where dating evidence has been forthcoming, other valley bottom enclosures in Sussex seem more likely to be medieval or post-medieval.

CONCLUSIONS

The area inside Harting Beacon hill fort and immediately to its south was first ploughed in 1944. Miss Keef reports a number of saddle querns turned up by the first few years' ploughing. She also mentions a number of crop-marks within the hill fort which appeared in the first year or two after 1944, but have not been seen since.

The results of Miss Keef's excavations at Harting Beacon are in broad chronological agreement with the author's own findings in 1976 and 1977. However, in addition to the limited focus of occupation then identified in the south-east corner of the hill fort, Miss Keef's work suggests another (perhaps larger) focus towards the north-west corner, in an area which remains unploughed. The evidence for occupation in this area is to be seen in the finds of early Iron Age pottery and quernstones reported by Miss Keef,

although her claims that these objects were found in the context of 'hut shelters' should be treated with caution.

The illustrations, typescript and notes from which this short article has been abstracted, have been deposited in Chichester Museum, with Mr John Budden's generous permision.

Owen Bedwin

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A possible prehistoric burial from Houndean, Lewes

In October 1981 a skeleton was uncovered by workmen, digging the foundations of a garage at 7 Houndean Rise, Lewes (TQ 4011 0982). The discoveries were reported to the Police and to Miss F. Marsden, who brought the site to the notice of the writer.

The skeleton was apparently lying in a crouched position, facing either the south-east or north-west. Although the burial seems to have lain within a slight scoop in the chalk, it was impossible to tell whether this was an artificial feature, since the whole area had been severely disturbed by both tree roots and agricultural acitivity. No other features were noted in the foundation trench, though twelve flint flakes, a scraper, and an abraded sherd of undiagnostic, flint-gritted pottery were recovered from the section. However, in view of the degree of disturbance, there is no way of knowing whether any of this material had been associated with the burial. None of the finds are closely dateable.

The bones[1] have broken post-mortem, much of the damage doubtless occurring during the course of their discovery, for the skeleton was buried whilst still articulated. The surface of the bones is often eroded and there are traces of rootlet erosion over most of the surfaces. The internal structure of the bone is well preserved.

It is just possible that the bone fragments represent parts of two skeletons. The posteranial remains almost certainly belong to one individual, a mature adult male of rather slender build and moderate stature. The skull fragments are not incompatible with those of a male, but equally could represent an adult female. The larger clavicle bone fragment is small and most likely to be female. Nevertheless, the overall impression is of a gracile male individual, perhaps aged 35–45. There are no signs of any pathological condition nor of any history of injury, undue stress, or nutritional imbalance; whilst the indications of mild degenerative osteoarthritis on the joint surfaces, and the flattening of the femoral head and acetabulum, suggest advancing years rather than disabling arthritis.

Whilst the crouched nature of the burial might be significant, in the absence of any positive evidence, its precise date must remain open to speculation. The finds have been deposited in Barbican House Museum, Lewes, together with a detailed report on the skeletal remains.

A. G. Woodcock

[1] I am indebted to Miss Theya Molleson of the Sub-Department of Anthropology, British Museum (Natural History) for her analysis of the bone fragments.

A Sussex Celtic Head re-discovered

In 1980 the owner of Keysford House, Horsted Keynes (TQ 379 266) called at Anne of Cleves Museum, Lewes, to enquire whether anything was known of a carved stone head in his rockery. As a result Mr. G. Burton visited the house and the authors were subsequently informed. Through the kindness of the owners, Mr. and Mrs. P. Daniel, a visit was made and photographs taken (Plate 2). The carving, which appeared to be a typical Celtic head, was found to be part of a large block of sandstone some 46 cm. high by 56 cm. wide, probably at one time part of a building. It is now set in the wall of a sunken rock garden. The owners knew nothing of its history, but referred us to Mrs. B. Hardy of 'Otye' nearby. She remembered the head in its present position early this century, when the house belonged to her mother-in-law Mrs. Anderson, but had no knowledge of its previous history.

Subsequent research revealed that the head was illustrated by Dr. Anne Ross[1] with a brief description and a footnote stating that its present location was unknown. It was also found that in 1924 a note and illustration by J. E. Couchman

Plate 2. Celtic head at Horsted Keynes (scale is 6 in long).

had been published in the *Antiquaries Journal*,[2] and another with identical wording in the *Sussex Archaeological Collections*.[3] Couchman's photograph shows the head before being built into the rockery wall, and the Ross illustration is taken from this. In the course of his article Couchman says 'It belongs to Mrs. Anderson, late of Horsted Keynes' and later states that it was found in a peat bog, about eleven feet below the surface, near Piltdown.

As we felt somewhat sceptical about the alleged find spot, enquiries were made among a number of elderly people who had lived all their lives near Piltdown. None had any knowledge of such a find, nor of the existence of a such a bog. The only possibility mentioned was the gravel pit at Sharpsbridge (TQ 440 209). Mr. E. Shephard Thorn of the Institute of Geological Sciences (S. E. England Unit) was consulted as to the likelihood of a peat bog in the area. He reported as follows:-

> 'Our records have not yielded any direct written or map evidence for the presence of a peat bog near Piltdown. Downstream in the Ouse valley extensive peat deposits are known from the Lewes Brooks area, and comparable developments occur in the Arun valley at Amberley Wild Brooks. It is hence possible that peat may be locally present in the alluvial flood plain of the tributary of the Ouse that runs through Shortbridge and Batt's Bridge. The six-inch Ordnance Survey map indicates boggy ground in the flood plain of this stream east of Park Wood (TQ 457 228) which might suggest the presence of some peat there.'

The sandstone itself seemed likely to provide a clue to its origin, and the owners agreed to a small sample being taken from the base of the block. Through the good offices of Mr. L. Hannah of Philpots Stone Quarries, West Hoathly, this was submitted to Professor P. Allen F.R.S. of the Dept. of Geology, University of Reading, who reported as follows:-

> 'Statuary stone: sample A is a piece of Forest stone from the Ashdown Beds formation. As such it undoubtedly came from the Weald, most probably from the Ashdown Forest area where there are extensive outcrops of closely matching rock.'

Conclusion

Despite the uncertainty as to where the Celtic head was found, there can be little doubt as to the neighbourhood of its origin. At the time of its first discovery almost nothing of contemporary date was known from the Ashdown Forest area of the High Weald. Since then the discovery and excavation of Garden Hill[4] has added an Iron Age/Roman dimension to the area.

Acknowledgments

Thanks are due to the following:- Mr. and Mrs. Daniel, owners of the head, for giving facilities for the investigation; Prof. Allen and Mr. Shephard Thorn for specialist reports; Mr. Hannah for the help and advice of a practical stonemason; Mr. Burton and Mrs. Kenward for advising us of the re-discovery.

E. W. Holden and C. F. Tebbutt

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[1] A. Ross, *Pagan Celtic Britain*, (London, 1967), 71 and 73 Fig. 37.

[2] J. E. Couchman, 'Ancient carving from Sussex', *Antiquaries Journ.* **4** (1924), 19–21.

[3] J. E. Couchman, 'Ancient carving from Sussex', *Sussex Archaeol. Collect.* **65** (1924), 206–9.

[4] J. H. Money, 'The Iron Age hill-fort and Romano-British ironworking settlement at Garden Hill, Sussex: interim report on excavations 1968–76', *Britannia* **8** (1977), 339–50. (Final report in preparation)

Bishopstone: Samian Pottery Report

I would like to correct an error which appeared in the report on the samian pottery excavated at Bishopstone (*Sussex Archaeol Collect.* 115, 1977, p. 179). The date of the three bowls in Group iii which were manufactured at Les Martres should have read early second century, not early third.

Joanna Bird

Excavations at Bignor Roman Villa 1975–6

In 1975 the geometric mosaic in the western half of the north corridor (Room 10), originally found by Samuel Lysons in the nineteenth century (Lysons 1815, 1817a,

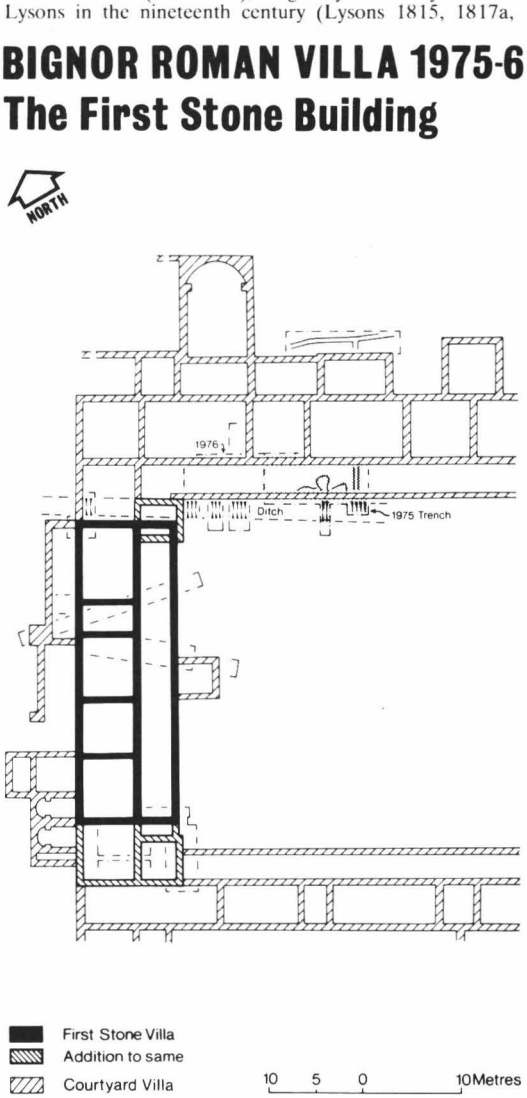

Fig. 14. Based on Frere (1963).

1817b, and 1821 and Dallaway and Cartwright 1832), was re-exposed for permanent display. Since this was to involve mechanical excavation and the relaying of the floor on a concrete base, the opportunity was taken to excavate by hand the levels that would otherwise have been removed by machine. The work was undertaken by local volunteers in October 1975 and April 1976 under the supervision of Mrs. M. Rule, then of Fishbourne Roman Palace, and the writer.

An area of some 100 m^2 was investigated within the boundary walls of the corridor and the opportunity was also taken to section the boundary ditch further west than had previously been seen (Figs. 14, 15 and 18).

The features examined were:

(a). The north and south walls of the north corridor (Walls 1 and 2); the deposits under the floor (Layers 2, 3, 4 and 13); and the inserted stone-lined drain with lead pipe (Feature 5).

(b) The boundary ditch (Feature 6), considered by Frere (1963) to be contemporary with the first phase of the stone building (Period IIa).

(c) An area containing the remains of a small kiln or kilns (Features 1, 2 and 3) and one post-hole (Feature 4) which pre-date the corridor of the courtyard villa.

The North Corridor (Room 10)

When first seen the geometric mosaic pavement had been removed to reveal a mortar bed, about 5 cm. thick (Layer 2), and the external faces of Walls 1 and 2 had been exposed by trenching — a method of exposure initiated on the site by Lysons. After the removal of the mortar bed, up to 0.45m. of greensand, loam, and chalk (Layers 3 and 4) was found to cover an earlier ground level (Layer 13) through which the footing of Walls 1 and 2 had been dug into the underlying natural greensand. The unmortared footings of Wall 2 were much deeper than those of Wall 1 (Figs. 16 and 17) but both were constructed, as were the walls, of, locally available, greensand blocks. Layers 3 and 4 are seen as material introduced, from elsewhere on the site, to bring the ground up to the required floor level.

It seems likely that Wall 1 had been constructed at the same time, but there was no evidence to indicate whether the corridor was an original feature or an addition to the north range, represented by Wall 2.

Cut through Walls 1 and 2 was the drain (Feature 5), comprising a stone-built channel containing a lead pipe, which post-dated the construction of the corridor, but its stratigraphic relationship with the mosaic floor is not known.

No evidence was seen of any structure adjoining the south side of Wall 1 which might indicate the former existence of steps down into a formal courtyard, but the original ground level (Fig. 18 Section G–H Layer 22) was seen to fall away on this side.

The Boundary Ditch (Feature 6)

On the south side of Wall 1 a one metre wide section was excavated across the Period IIa ditch (Feature 6 Fig. 18 E–F). Lysons' back-filled trench was still visible alongside Wall 1 (Layer 8), and below the modern turf and several layers of loam (Layers 6, 7, 9 and 15) an earlier ground level was encountered (Layer 22) through which the ditch had been cut. The ditch was V-shaped, being 1.7 m. wide and 1.0 m. deep, and contained a primary silt of fairly clean loam (Layer 24) followed by several layers of chalky loam (Layers 20 and 23) which had the appearance of being a deliberate fill.

