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May 1992

ABBREVIATIONS

used in References and Notes in this volume

Add. MS.	Additional Manuscript
Antiq.	*Antiquarian, Antiquaries, Antiquities*
Arch.	*Archaeologia, Archaeological, Archaeology*
Assoc.	*Association*
B.A.R.	British Archaeological Reports
Coll.	*Collections*
Edn.	*Edition*
Geog.	*Geographical, Geography*
Hist.	*Historical, History*
Inst.	*Institute*
Jnl.	*Journal*
Mag.	*Magazine*
NGR	National Grid Reference
N. & Q.	*Notes and Queries*
O.S.	Ordnance Survey
Prehist.	*Prehistoric*
Proc.	*Proceedings*
Rec.	*Record*
Repr.	*Reprinted*
Sci.	*Science*
Ser.	*Series*
Soc.	*Social, Society*
Suss.	*Sussex*
Univ.	University
V.C.H. Sussex	*Victoria County History of Sussex*
Vol.	Volume

Sussex Archaeological Collections **130** (1992), 1–12

PREHISTORIC EARTHWORKS ON HALNAKER HILL, WEST SUSSEX: EXCAVATIONS 1981–1983

by Owen Bedwin

Excavations on Halnaker Hill have identified an oval barrow and a later Bronze Age/early Iron Age field system. Firm dating evidence for the weak, univallate hill-top enclosure remains elusive; it could belong either to the early Neolithic or to the later Bronze Age.

INTRODUCTION

A number of small, univallate, continuously-ditched enclosures are known on the South Downs, some on hill-tops, others on slopes just below the summit. In general terms, these have been considered most likely to belong to the Iron Age, particularly to the early part of that period. Where these enclosures are situated on hill-tops, they have usually been classified as hill forts, in spite of their often feeble defences.

In 1979, the author excavated a small, hill-slope enclosure on Bury Hill in West Sussex, and found that it belonged to the early Neolithic (Bedwin 1981). As a result of this discovery, it was felt worthwhile to examine two other similar enclosures in the area, namely Court Hill and Halnaker Hill, both undated (Fig. 1). These sites had always been classified as hill forts (e.g. in the Ordnance Survey map of Iron Age Britain), but both were small enclosures (2.5 and 1.7 hectares, respectively) defined by slight earthworks. Both are situated on chalk spurs connected to the substantial ridge running east–west from the Trundle to Barkhale (each of these being a classic early Neolithic causewayed enclosure: Fig. 1). Trial excavations at Court Hill in 1982 showed it to belong to the early Neolithic also (Bedwin 1984). This report concerns itself with trial excavations on the hill-top enclosure at Halnaker Hill, plus nearby earthworks.

THE HALNAKER HILL EARTHWORKS

On the summit of the hill is a univallate 1.7 hectare enclosure, with a single entrance to the north-west (Fig. 2). The entrance is now only visible from the air as a crop-mark or soil-mark as *c.* 60 per cent of the enclosure has been ploughed annually since the second world war, obliterating all traces of the earthwork over this proportion of its perimeter. Around the southern margin of the enclosure (Fig. 2), the bank survives only as a low earthwork up to 40 cm. high, topped by a fence or overgrown with brambles. The ditch outside the bank has been everywhere levelled by ploughing. Within the enclosure, although there are relatively recent features like the brick windmill (see below), there do not appear to be any features likely to be contemporary with it. The subsoil on the hill-top is chalk, though on the southern slopes there is a substantial deposit of Clay-with-flints. There may well have been a light capping of Clay-with-flints on the summit, now removed by regular ploughing.

The enclosure does not sit alone in the landscape, and there are a number of other earthworks or features, as follows (Fig. 2):—

(a) A small oval mound, *c.* 26 by 14 metres, just outside the enclosure to the south-west. This is ploughed almost flat, but is easily recognisable from the air as a soil mark.