The Kiln(s) (Features 1–3)

Beneath the make-up for the corridor floor (Layers 3 and 4), a layer of fairly clean burnt chalk or lime (Layer 12) was found to seal three features which appear to be the remains of one or more kilns (Figs. 15 and 17). Although Layer 12 and the kiln(s) were mainly confined to the corridor area a small part of Layer 12 was seen to be cut by Wall 1 (Fig. 15 and Fig. 17 A–B) indicating that the kiln(s) pre-dated the corridor. There was no stratigraphic evidence to relate the kiln(s) and the Period IIa ditch.

Feature 2 comprised an oval depression, 0.9 m. x 0.7 m. across and 0.34 m. deep, to the south of which was a contiguous gully at least 1.1 m. long, 0.5 m. wide and up to 0.3 m. deep, cut by the foundation trench of Wall 1. The structure had all the appearance of being the remains of a kiln, with firing chamber and firing pit, but its function remains a little obscure. The firing chamber contained an area of intensive burning, about 0.6 m. in diameter (Layers 32 and 33), over loam and charcoal (Layer 31). The firing pit contained a layer of whitish clay-like material (Layer 28) beneath which was a layer of charcoal (Layer 36), and three stones which may have once supported a superstructure. Between the firing pit and the chamber were the remains of a clay wall, 15 cm. wide and 7 cm. high, with a small gap at the centre, and there was a further band of clay on the east side of the chamber. It seems likely that the clay was the remains of a superstructure and that the narrow gap between firing pit and chamber was for introducing a tuyere and bellows to raise the temperature.

Features 1 and 3 appeared to be abandoned firing pits which also fed the central firing chamber, the latter continuing to be used on a final phase fed by Feature 2.

The absence of any pottery wasters or metal slag appears to preclude the use of the site for pottery manufacture or iron smelting and it is assumed that the structure was connected either with the forging of iron objects or the burning of chalk to make lime, both of which require a temperature in excess of 900° to operate. The latter seems the more unlikely, since the kiln was rather small for this purpose, but Layer 12 did appear to be lime which would have been required for lime-washing walls or in the manufacture of mortar. It seems most likely therefore that the kiln was a smithing hearth used for forging small iron objects, possibly nails, for either the timber or the first masonry structures on the site.

The kiln(s) had apparently been carefully filled and covered with the layer of burnt chalk or lime (Layer 12) prior to the erection of the north corridor.

To the west of the kiln(s) was a single post-hole (Fig. 15 Feature 4) which was 25 cm. in diameter and 20 cm. deep. This was sealed by Layer 12. There was no dating evidence but it is assumed to be roughly contemporary with the kiln(s).

A small quantity of pottery found during the excavation was retained by Mrs. Rule but appears to be no longer available for study.

F. G. Aldsworth

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Lysons, S. 1815 An Account of the Remains of a Roman Villa discovered at Bignor *Archaeologia* **19** 176–7.

— — 1817a *An Account of the Remains of a Roman Villa, discovered at Bignor, in Sussex, in the years 1811, 1813, 1814 and 1815*

— — b *Reliquiae Britannica Romanae* Vol.III *Remains of a Roman Villa discovered at Bignor in Sussex*

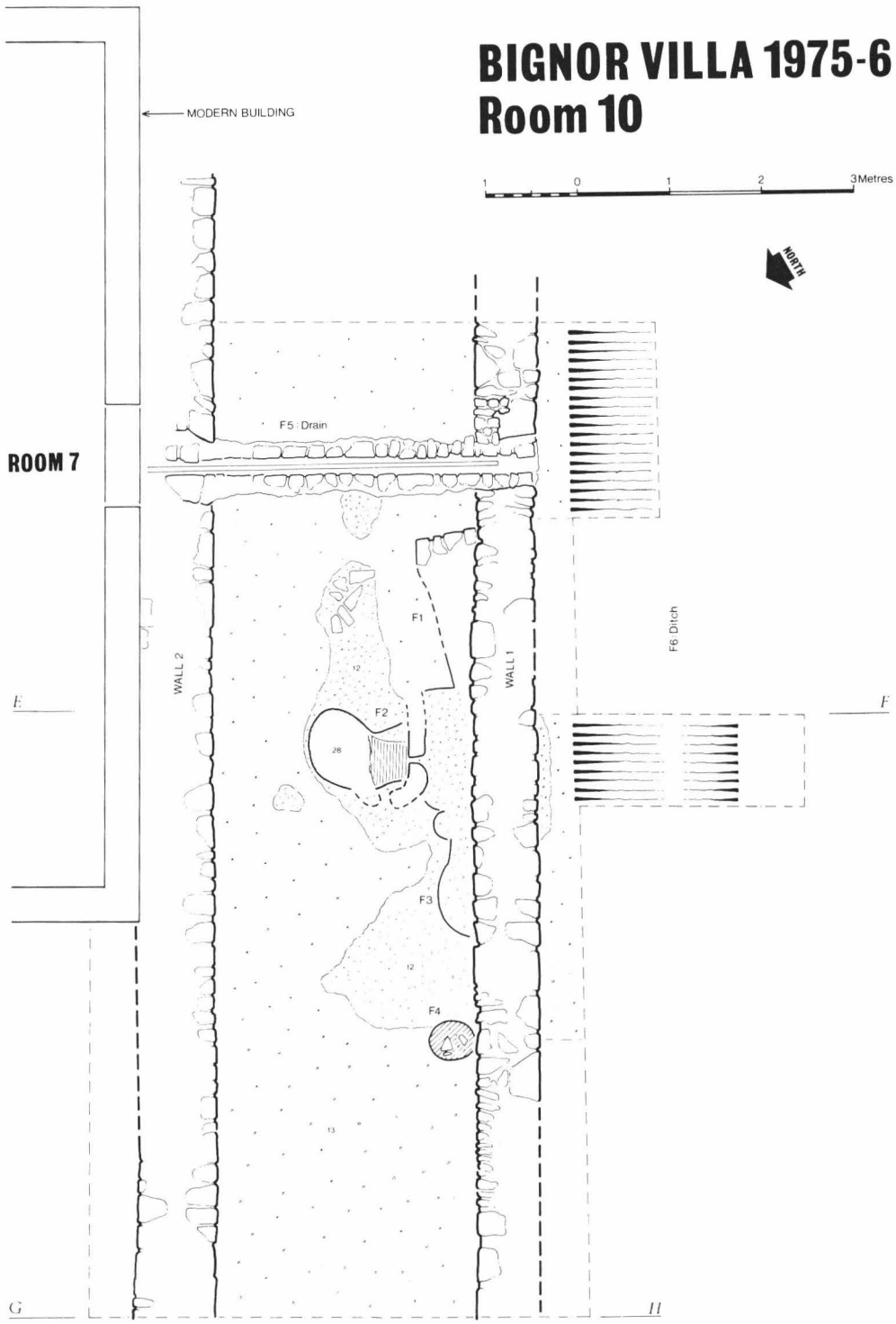

Fig. 15. The east end of that part of the north corridor excavated in 1975.

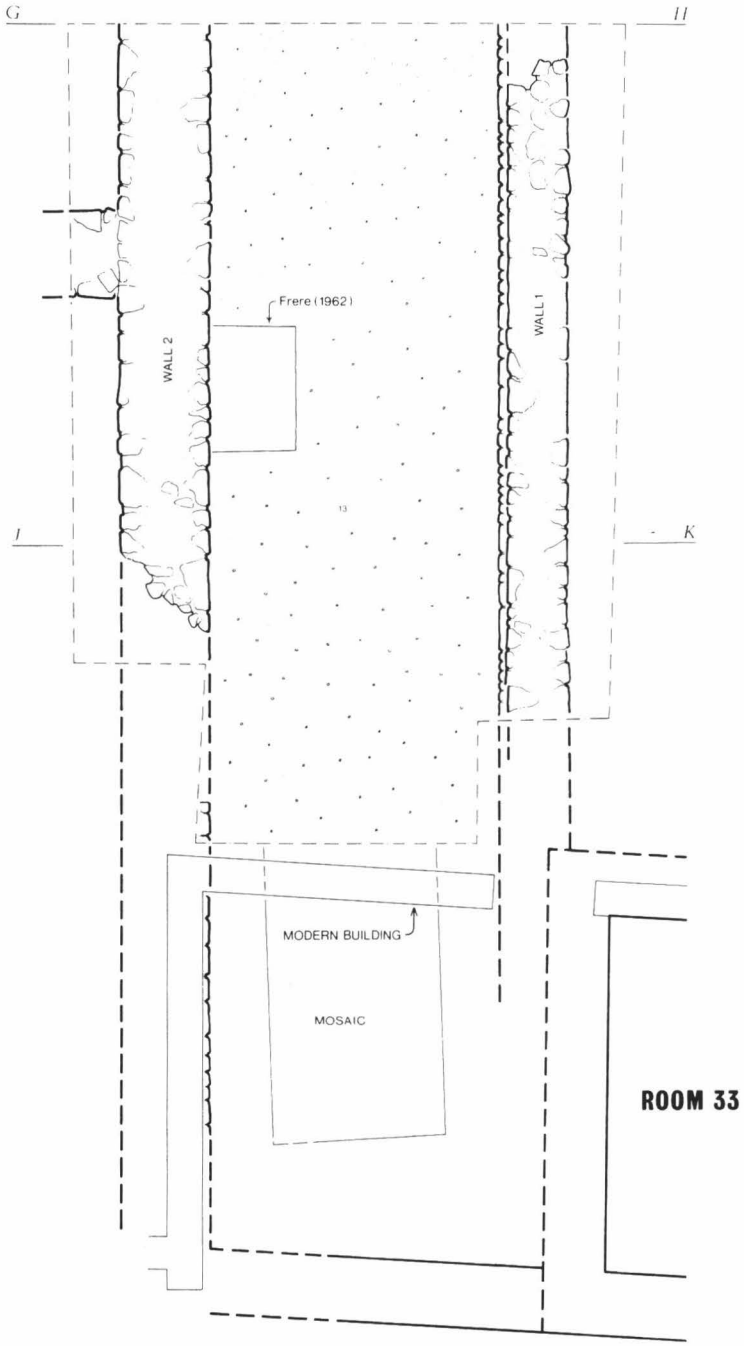

Fig. 16. The west end of the north corridor, excavated in 1976. Scale as Fig. 15.

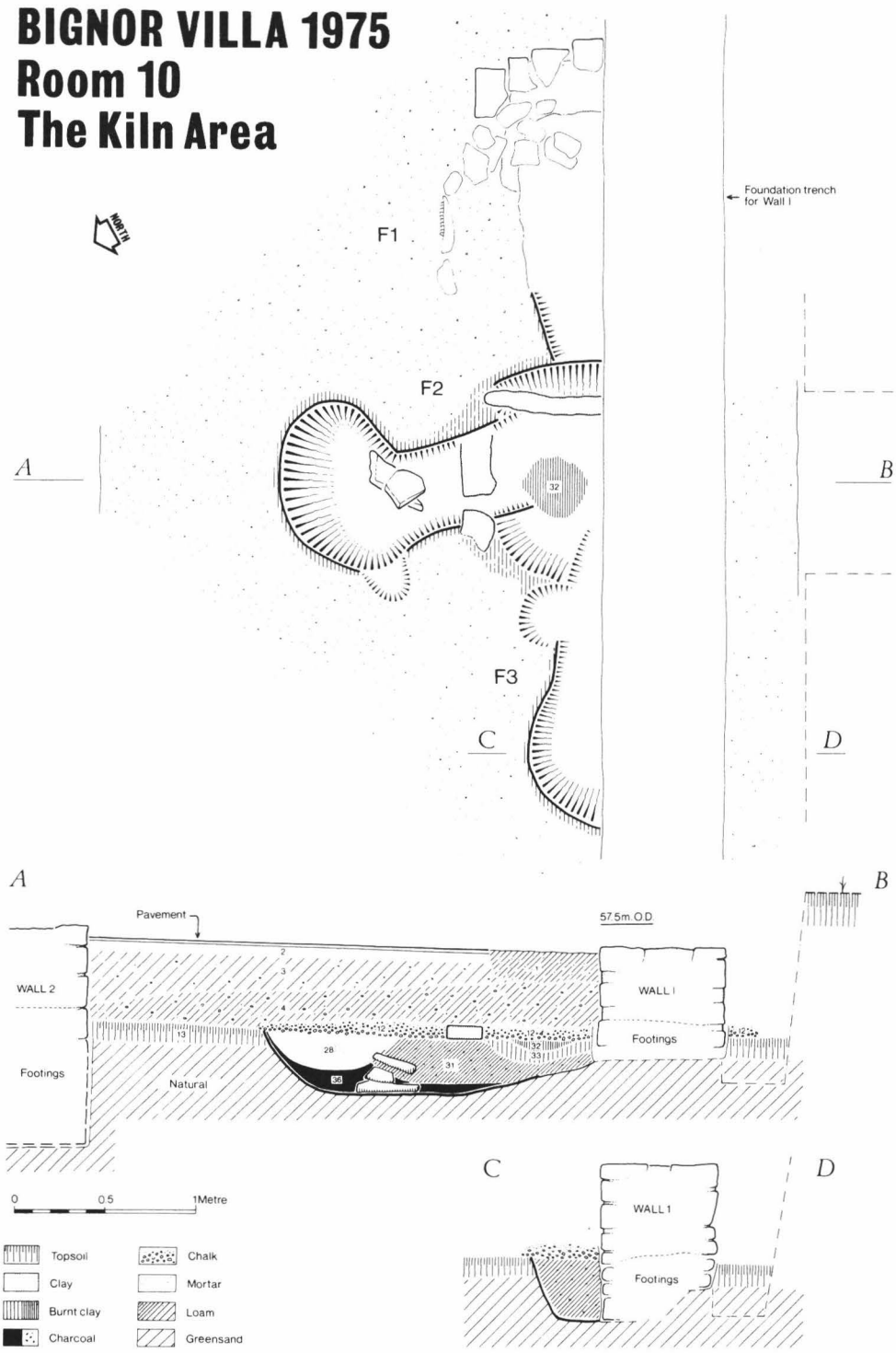
BIGNOR VILLA 1975
Room 10
The Kiln Area
NORTH
F1
F2
F3
Foundation trench for Wall I
A
B
C
D
32
Pavement
57.5m O.D.
WALL 2
WALL I
Footings
Natural
13
28
30
31
33
0
0.5
1Metre
Topsoil
Clay
Burnt clay
Charcoal
Chalk
Mortar
Loam
Greensand

Fig. 17.

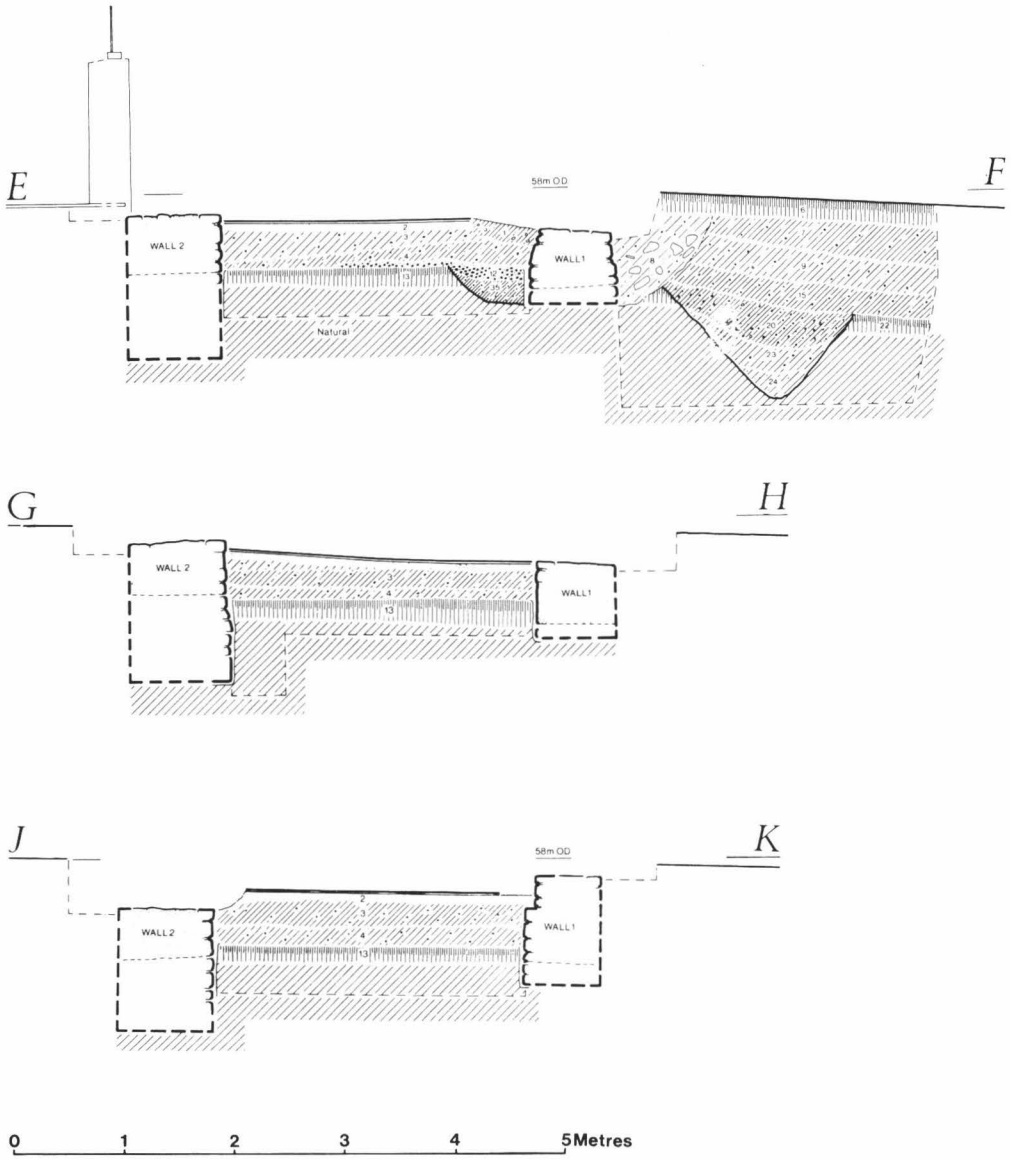

Fig. 18. Sections E–F, G–H, and J–K. For positions see Figs. 14 and 15.

— — 1821 Account of further discoveries of the remaims of a Roman Villa at Bignor, in Sussex *Archaeologia* **18** 203–21.

Since this note was submitted to the *Collections*, Professor Frere's report on his excavations from 1956 to 1962 has been published in *Britannia*, vol. 13, 135–95.

Human skeleton, St. Annes Road, Eastbourne

In December 1973, the Eastbourne Coroner's Officer, informed the writer of a discovery of what was thought to be a human skeleton, found during building operations and, within 15 minutes Mr. K. Suckling and Mrs. P. Stevens were on the site. The burial was situated in the bank of the south-western boundary of the Eastbourne Telephone Exchange, St. Annes Road, Eastbourne, at OS 6060 9968. The skeletal remains were aligned NW–SE with the skull to the NW but a large proportion of them had been removed mechanical excavation. Subsequent to the discovery, the remains had suffered interference.

After the soil had been removed, it was clear that the skeleton had been truncated obliquely, leaving only part of its

right side. The undisturbed bones were measured before lifting and included; a humerus (375 mm), radius (265 mm), ulna (275 mm), scapula, clavicle and parts of six ribs; the right arm was extended by the right side. The bones rested on a layer of small chalk fragments and soil, all of which was removed for examination. There were two depressions in the floor of the grave; the first, a small depression in the angle of the right shoulder and skull, in which there was a calcined flint; the second was a large depression below the skull.

The outline of the grave's excavation in the 2.1 m deep section was indistinct. There appeared to be a considerable depth (0.6 m) of made-up ground of chalk rubble, above a deep layer (0.8 m) of loose dark brown loam which had been considerably disturbed by tree roots, thus masking the edge of the grave. The underlying chalk formed the floor of the grave and was not cut into.

The Skeletal Remains — T. P. O'Connor

The skeletal remains were those of a male aged around 40 years. The man was sturdily built and quite tall. Long bone measurements taken *in situ* by the excavator indicate a height in the region of 5 ft 10 in. The dental formula is as follows:

													C		
–	/	/	/	/	/	–	–	X	/	/	/	/	A	/	X
8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
/	/	/	/	/	/	/	/	/	/	/	/	/	–	/	–

Key: / —tooth present and healthy
X —tooth lost ante-mortem
C —tooth carious
A —tooth abcessed
– —area of jaws missing

There were indication of periodontal recession throughout the jaws, particularly in the region of $\overline{8\ 7\ 6}|\overline{.\ 6}|$ was displaced buccally, apparently ante-mortem. Attrition on the molars was considerable, and anomalous when compared with the anterior dentition.

Pathology was represented by a small osteophytosis on the right distal radio-ulna joint, probably of osteo-arthritic origin. The interior aspect of os frontalis bore a number of irregular pits with associated low exostoses. The pits penetrated the inner table, and went some way into the diploe. The exostoses were roughly pillow-shaped, and consisted of compact bone, there being no indications of associated inflammation. It is not possible to link these pits with any particular disease or disorder.

Soil Sample

The soil sample produced charcoal and mollusca. The former was identified by Miss C. Cartwright as Oak (*Quercus* sp.). The mollusca were examined by Mr. O'Connor who felt that there were too few to allow any kind of valid conclusion to be drawn regarding the contemporary environment of the grave digging, and noted that this is often the case with samples from grave fills.

Conclusions

In the absence of any grave goods, or any other datable evidence, it is not possible to suggest a period for the burial, except to say that in all probability it is pre-conquest, and to note that several Saxon burials have been recorded in the area, see: 'Gazeteer of Early Saxon Sites in Eastbourne', P. M. Stevens, *SAC* 118, 244; particularly sites nos. 1, 2, 5, 7 and 9. This last, only 55 m away from the burial under discussion, produced large fragments of a pottery vessel with strap decoration and Saxon loom weights.

Acknowledgements

I acknowledge, with grateful thanks, the co-operation and assistance given by the contractors, Walter Llewellyn and Sons; Mr. G. Heys and all those who assisted with the work.

Lawrence Stevens

Recent archaeological trial trenching in Seaford, Sussex

As part of the Sussex Archaeological Field Unit's research project into 'The Origin of Sussex Towns', the medieval town of Seaford has been the subject of an archaeological survey (Aldsworth and Freke 1976, 54–6), two excavations (Freke 1978 and 1979) and trial trenching, which is reported on below. The two surviving medieval structures (the eleventh-century parish church of St. Leonard and a thirteenth-century vault), and the locations of the various archaeological investigations undertaken in the town by the Unit are shown in Fig. 19(b).

a *Steyne Road, Seaford, 1979* by D. Freke

Medieval Seaford grew up at the mouth of the Ouse, probably as an outport of Lewes. The quay is assumed to have been along the line of Steyne Road, although a small excavation in 1977 (Freke 1979) about 250 m to the west of the trenches reported here suggested that there Steyne Road may be a little north of the medieval river bank. In view of this and the other evidence of the changing topography of Seaford, the opportunity was taken to check the supposed line of the medieval river bank when the two sites to the south of Steyne Road became the subject of planning applications. A J.C.B. was used to cut two narrow trenches. Both revealed thick layers of modern rubble under which were layers of silt and sand laid down in the medieval period (Fig. 20).

Trench 1 revealed a post hole cut into the underlying sand. It was packed with chalk and clay and contained thirteenth/fourteenth-century pottery. It was sealed by a layer of gravel which was covered by grey silt up to 40 cm thick.

Trench 2 revealed a more complete series of stratified deposits. At the northern end, lying against clean sand under layers of silt, sand and gravel, were substantial fragments of a thirteenth/fourteenth-century cooking pot, together with other medieval pottery fragments. At the southern end of the trench, terracing had cut through these deposits, but a disturbance in the clean underlying sand produced more fragments of medieval pottery. The sharply increasing slope of the medieval layers towards the north suggests that the trench was near the river bank. The evidence of these two trenches suggests that this portion of Steyne Road is on or very near the medieval river bank, but is not the site of the medieval quay.

b *Broad Street, Seaford, 1980* by D. Rudling

As a continuation of the Unit's previous policy of investigating medieval Seaford, and at the request of East Sussex County Council (who provided the necessary finances), the opportunity was taken in advance of redevelopment to conduct a small trial excavation on the former Post Office site, 33 Broad Street (immediately north east of the church).