(b) A field-system extending down the southern slope of the hill. The lynchets have been severely eroded by ploughing, but where they survive undamaged, beneath modern fence-lines, are up to 1.5 metres high. Fieldwalking the area defined by the lynchets produced an abundance of flint flakes, a few scrapers and scraps of heavily flint-gritted pottery.

(c) At least three small round barrows, also very badly eroded by ploughing. One of these is situated on the junction of two lynchets, i.e. in the corner of a field.

(d) A substantial quarry hollow below the lowest lynchet. This is almost certainly of recent origin. There is a large, modern quarry (now abandoned) to the south, the northern tip of which is indicated at the southern margin of Fig 2.

(e) Within the enclosure itself is the windmill, no longer in use and empty. It was built *c.* 1740

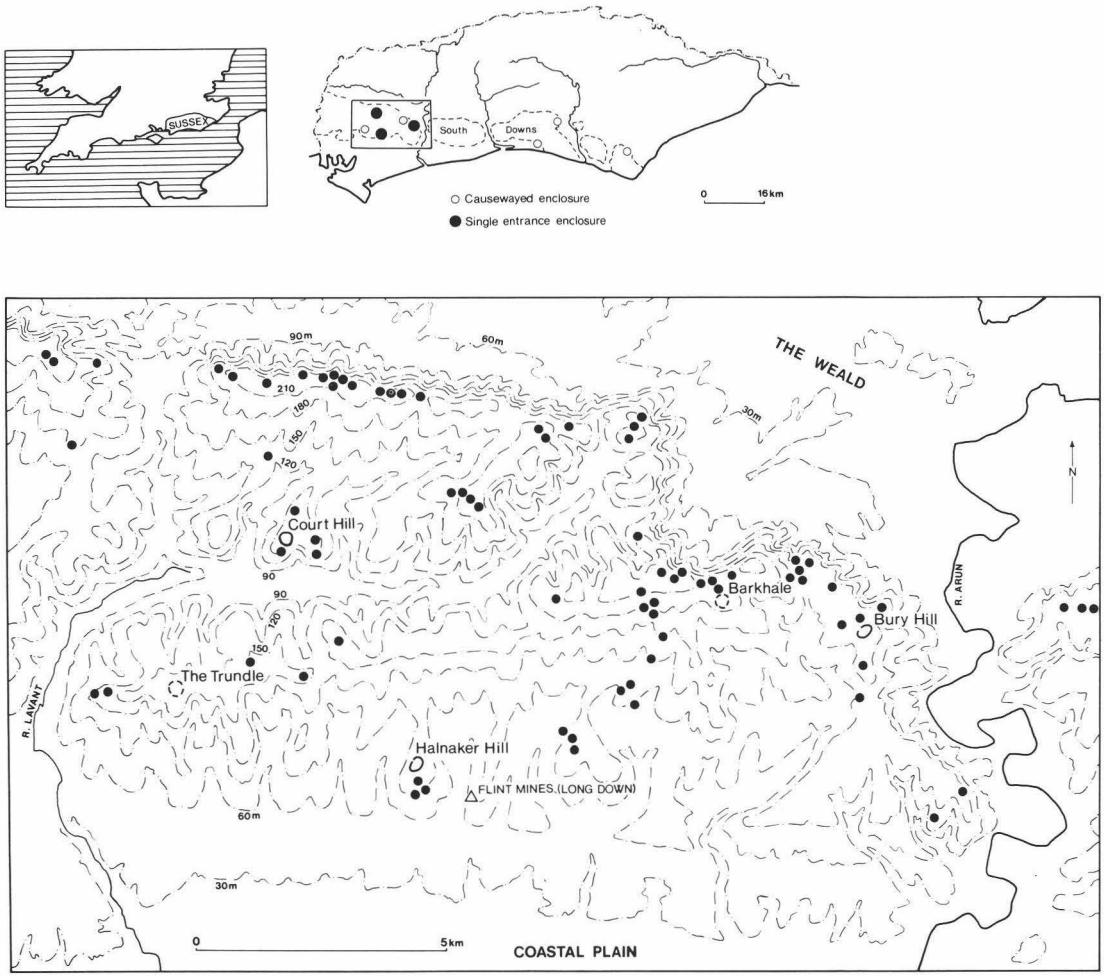

Fig. 1. Halnaker Hill; general site location (by F. G. Aldsworth).