A J.C.B. was used to cut a trench 11.2 m long by 1 m wide. Most of the area investigated proved to have been disturbed

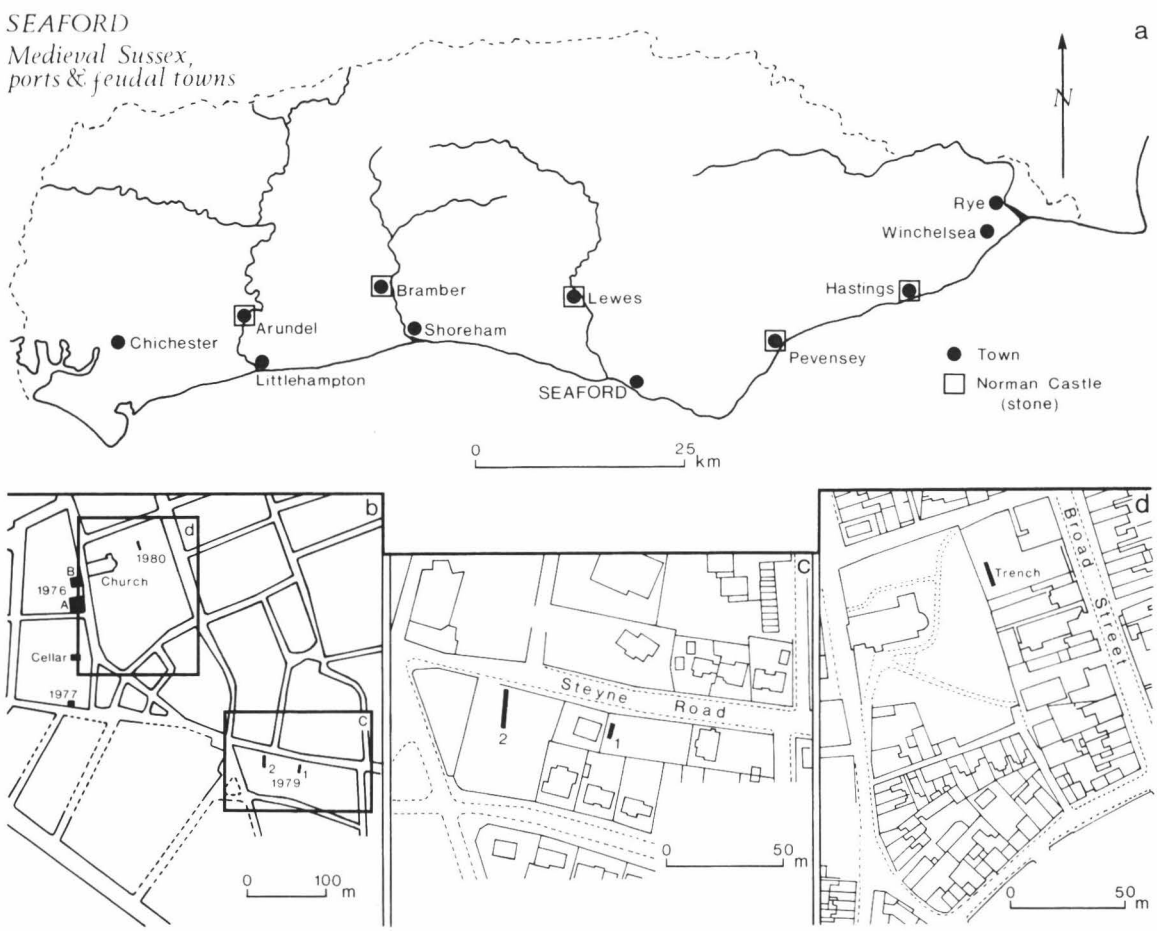

Fig. 19. Seaford. Site locations.

by relatively modern foundations, but elsewhere the main impression obtained was one of almost completely sterile silty-clay soils (Fig. 20). The only discoveries of archaeological interest were two post holes, two sherds of medieval pottery (one being a sagging base of flint tempered ware, probably dating to the thirteenth century), a piece of slate, tile and an oyster shell. All of these were found at the less disturbed southern end of the trench. One of the post holes was completely excavated, but unfortunately yielded no dating evidence, the only finds being fishbones, a few charred seeds, and very small fragments of charcoal.

The lack of finds in general and the extensive disturbance of the site in post-medieval times makes interpretation difficult, but the lack of twelfth-century finds on a site in such close proximity to the parish church is very similar to the situation revealed by the excavations in Church Street (Freke 1977) and may help to confirm Freke's suggestion that the early town was further to the south and east, perhaps nearer the quay. The church would then have been on rising ground at the edge of the town out of reach of the floods.

Acknowledgements

I would like to thank Andrew Woodcock of East Sussex County Council, B.I.C. Ltd. and Gamble Cook and Warner for permission to excavate on their site, and Owen Bedwin for his assistance during the investigation.

David Freke and David Rudling

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The dating of charcoal samples from Lordship Wood, Ewhurst

Survey work by the field survey group of the Robertsbridge and District Archaeological Society began in Lordship Wood in February 1979 and a hitherto unknown barrow was discovered (*S.A.C.* 118, 1980).

Continuing work during subsequent winters has revealed

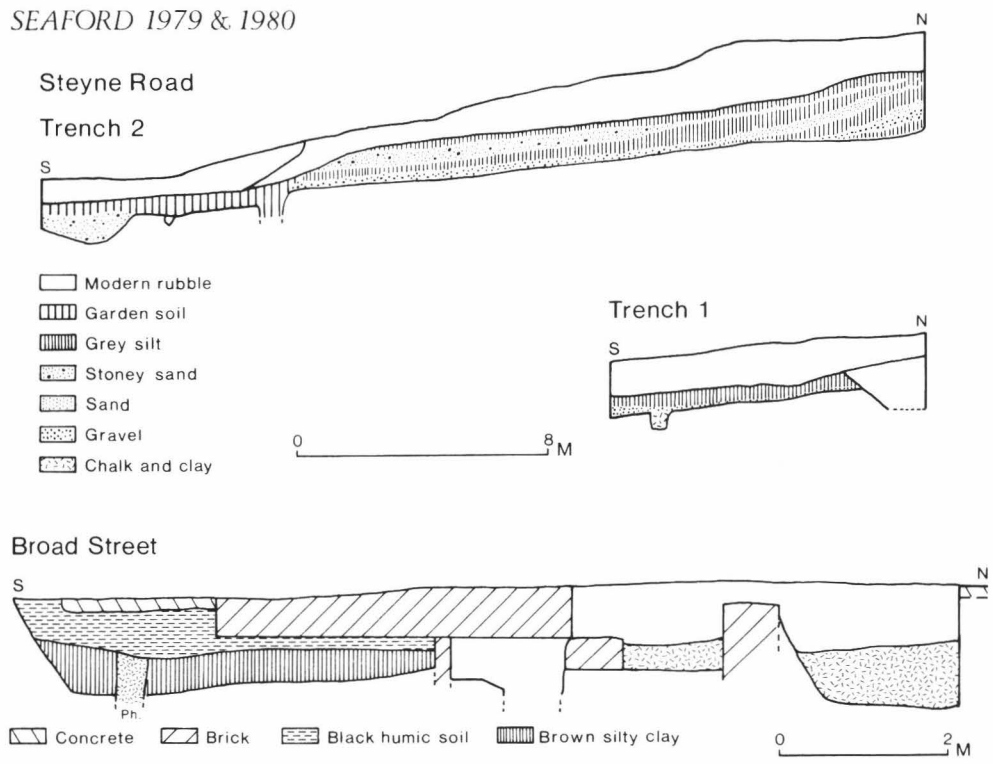

Fig.20. Seaford. Sections.

the presence of six platforms, all roughly 8 x 10 m in diameter which were located on a north-east facing slope, all within approximately 150 m of the barrow.

In order to investigate the origin of the platforms a trial excavation took place in July 1981. Mr. P. Drewett directed and a trench 8.1 m x 1 m was opened stretching from the rear of one platform almost to its scarp edge at the front. While no artefacts were found the excavation did reveal the care with which the platform had been dug into the hillside and distinct traces of burning were evident in three patches on the surface of the subsoil.

A generous grant from the Ivan D. Margary Research Fund made possible the dating of the charcoal samples by Carbon 14 analysis. The date revealed was 280 ± 70 b.p. The most probable conclusion must be that the platform was used for charcoal burning even though in comparison with other know charcoal platforms there was very little ash or charcoal present. The date set by the analysis could conceivably link the use of the platform with the later years of the iron industry. Robertsbridge Furnace and Forge were nearby, or with brick making, hop drying or lime burning.

The identification of the species was as follows — all samples are quantified by weight in grams:

38% *Corylus* sp. (hazel) Charcoal
25% *Crataegus* sp. (hawthorn) Charcoal
19% *Quercus* (oak) Charcoal
6% *Fagus* sp. (beech) Charcoal
5% *Carpinus* sp. (hornbeam) Charcoal
4% *Betula* sp. (Birch) Charcoal
3% *Alnus* sp. (alder) Charcoal

The analysis of the samples is interesting. All the species represented are still found in the local woods although beech is now often restricted in its growth to almost pure stands which imply plantation. Alder, a frequent constituent of field and place-names, is still common where soils are suitably damp but now seems to be found in much smaller quantities than in previous centuries. This is the result perhaps of a lowering of the water-table, perhaps of the excessive selection of this tree for gunpowder manufacture for which purpose it was particularly suitable. Gunpowder was made at several places in neighbouring parishes. It is perhaps surprising that hornbeam, which is predominant in many coppices and hedgerows throughout the parish today, forms so small a part of the sample. The explanation may be that its growth was encouraged much more for fuel than for charcoal. It is equally surprising that hawthorn forms so large a part of the sample. The platform is well within the wood and the charcoal on it presumably came from trees round about it. Hawthorn, *Crataegus monogyna*, is now only found in any quantity on the very fringes of the wood, mainly in the hedges. It is not tolerant of heavily shaded conditions and if it was present in any numbers when the platform was in use, it must presumably indicate fairly open conditions within the wood. It is possible that the woodland hawthorn, *Crataegus laevigata*, is represented by the charcoal. It is now extremely rare, at least in Ewhurst parish, and it is therefore impossible to judge whether it grew more commonly in earlier centuries. Oak is still a common constituent of the local woods and hedgerows and of coppice with standards. While hazel is very common in hedgerows and common in woods it is rather less

frequently found in pure stands of coppice where, locally at least, hornbeam, ash and chestnut are or were formerly predominant.

This sample offers a first insight into the constituents of the woodland in former centuries. It needs now to be checked by further samples taken from the same platform. It would also be interesting to take samples from the other known platforms in other areas of the wood. While there would not be any correlation of date from such widely spaced samples they would offer a clearer idea of the species in the wood and, by implication, of the management (or lack of it) of them.

Gwen Jones

The 'Druid Altars' at Rudgwick, West Sussex

In December 1982, Mr. S. G. Smith, of Rudgwick, drew my attention to several large blocks of stone in the Rudgwick area which have been previously noted in the *Collections* but never seriously discussed. E. G. Apedaile[1] noted that two large stones were seen 'on the hill at Aliblastairs' in 1928 and that a third, smaller, stone had been removed to Lynwick. One of the larger stones was excavated by him to a depth of five feet. These stones are referred to in the Lynwick Estate Sale Catalogue of 1922[2] as 'druid altars'. Aliblastairs is a late nineteenth-century house, now used as a nursing home, about a mile and a half west of Rudgwick village.[3] On the edge of a field about 300 m south-east of the house is a disused and overgrown pit which is shown on the Ordnance Survey six-inch map of 1912.[4] In the centre of this is a large block of sandstone, 3.4 m long, 1.9 m wide and at least 1 m high, and there is an outcrop of sandstone in the north face of the pit. The sides of the main block have been sawn straight and there are traces of an old excavation trench, perhaps the result of Apedaile's work, around its base. There can be no doubt but that these represent the remains of a natural outcrop of sandstone in the Weald Clay, which is mapped on the latest edition of the Geological Survey, and which has been partially worked for stone.

Apedaile also refers to large stones at the back of Swaynes, now Swain's Farm,[5] one of which was found lying on what was the Horsham-Guildford road, before the present road was made in about 1811. He also notes that a nearby field was called Barrow Field. Two of the stones were later re-erected as benches and survive near Gravatt's Farm.[6] The larger of the two[7] is 3.6 m long, 20 cm thick and varies from 53–61 cm in width, whilst the smaller[8] is 3.3 m long, 20 cm thick, and tapers from 81–62 cm wide. Both stones are of local sand- or limestone and the upper and lower surfaces are roughly flat though weatherworn. The most likely explanation seems to be that these two surviving stones had been quarried locally and were being transported along the old Horsham road before being discarded. The only real clue to the date seems to be the almost straight edges which may have been sawn — a technique in use for at least two hundred years. Barrow Field is shown to the south of Swain's Farm on the Rudgwick Tithe Map of 1840[9] but no trace of a barrow survives.