and worked until *c.* 1900. A windmill has been shown here on maps from at least 1595, and the circular hollow near the present windmill may mark the site of an earlier postmill. At the edge of the enclosure is the site of the miller's croft, shown on the Boxgrove Tithe Map of 1841.
Finally, (not shown in Fig. 2) are several polygonal brick and/or concrete structures on the hill-top, marking the positions of second world war gun emplacements.

THE EXCAVATIONS

Three short seasons (10 days each) were carried out by the Sussex Archaeological Field Unit under the direction of the author in September 1981, August 1982 and September 1983. The aim was to date the hill-top enclosure, plus earthworks (a) to (c), and thereby to obtain some idea of how the landscape developed. All trenches (A–F in Fig 2) were hand-dug. The work was entirely funded by grants from the Sussex Archaeological Society's Margary Fund.

The enclosure (Trenches A, B and F; Figs. 2–4)
The northern half of the enclosure, including the single entrance, had been ploughed to the extent that the bank and ditch were not visible on the ground. Plots from aerial photographs were therefore used to locate trenches A and B so as to

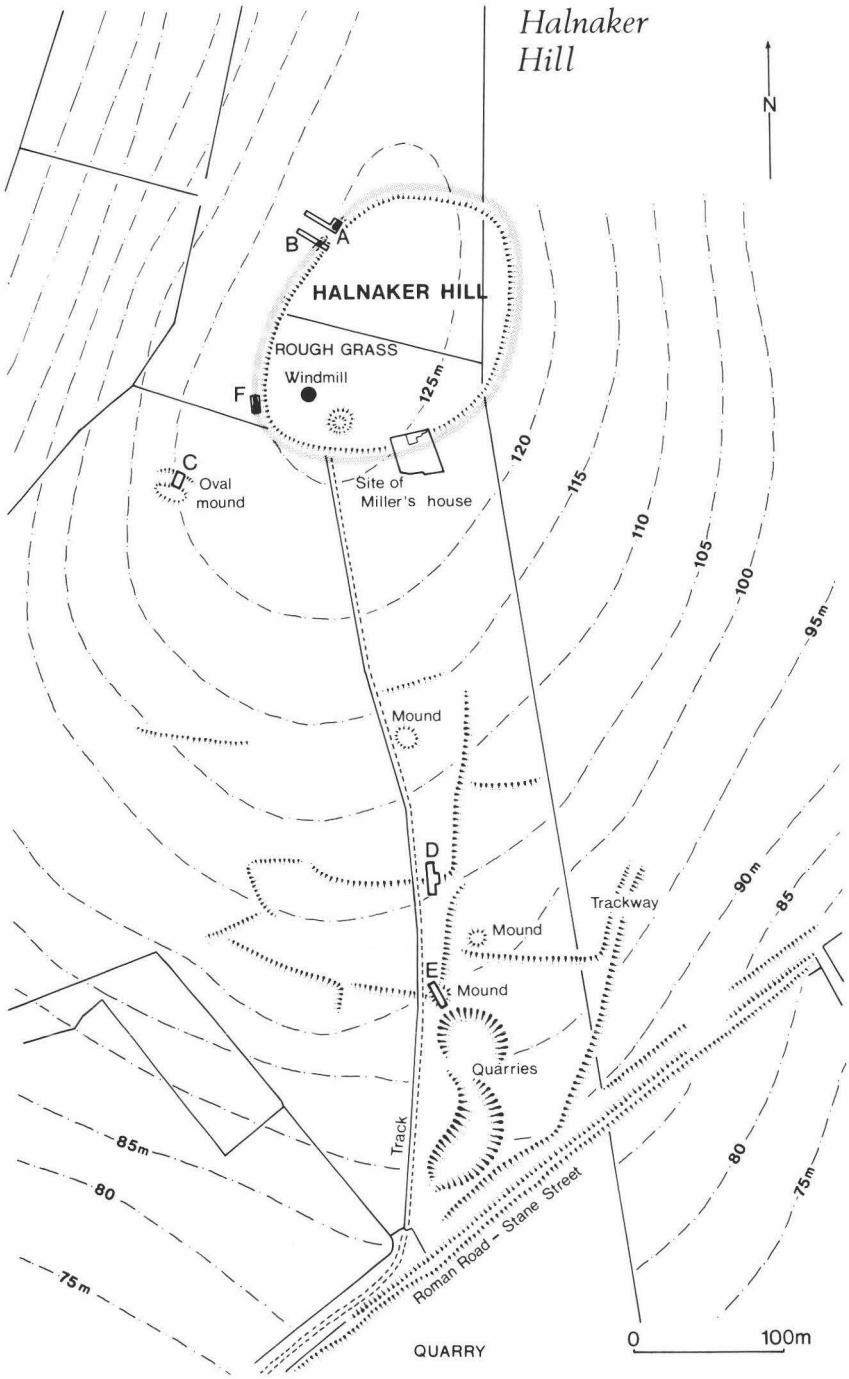

Fig. 2. Halnaker Hill. Plan of earthworks on Halnaker Hill and the trenches A–F. Apart from the rough grass covering the southern half of the hill-top enclosure and the quarry at the southern edge of this area, all this is now arable land (by F. G. Aldsworth).

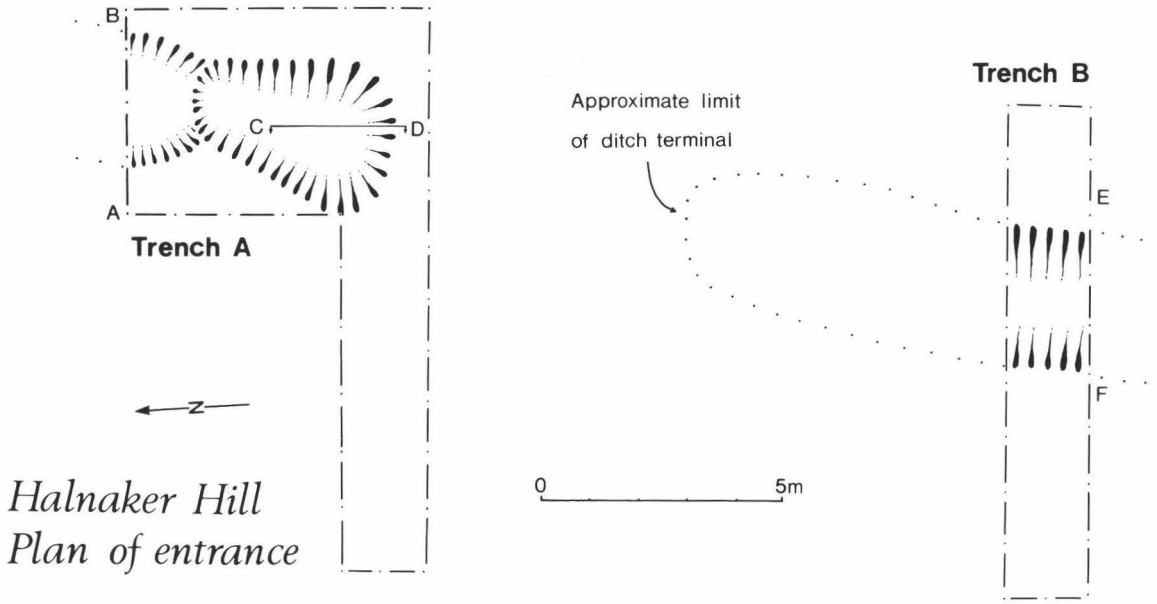

Fig. 3. Halnaker Hill. Detailed plan of the entrance to the hill-top enclosure.