None of these stones appear to be of any archaeological or historical significance.

F. G. Aldsworth

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[1] *Collections* 69 (1928) 233.

[2] Copy in the possession of Mr. S. G. Smith.

[3] National Grid Reference TQ 0680 3400.

[4] TQ 0701 3380

[5] TQ 0920 3313.

[6] Mss. notes by J. Hickmann 13.2.1970 in possession of Mr. S. G. Smith.

[7] TQ 0930 3355.

[8] TQ 0947 3380.

[9] Centered at TQ 0930 3290.

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 medieval French brooch inscription from Cliff Hille*

Cherry (1981) publishes an inscribed brooch from Cliffe Hill, Lewes, in vol. 119 of these *Collections*. The inscription is partly in Latin, partly in medieval French; the latter is left partly uninterpreted. The problem begins because Cherry does not link the REI before the Latin tag AMOR VINCIT OMNIA with the inscription on the other side, from which REI is an overspill. This can be seen by the relative crowding of the letters *REI*. AMOR VINCIT OMNIA seems to have been inscribed before the French. The French, however, to judge by the wear on the pin, was to be worn facing outwards. (For the manner of wearing similar ornaments, see London Museum (1967: 273-6). For a literary analogue, see Chaucer, *Prologue*, lines 160-2.) The French thus reads:

PENSEZ DE MEI A VVS MEI OT // REI

which is perfectly interpretable, though there are two odd features. As it stands it means: 'Think of me; I grant myself (MEI OTREI) to you (A VVS).' It is thus a doggerel couplet with an end rhyme.

The oddities are as follows:

1. The stressed form of the pronoun MEI is slightly unusual for expected unstressed ME, M' (before a vowel); but parallels are known (Foulet 1928: 118, 128). MEI could be chosen for a particular stylistic effect, rather like 'To you it is *myself* that I grant.' (This might be to draw attention to a heavy-handed irony about whether the brooch or the donor is 'I'; cf. in the Latin inscription IOHANNES ME FECIT "John made *me*".) If so, it is less unusual. If it is a simple error for ME, the lines could become metrically regular 4-syllable ones.
2. DE after PENSEZ before a pronoun is without parallel that I know of. A or EN are normal in medieval French.

A possible resolution of difficulty 2 is to assume the omission of conjunction *que* 'that', which is indeed possible after verbs of thinking (Brunot 1933: 263-4; and especially Einhorn 1974: 102). The inscription would then read:

'Think (this) of me, (that) I grant myself to you.'

This is the reading that I prefer. In any case there is little room to doubt that the object is some sort of love token. The sense of *octroyer* as the gift of loving favours can be seen well in the *Roman de la rose* of 1277, perhaps a little later than our brooch:

D s'amor li dona l'otroi 'She gave him the grant of her love.'

In the thirteenth century *Romans et pastourelles* we also find:

Li biaus, li dous, a cui mes cuers s'otroie

'The handsome, sweet [one] to whom my heart gives itself'.

*My thanks are due to the staff of Barbican House and to James Hadfield for their help.

The inscription is Anglo-Norman, as might well be guessed. It is probably of the twelfth or the early thirteenth century. VVS (i.e. VUS) is a typical English feature for VOS (Moignet 1973: 38). *—ei* in MEI is a Normanism, though not necessarily English. On the continent, the change of *ei* to *oi* is usually reckoned to have taken place before *c.* 1100 (Pope 1934: 103/4; Ewert 1933: 36, 46) (cf. later French *moi, octroi*) but *ei* changed to *e* around 1300 in England (Pope 1934: 444). Cherry (1969: 225) gives reasons from costume history for a similar date for analogous pieces of ornament.

Richard Coates

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R v *Walson:* new light on a medieval mugging

In 1925 L. F. Salzman published an account of miracles relating to the county drawn from several medieval hagiographies. The author was non-committal on the subject of the likely veracity of the stories and was only able to advance evidence for the mere existence of one participant.

The texts of two miracles attributed to the saintly king Henry VI were given in detail and it is fortunate that complete corroboration of the events recounted by one has recently been discovered.[1]

According to the miracle text, on 1 November 1488 Dr William Edwards, vicar of Hollington, was attacked by three of his parishioners. They extracted his tongue using wooden tools which were 'in a strange and horrible shape, toothed like a saw' and cut it out by the roots; they then blinded him by pricking his eyeballs with pins. Edwards, taken for dead, miraculously revived to denounce his attackers who were arrested and taken to prison. After he had vowed a pilgrimage to Windsor if cured, his speech and the sight of one eye were restored. The records of the court of king's bench contain details of the process against John Walson of Bexhill labourer which, though lacking some circumstantial details and any mention of the miraculous

cure, leave little doubt that the events did take place. What is more, the documentary evidence sheds welcome light on several aspects of the obscure history of the process of contemporary criminal law.

Those keen to bring the assailants to justice were perhaps fortunate to have Thomas Oxenbridge, not only a justice of the peace but a leading member of the London legal establishment, in residence at Brede Place not more than five miles from the scene of the outrage.[2] Oxenbridge committed Walson to Guildford Castle gaol (which served Sussex as well as Surrey) on suspicion of felony only, since no indictment had yet been found against him.[3] The Michaelmas sessions had taken place in the first week of October and the next opportunity would not occur until the second week of January 1489 at the Epiphany sessions. For reasons which seem at first sight difficult to understand, this opportunity was ignored and it was not until the Easter sessions at Chichester on 27 April that Walson was indicted.[4] The facts alleged conform well with those of the miracle text. On 1 November 1488 Walson and others unknown attacked Edwards at Hollington, pulled out his tongue *cum diversis instrumentis ligneis* and cut it out with a knife. They pricked his right eye with needles, leaving him almost without speech and blind in one eye. Furthermore, a coral rosary with silver gilt mounts, a gilt ring, a lace with a green silk tassel, a blood-red hatlace with gilt points, a knife inlaid with silver, a gilt earpick and toothpick, a black silk purse with fifty-two pearls and a small piece of gilt (all worth £10) and £5 17s in cash were all stolen during the assault. This robbery is not mentioned in the miracle text and may have been added as a direct result of Edwards's partial recovery. Apart from the appeal of mayhem, the common law had no concept of grievous bodily harm and disoculation and tongue-cutting had been made felony by statute in 1404.[5] Contemporary criminal lawyers however were expressing the opinion that the blinding of one eye only would not amount to statutory felony since sight was still possible; the same reasoning presumably applied to partially-recovered speech and perhaps it was also necessary for the eyes to be physically removed.[6] The robbery however was not subject to such jurisprudential problems and even if fictitious (which the list of goods makes unlikely) could not, because of its place in the indictment, be denied without confessing the felonious assault.[7]

The court issued a writ of *capias* returnable at the Lewes sessions three days later before a list of justices which included Thomas Oxenbridge. Somewhat surprisingly, the sheriff returned that he could not find Walson and so the process began which resulted in his outlawry at the county court at Chichester on 7 January 1490, reported to the Lewes sessions five days later.[8] There was a good reason for the sheriff's inability to produce Walson and for the suspect's failure to appear at successive county courts to escape outlawry; he was no longer in the sheriff's custody at Guildford. On Saturday 7 February 1489 a writ *habeas corpus cum causa captionis* had been sent to the gaoler, commanding him to produce Walson in chancery the following Wednesday with the reasons for his arrest; to concentrate the official's mind, a penalty clause of £100 for failure to execute the writ was inserted.[9] The writ was returned by William Shadet, with an endorsement that the prisoner had been committed by Oxenbridge on suspicion of felony in Sussex; on his arrival at Westminster Walson was confined in the marshalsea of the court of king's bench.[10] The date of this writ makes it clear why no indictment had been found in January; there had not then been time to remove him out of the sheriff's custody and an immediate trial, with a strong likelihood of acquittal, would have been the unavoidable outcome. Once the prisoner was safely out of the jurisdiction, however, an indictment could be found in the certain knowledge that the process upon it would lead ineluctably to outlawry.

Walson's position was parlous indeed; he had the unenviable choice of remaining in a disease-ridden prison far from home or volunteering to stand trial for a notorious crime, even of course presuming that he had the means to reverse the outlawry. When a list of prisoners in the marshal's custody was drawn up on 5 June 1491 he was still amongst their number.[11] Official interest stirred again on 21 November 1493 when a writ was sent to the Sussex justices ordering them to send up copies of any indictments pending against Walson by 20 January; not until 3 February 1495 was a copy of the 1489 indictment delivered, by none other than Thomas Oxenbridge.[12] A further year and more passed until 6 May 1496, when Walson was brought to the bar of king's bench, produced a writ of error dated 30 May 1495 and reversed the outlawry on the grounds that he had been confined at Southwark when the proclamations were being made at Chichester. He then pleaded not guilty to the felony and put himself upon a jury, which the sheriff of Sussex was ordered to produce in the next term. More delay followed as successive sheriffs failed to return writs until Trinity 1499 when a panel was returned; he was ordered to be at Westminster on 14 October and 'by special grace' Walson was bailed to the same day.[13]

When the day came, neither the defendant nor his bails appeared and the court again set in motion the process which led to the outlawry of them all at a county court held at Lewes on 31 October 1521.[14] It is of course impossible to say what had happened to Walson; were he dead, it would not have been difficult for the bails, a London gentleman and a Southwark yeoman, to have been discharged. Perhaps the court considered that almost eleven years' imprisonment was sufficient punishment for his offence and was satisfied that the outlawry and the unanswered charge of felony would act in effect as a suspended sentence and encourage Walson to keep the peace in future.

There is no more definite evidence of the victim's career either; his service as vicar of Hollington goes unnoticed in the bishops' registers as does his degree in the published lists of university men. Only the citation of a William Edwards, rector of Chichester St. Pancras, to appear at a visitation in 1521, allows us to speculate that a less traumatic cure was found for the unfortunate priest; to the common law, almost thirty-three years after the assault, his attacker was still technically a wanted man.[15] We may also speculate on the motives for the assault. Perhaps Edwards was the object of xenophobic hostility as well as simple secular envy; the stolen goods were worth almost twice as much as the annual value of the benefice and it is possible that the parishioners regarded their priest as a foppish schoolman foisted upon them by the living's patron John Clement, a non-resident prebendary of Hastings free chapel.[16]

Apart from providing welcome evidence of the events recounted by the miracle text, the Walson case is of interest both to historians of the county and of the law. It appears that the monthly county court (the business of which at this period was largely confined to the proclamations of exigents and outlawries) was held exclusively at Chichester in Henry VII's reign but at Lewes and Chichester alternately during that of his son, in accordance with the terms of the statute of 1504.[17] The court of quarter sessions had already begun its practice of sitting in both eastern and western divisions but the sessions were nevertheless controlled by one clerk; the names of the justices to be at Lewes on 30 April 1489 were already known at the Chichester sessions three days

earlier.[18] As well as producing more frequent dispensations of justice, this system of double sessions had the great advantage of making process—the use of a fixed number of writs to achieve arrest or outlawry—twice as fast in Sussex as in some less fortunate counties. It is also clear that at this period there was nothing to stop a presenting jury at the western sessions from bringing in an indictment for a felony committed at the opposite end of the county.

At common law, imprisonment was not available as a sentence. The penalty for felony was death and cases deemed to warrant a more lenient punishment required, of necessity, some manipulation of a system which advanced, albeit with its own peculiar rhythm, at a snail's pace. On many occasions as a result, what appears on the face of the plea roll is little better than fiction; the reality has often to be sought in the parallel series of files, dirty, difficult to consult and only recently made available.[19] Many of those who have ridiculed the inefficiency of medieval criminal justice have, it is submitted, taken the formal enrolments of the court of king's bench too much at face value.[20] Whether lawyers used these tactics, which they termed 'policy', in all criminal cases we do not yet know.[21] Perhaps the Walson case was extraordinary; a foul and notorious crime, committed against a clergyman and within the sphere of influence of a local magnate who was also a member of the legal establishment. Until more similar cases are investigated using the whole archive of the court, we shall not know.

Christopher Whittick

References

Unless otherwise stated, all documents are at the Public Record Office, Chancery Lane.

[1] *SAC* 66.62–82. The Henrician miracles were taken from R. Knox and S. Leslie, *The Miracles of Henry VI*, itself an edition (in translation) of British Library MS Royal 13 C viii.

[2] For Oxenbridge's legal career *see Selden Society* 94.*394*. He was named on all Sussex commissions of the peace between 1485 and 1493, regularly delivered the county's indictments to Westminster in response to writs and was possibly the *custos rotulorum*.