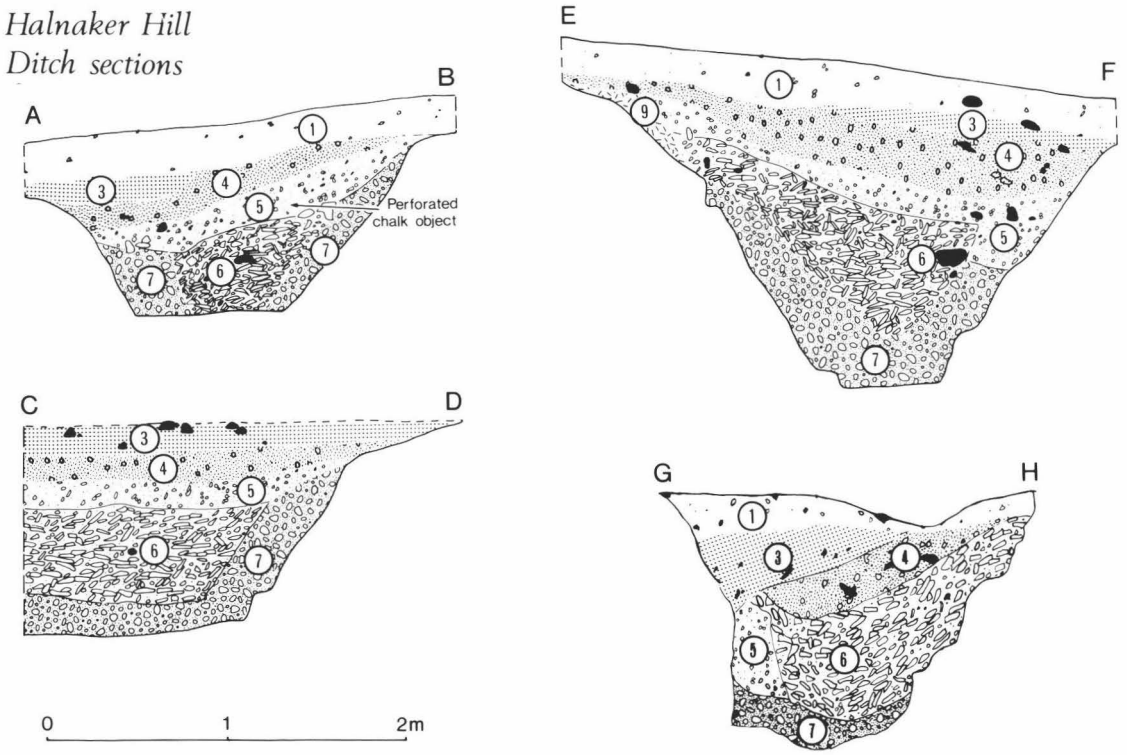

Fig. 4. Halnaker Hill; enclosure ditch sections. Sections AB, CD and EF are shown on Fig. 3. Section GH is the ditch section at the northern end of Trench F (Fig. 2).

examine the entrance; trench F sampled the ditch on the western side.

The L-shaped trench A exposed a 5 metre length of the ditch terminal on the northern side of the entrance. The ditch was cut up to a maximum of one metre into the natural chalk; it had sloping sides and a flat bottom. More significant was the fact that it had clearly been constructed in the 'linked pit' tradition of the early Neolithic (Fig. 3 and Fig. 5). The chalky primary ditch silt (context 7 in Fig. 4) was consistent with rapid natural silting. Above this was an extensive deposit (context 6) of very loose chalk, largely in the form of flat, unweathered chalk slabs. This deposit (which was even more extensive in trench B) could be interpreted as resulting from either sudden natural collapse of, or deliberate backfilling with, the material forming the bank. The silts above this were consistent with slow, natural filling of the ditch.