[3] KB 29/119 m15d.

[4] For the text of the indictment *see* KB 9/403 m19.

[5] 5 Henry IV, c 5.

[6] Cambridge University Library MS Hh 3 6, f. 2 (Richard Littleton reading at the Inner Temple, *c* 1493) and BL MS Harg 87, f. 178v (Francis Mountford reading at the same inn, 1519 or 1527).

[7] For a fuller explanation of this doctrine *see SS* 94.*144–148*.

[8] KB 9/403 m19.

[9] KB 145/9/4, unnumbered membrane. For the use of *sub pena* clauses in such writs *see* Patricia Barnes, 'The Chancery corpus cum causa file, 10–11 Edward IV' in *Mediaeval Legal Records* (HMSO 1978), pp. 430–76 at p. 434.

[10] KB 29/119 m15d.

[11] KB 145/9/6, unnumbered membrane.

[12] KB 9/403 m18; KB 9/403 m19d; KB 29/125 m10.

[13] KB 27/939 rex m10; KB 29/126 m20d.

[14] KB 29/126 m20d; KB 27/1039 rex m40; KB 37/10/13/4, unnumbered membrane.

[15] West Sussex Record Office, Ep I/1/5 f. 101. He was still rector in 1526, when Thomas Cooper named him executor of his will: *Sussex Record Society* 41.334. The editors of the miracle text suggest (pp26–7) that he was still alive *c* 1528, to which date (perhaps erroniously) they attribute the manuscript's marginal annotation of the miracle's proof.

[16] £8 2s in 1535: *Valor Ecclesiasticus* (Record Commission, 1810–34) 1.344, Clement was also rector of St Swithun Candlewick Street in London (*CCR 1476–85*, pp. 164, 424) and may also have been identical with the vicar of Salehurst of the same name (CP 40/903 m395d, 1488). In Trinity term 1487 the prebendary was sued by John Pensell the dean of Hastings free chapel for three and a half years' arrears of an annual rent of 33s 4d : CP 40/901 m50. The system of presentations by the prebendaries had been reviewed in 1480 as part of arbitrators' award that altered the chapel's constitution; for a text of the award *see* C Dawson, *History of Hastings Castle* (1909), 1.296. It is possible that Edwards was presented under the revised system and that this had led to trouble in the parish.

[17] 19 Hen 7, c24. Although the details of outlawries are sometimes to be found in the *indictamenta* files (KB 9), a better source are the returned writs of *exigi facias* on the *brevia regis* files (KB 37) which are endorsed by the sheriff with the dates and venues of each county court.

[18] KB 9/403 m19.

[19] For a list of the classes and a discussion of their contents *see* CAF Meekings 'King's Bench files' in *Legal Records and the Historian* ed JH Baker, (Royal Historical Society Studies in History, 1978).

[20] For example M Blatcher, *The Court of King's Bench 1450–1550* (1978), especially at pp. 47–89.

[21] For a discussion of 'policy' *see SS* 94.*84*.

An eighteenth-century Gothic folly at Uppark, Harting

The remains of this folly (Plate 1), now known locally as The Vandalian Tower, lie on the crest of the South Downs some 750 m north-east of Uppark House[1] from where extensive views may be obtained in all directions. The value of the hilltop for viewing was evidently recognised at least as early as the first decade of the eighteenth century since a viewing mound is shown here on a landscape painting of about 1710–12 by Peter Tillemans, which is on display in Uppark House. The conical mound is shown surrounded by a circle of about twelve trees and surmounted by a single tree with an encircling seat. It is possible that this mound incorporates the remains of a Bronze Age burial mound but there is no archaeological evidence at present to demonstrate this.

A map of Uppark in 1746[2] shows a rectangular feature on the site and this is described as 'Mount', but the remains that survive today are of a banqueting or viewing house erected between 1743 and 1776. The tower was designed for Sir Matthew Fetherstonhaugh, of Uppark House, it seems primarily to commemorate his part in an investment in land on the ever-moving western frontier of British America. The land lay in the Valley of the Ohio and was to be called Vandalia but the venture came to an abrupt end with the American Revolution in 1775. Most of Vandalia was later incorporated into West Virginia.[3]

As soon as he had invested money in the project Sir Matthew chose Henry Keene to design a Gothic brick and stone tower as a fitting memorial to the Vandalian venture. The site chosen was known as Noon Bush, a name apparently applied to the viewing mound surmounted by a single tree shown on Tillemans painting,[4] and Keene's original design appears to have been for a triangular building with Gothic windows and pinnacles.[5] Henry Keene

Plate 1. Vandalian Tower, Uppark, from the south-east, after consolidation in 1982.

(1726–76) was for a time architect to the King's Works in Ireland and surveyor to Westminster Abbey but he is chiefly known as one of the first to exploit the fashion for Gothic architecture which became a characteristic feature of English taste in the latter part of the eighteenth century.[6] He is best known for his classical works in the Oxford Colleges but was responsible in Sussex for the Gothic timber spire on Westbourne Church.

Work appears to have started on the tower towards the end of 1773 and Sir Matthew's account book at this time includes payments to Keene, a Mr. Brooks (builder), a Mr. Rose (plasterer) and a Mr. Carter (sculptor).[7] Sir Matthew died in March 1774 and the responsibility for completing the work on the tower was left to his son, Harry. Sir Harry's General Cash and Disbursement Book 1774–82[8] includes the following payments, suggesting that work was completed by April 1776-

August 31st 1774 — To Mr. Brooks in part payment for his bill for the windows of the Gothick Tower £80
November 21st 1775 — To Mr. Rose for the Gothic Tower £43
— To Mr. Brooks for ditto .....£33.3s.
April 3rd 1776 — To Mr. Keene in full of all demands for the Gothic Tower due at Sir M(atthew)'s death £47

A number of illustrations of the tower survive today and these show that the structure comprised a two-storeyed square building approached at first floor level by a ramp. There was an open buttress at each corner and large viewing windows, partially filled with stained glass, on all sides apart from in the south-east buttress which contained fireplaces, presumably by Carter (Figs. 1 and 2). The tower and the mound on which it stood being enclosed by a ditch and fence in the form of a ha-ha. The tower is said to have been destroyed by fire in 1842.[9]

Grimm's drawing of 'The Prospect House', dated 1782,[10] is probably the earliest surviving illustration (Plate 2) and shows, from the north-east, the ramp leading up to the square, pinnacled, porch with covered access to the ground floor level below. In Uppark House there are two unsigned and undated paintings of the tower showing it complete and hence presumably date to before 1842. One of these, possibly by Ann Sutherland—who became a governess at the house in the 1820s,[11] is a watercolour view from the south-west and this shows the elaborate tracery of the Gothic windows mostly filled with clear glass but with coloured glass in the smaller panels at the top. There is also a pencil drawing showing the building in ruins from the south-east and this shows that the porch was square with openings on three sides whereas Grimm appears to show a pair of openings side by side.

The structure has decayed quite rapidly in recent years but an attempt has now been made to consolidate what remains. Work has been supervised by the County Planning Officer and has been supported by the Meade-Fetherstonhaugh Trust, the Department of the Environment, and West Sussex County Council. Consolidation has involved the stabilization of the upper brickwork and repointing elsewhere. Whilst this work has been in hand the opportunity has been taken to examine the structure and to produce reconstructed plans and elevations of the original building (Figs. 1 and 2.)

The ground floor was used as a kitchen and contained a

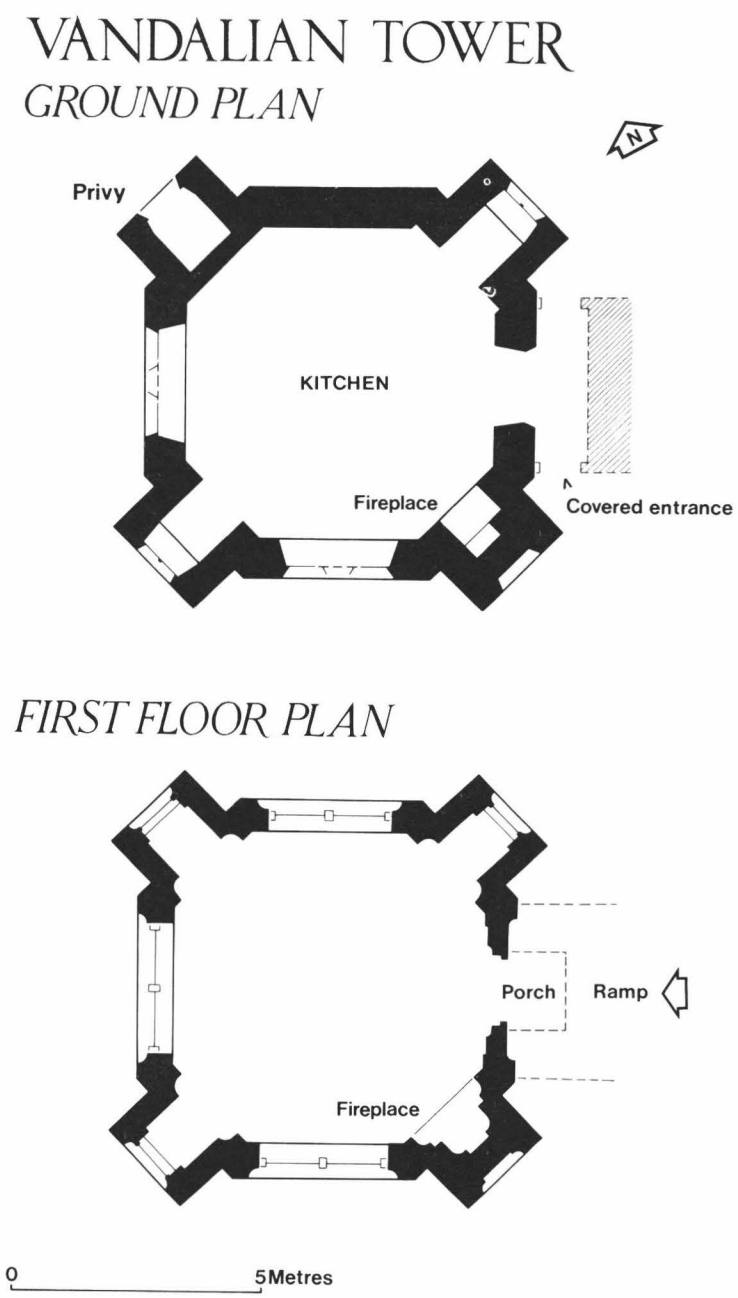


Fig. 1. Vandalian Tower, Uppark. Ground and first floor plans — as reconstructed from surviving remains and old drawings.