Finds consisted of flintwork, scraps of animal bone and pottery, and a fragment of perforated chalk disc of indeterminate function. There were 201 pieces of worked flint, almost entirely waste flakes, although 4 cores and 2 short end-scrapers were present. The pottery consisted of 12 small sherds of flint-gritted early Neolithic pottery from contexts 6, 4 and 3, plus 6 small, abraded sherds of Romano-British pottery from context 3, which may have been a Romano-British ploughsoil, partly truncated by modern ploughing. The faunal material consisted of small quanitities of cattle, sheep and pig bones and teeth. There was just sufficient from context 6 for a radiocarbon determination. Soil samples were taken from each of the contexts in the ditch for analysis of land molluscs (report below).

Trench B, 10 metres by 2 metres, sectioned the southern ditch terminal about 5 metres from

Fig. 5. Halnaker Hill; the northern terminal of the entrance ditch in Trench A. The vertical scale is 2 metres.

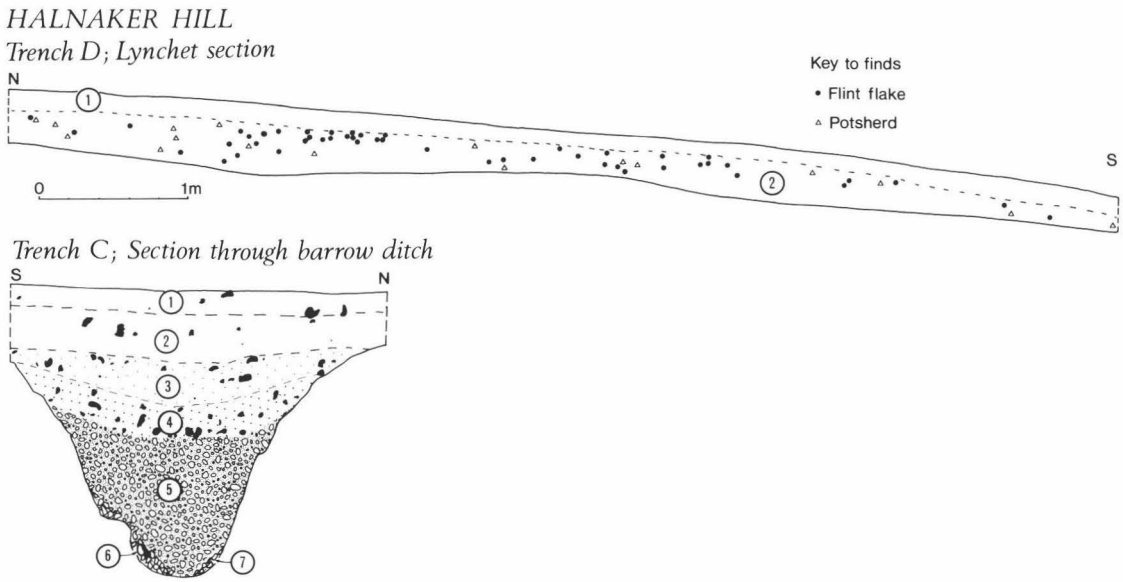

Fig. 6. Halnaker Hill. Sections through the lynchet (trench D) and through the oval barrow ditch (trench C).

the entrance itself (Fig. 3). The ditch here was much deeper than in trench A, having been cut 1.6 metres into the chalk subsoil. The sequence of deposits was very similar to that observed in trench A, although the more extensive loose, rubbly deposit (context 6) implies perhaps a larger bank. Finds were few; there were 77 pieces of worked flint (again virtually all waste flakes, though there was a single hollow scraper), 5 sherds of pottery (early Neolithic, a late Neolithic rim and a possible Iron Age sherd), 2 fragments of cattle bone and, from the topsoil, a small sandstone object, possibly a grinding stone.

In neither trench A or B was there any indication of post holes suggesting a revetment for the bank.