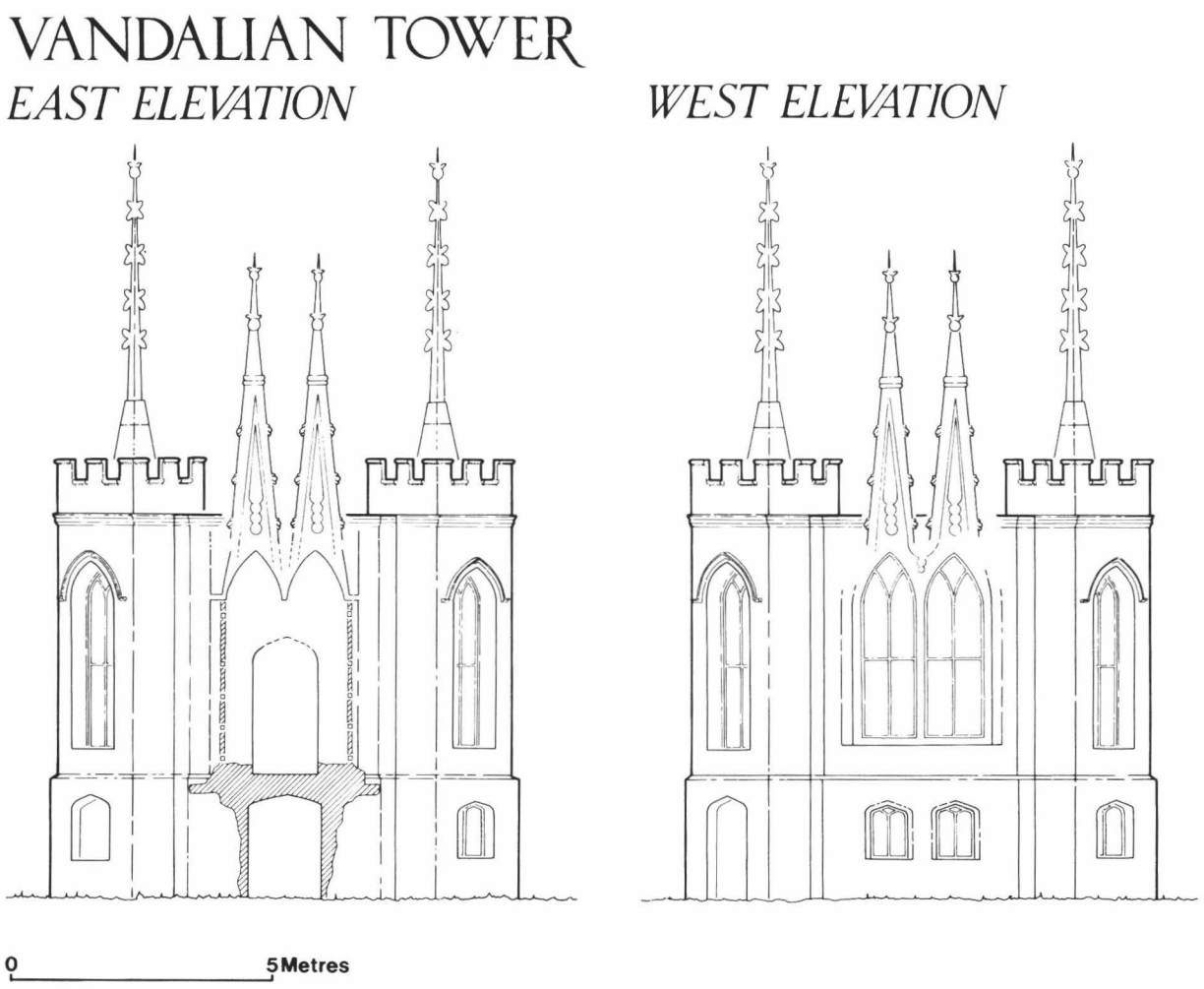


Fig.2 Vandalian Tower, Uppark. East and west elevations — partial reconstructions from surviving remains and old drawings.

fireplace and a privy entered from outside. At the head of the external ramp was a porch with pinnacles and beyond this the main door gave way to the viewing or prospect room at first floor level. Large windows allowed for viewing in all directions except the south-east where there was a large fireplace. The external elevations were rendered with a lime-based mortar containing aggregate to give a pebble-dashed appearance, except on the south-east bastion which was disguised to give the impression of windows, treated with a yellow glaze on the outside to give the effect of daylight reflected on glass. The roof appears to have been flat and, judging by the molten lumps adhering to the brickwork, covered in lead, but there is no surviving evidence to indicate that access was available to the roof for viewing although there could have been a ladder from first floor level. The internal elevations at first floor level were fitted with wooden battens, perhaps to carry canvas wall coverings.

F. G. Aldsworth

References

[1]National Grid Reference SU 785 182.

[2] *WSRO* Uppark Ms. 499.

[3]Meade-Fetherstonhaugh M. and Warner, O. 1964 *Uppark and Its People*, pp.40-6.

[4]The name appears as a field or area name on the map of 1746 (*WSRO* Uppark MS.499 op.cit) and Mr. John Eyre, the National Trust Administrator for Uppark House, informs me that early references to the folly refer to it as the tower at Noon Bush.

[5]Reproduced in *Meade-Fetherstonhaugh and Warner* op. cit. Plate 12 opposite p.97.

[6]Colvin, H.M. 1954 *A Biographical Dictionary of English Architects 1660-1840* pp.333-8; *Dictionary of National Biography* Vol. 30, 1892, pp. 304-5.

[7]I am grateful to Mr. John Eyre for providing this information.

[8] *WSRO* Uppark Ms. 227.

[9]Gordon, H.D. 1877 *The History of Harting*, p.229 and pp. 490-1 (footnote by J. Weaver).

[10] *BM* Add Ms. 5675.

[11]I am grateful to Mr. John Eyre for this suggestion.

An eighteenth-century brick kiln on Ebernoe Common, Kirdford

The remains of Ebernoe Brickworks lie some 500m south-east of Ebernoe Church just within the northern perimeter of Ebernoe Common,[1] an area of some 175 acres of ancient woodland recently purchased and declared a nature reserve by the Sussex Trust for Nature Conservation. The Common has a long history as unmanaged woodland but includes several sites of industrial archaeological interest. The site of Ebernoe ironworks[2] lies some 400m north-west of the brickworks[3] and the furnace pond is still water-filled. The site of Wassell forge, working at least from 1579 until 1640,[4] lies some 500 m to the north,[5] just beyond the northern edge of the Common, and its pond was later used to supply a watermill.[6] There is a water-filled pond 100 m south-east of the brickworks which may formerly

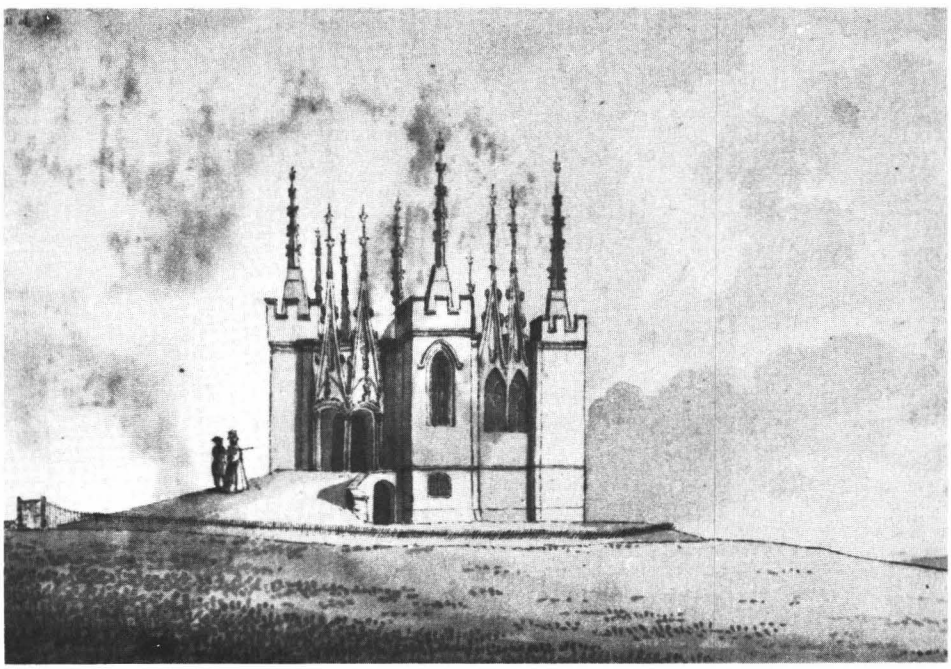


Plate 2. Vandalian Tower, Uppark. Grimm's drawing of the 'Prospect House in Up Park', dated 1782. (Reproduced by kind permission of the County Archivist).

EBERNOE COMMON BRICKWORKS
SITE PLAN

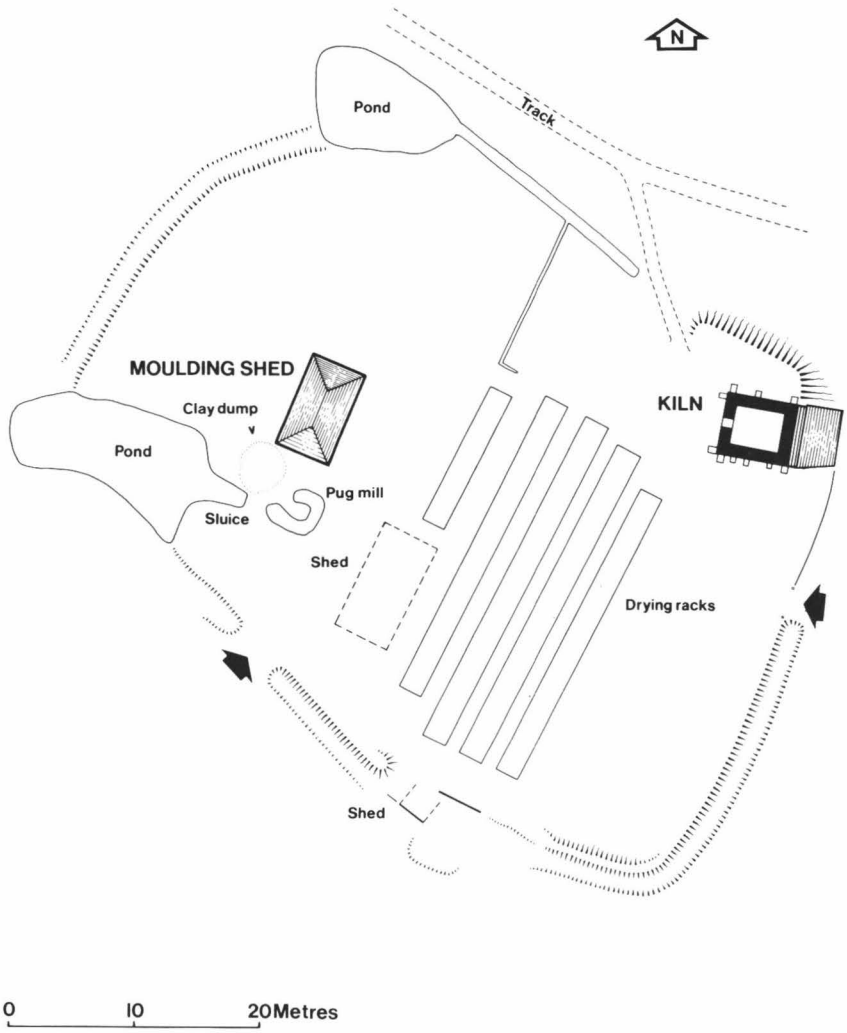


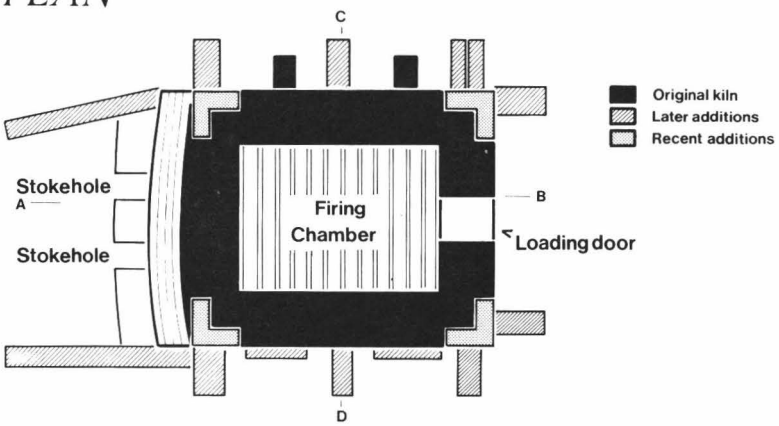
Fig.3.

have supplied Wassell forge and there is another, now dry, 600 m to the south-west. The area is also known for its former supplies of Sussex 'marble' or 'winkle stone' and there is at least one area of former workings on Ebernoe Common, 200 yards east of Sibland Farm.[7] There are several glass-working sites in the vicinity but none known on the Common. The nearest is the sixteenth-century Frithfold furnace about 1,000 m to the north.[8] There are also several lime kilns around the Common, one of the best preserved of which is 400 m west of Ebernoe Church.[9]

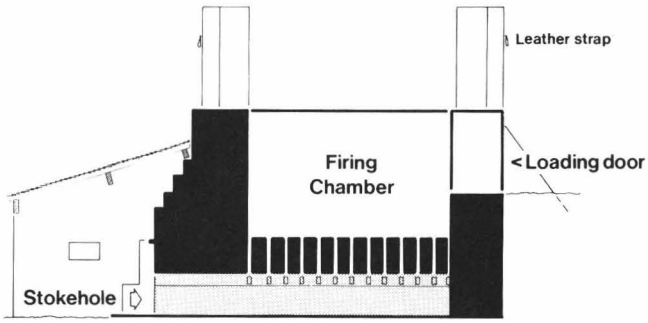
The brickworks were in use before the end of the eighteenth century and are shown on a map of 1795.[10] They are described as 'The brickiln, house, yartds, garden' on a map of 1829[11] and the layout of the works is shown in detail on another map of the same date,[12] but there is some evidence to indicate that there were brickworks at Ebernoe over a hundred years earlier. In 1693 F. Marks was paid for carrying bricks from Ebernoe to Petworth[13] and a brickkiln at 'Abernole' is mentioned in correspondence associated with Petworth House in March 1702.[14] It has not been

EBERNOE BRICKKILN

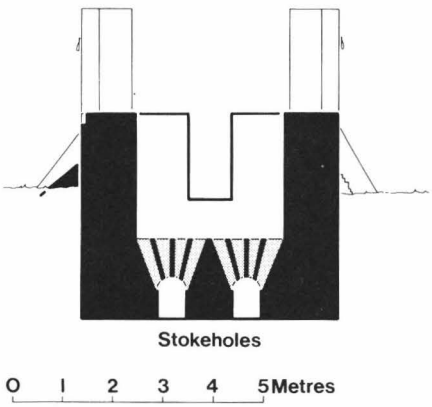
PLAN



SECTION A-B



SECTION C-D



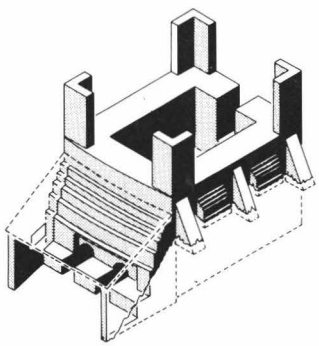


Fig.4.

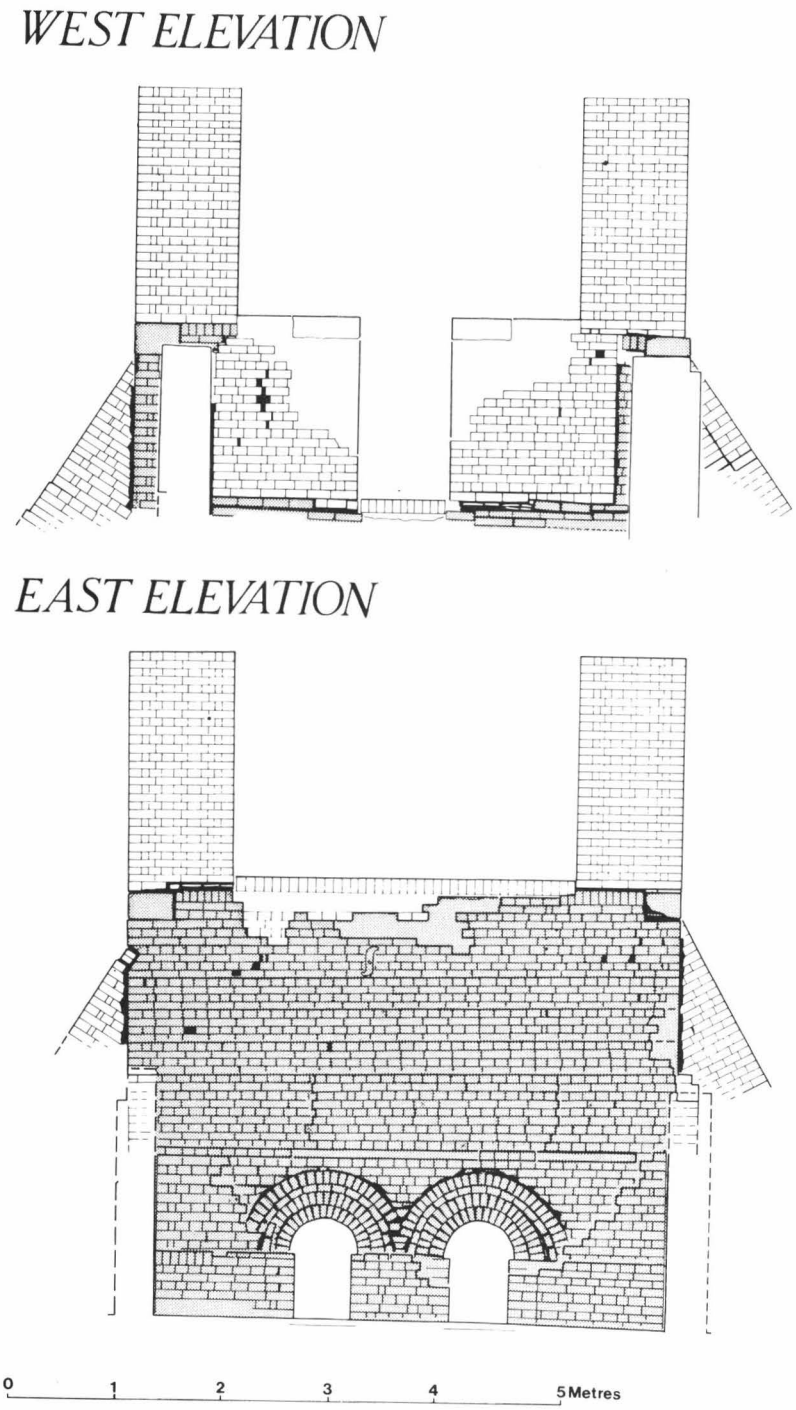


Fig.5. The earliest surviving brickwork is shown stippled.

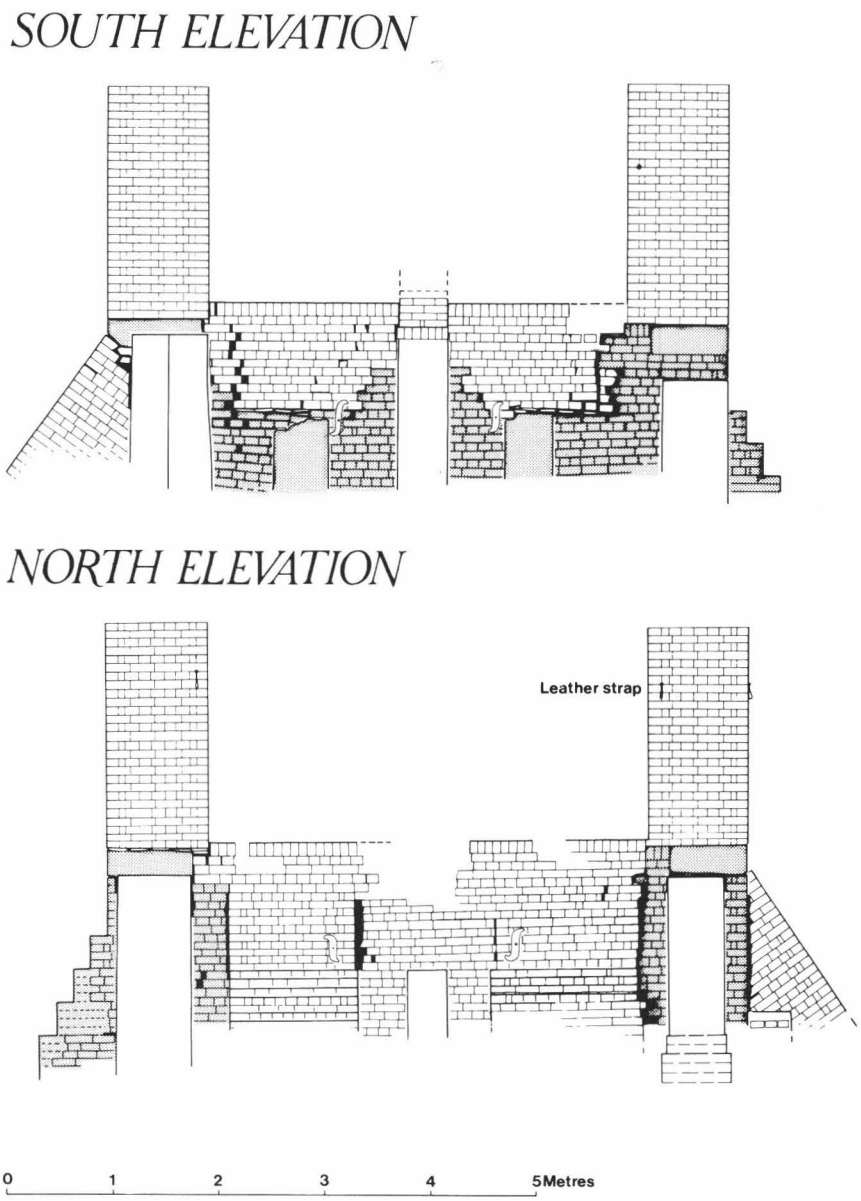


Fig.6. The earliest surviving brickwork is shown stippled.

possible to trace the history of the works in any detail since they appear only to have served the estate on which they stand. As such they are not referred to in nineteenth century trade directories. They may appear again in the Petworth House Archives but these have yet to be catalogued and transcribed. The Kirdford Tithe Map of 1847 gives the owner as the Reverend John Peachey and the occupier as James Coles. Coles, a brickmaker and farmer who lived in an adjoining cottage, can be traced in the census returns of 1841 and 1851 but in the returns of 1861, 1871 and 1881 the occupier of the only brickyard listed in the vicinity appears to be Edward Phillips. Immediately prior to the First World War they were worked by Ephraim and Robert Holden, farmers of Sparkes Farm.[15]

Despite doubts concerning the precise date at which the works were established on this particular site what is clear is that the layout changed very little from 1795 until they went out of use in the 1930's. Thus the layout shown on the map of 1829 is virtually the same as that shown on the Kirdford Tithe Map of 1847, the first edition of the Ordnance Survey twenty-five inch map of 1871–75, and the later edition of 1912. The works never appear to have been enlarged or mechanized and, as such, what remains represents an unusual survival into the twentieth century. The remains are especially important because they include a complete updraught or 'Scotch' kiln, with twin stokeholes, which was fired with wood.

The layout of the works can still be traced on the ground (Fig. 3) and comprises a roughly rectangular area, measuring approximately 60 m x 40 m, surrounded by a drainage ditch incorporating two ponds. Access into the works was by gateways on the north, south, and east sides. Clay was brought in from the south, where there are a number of pits, and was prepared for moulding in the *pug mill.* This is still traceable as a ring-shaped pond into which water could be fed from an adjoining pond through a *sluice.* The mill itself was probably worked by a horse which walked around the pond at the end of a beam pivoted at the centre. To the north of the pug mill is a *clay dump* which, having been worked into the right consistency in the mill, was stored ready for shaping into bricks and tiles in the *moulding shed.* The surviving shed is of no great age and is constructed of nine-inch brickwork incorporating two doors, presumably one in and one out, and one window. Furniture, including several moulds, has been transferred to the Weald and Downland Open Air Museum, at Singleton. The roof comprises two trusses with raking struts and clasped purlins supporting a tiled roof of wasters produced on site. After moulding the bricks were laid out to dry on *drying racks* or 'hacks', the outlines of which can still be traced on the ground, before being taken to the kiln for firing.

The *kiln* is an unusual survival and, as far as can be ascertained, there is no other example of this type to be seen in Sussex. The actual processes of firing in a wood-fired Scotch kiln are described in Kim Leslie's account of the Ashburnham Estate Brickworks 1840–1968.[16] The Ebernoe kiln has clearly been altered several times during its lifetime but the original form of the structure is fairly clear (Figs. 4, 5 and 6). Access for loading the *firing chamber* was from the west during the latter part of its working life, and this may have always been the case. the chamber measures 4 m x 3 m internally and is 2.5 m deep. It is surrounded by a brick wall 1.1 m thick — the earlier bricks measuring on average 23 cm x 10 cm x 5.5 cm (9 in x 4 in x 2¼ in) whilst the later ones measure on average 22½ cm x 11 cm x 6.5 cm (8¾ in x 4½ in x 2¾ in). In its original form there were large blocks of stone built into the wall at each corner and two original buttresses survive on the south elevation. The kiln was wood-fired through twin stokeholes on the east side and the stokehole area was later protected with a tiled roof. It is not clear whether there was ever any integral or free-standing roof over the firing chamber but during its lifetime the kiln was repaired several times and more recently pillars were constructed at each corner. These are thought to have been added to reduce the effect of the wind lowering the temperature of the top of the kiln during firing. Leather straps were nailed to each pillar and poles were slung between these. During firing, canvases could be hung down from the poles to prevent the wind from blowing across the top of the kiln.

The works went out of use in the 1930s and since this time the adjoining cottage, which formerly stood immediately north of the brickworks, has been demolished and the other structures have become overgrown. When first visited by staff from the Weald and Downland Open Air Museum in about 1975 both the moulding shed and the kiln were collapsing and some clearance was undertaken on the kiln. The site was Scheduled as an Ancient Monument by the Secretary of State for the Environment in August 1980 and a programme of clearance and repair was initiated by West Sussex County Council in the same year. Initial clearance was undertaken by members of the Haslemere Archaeological Group under the supervision of the writer and in1982 the kiln was restored by staff from the Weald and Downland Open Air Museum and the County Planning Department.

F. G. Aldsworth

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[1]National grid reference SU 9790 2747.
[2]Straker, E. 1931 *Wealden Iron* p. 423.
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