Trench F measured 3 metres by 5 metres, and was located across the ditch on the western side of the enclosure. The sequence of silts was remarkably similar to that revealed in trenches A and B, 120 metres away (Fig. 4). Finds were minimal; there was a single flint flake, and 3 small sherds of pottery (one Iron Age and 2 Romano-British). None of these came from the early silts, however.

The oval barrow (Trench C; Figs. 2 and 6)
On the northern (upslope) side of this feature, what appears to be a flanking ditch survives as a slight hollow. A trench 5 metres long by 2 metres wide was positioned so as to section this ditch, which was shown to be 2.0 metres deep and 2.2 metres wide at the top. It had steeply sloping sides and a narrow, flat bottom (Fig. 6). The top of the ditch was cut through a thin, patchy deposit of Clay-with-flints, but most of the subsoil was chalk. The ditch silts were therefore a mixture of chalky and clayey materials, with no indication of any re-cut. There were no finds.

The field system (Trenches D and E; Figs. 2 and 6)
The purpose of trench D was to date one of the more prominent lynchets on the southern slope of the hill. A slot 15 metres long by 1 metre wide was cut through the lynchet at right angles to its main axis. The eastern section was then drawn, and the lynchet build-up (context 2 in Fig. 6) was then carefully cut back by trowelling, each artefact being plotted onto the drawn section. A total of 66 artefacts was recovered; 17 potsherds and 49 flint flakes. The pottery was flint-gritted, some sherds very heavily. One sherd appeared to have traces of a haematite coating. The general data range for this pottery cannot be more closely defined than the late Bronze Age/early Iron Age.

Trench E, 12 metres long by one metre wide, was located so as to section a possible small round barrow (much reduced by ploughing), situated on top of the corner of a field. The trench was uninformative, and there was no dating material. The strategy of a single narrow trench across such a heavily eroded feature is probably therefore inappropriate.

SPECIALIST REPORTS

The artefacts by P. L. Drewett

The artefacts consisted of 65 pottery sherds, 278 pieces of struck flint, six pieces of burnt flint, two stone objects and a fragment of burnt clay.

A. *The pottery* (for details see pottery archive report)

The entrance to the enclosure produced 15 sherds of Fabric 1 (Drewett 1980) early Neolithic pottery from contexts 3–6 (fig. 7, no. 1). A small, cord-impressed rim sherd (Fig. 7, no. 2) from a Peterborough-tradition bowl found in context B4 suggests a later Neolithic presence. The remaining sherds from the enclosure are Romano-British.

The field system produced 39 small, abraded sherds, most of which may be assigned to the Late Bronze Age/Early Iron Age, together with a few Roman-British sherds. Significantly, all 17 sherds from the lynchet build-up itself belong to the Late Bronze Age/Early Iron Age.

B. *Stone artefacts*

1. Half a round, perforated chalk object. If complete, the object would have weighed *c.* 350 gm. It is therefore somewhat heavy for a spindle whorl, but rather light for a loomweight (Drewett 1985). Fig. 7, no. 3. Context A5.
2. Oval siliceous sandstone object, possibly a grinding stone. 275 g. Fig. 7, no. 4. Context B1.

C. *Flint artefacts*

The flint assemblage consists almost entirely of waste material. It is uncertain how much of it relates to the early Neolithic activity on the site, and how much to later Neolithic activity. Most of the material appears to be the result of core preparation, perhaps for use elsewhere on the site. The small cluster of very small flakes from context A7 suggests some secondary working. The tool types, scrapers and retouched flakes, may be either Neolithic or later. The assemblage is summarised in Table 1.

D. *Burnt clay*

A small fragment of fired clay, possibly from a loomweight (Context E1).

The animal bone

A total of 17 fragments of animal bone and teeth were recovered from silts within the enclosure ditch in Trenches A and B. All fragments were unworn and in good condition. Species represented were *Bos, Sus* and *Ovis*. A group of fragments from low down in context A6 were used to provide a radiocarbon date (see below).

Radiocarbon date

The animal bone from context A6 was sent to Teledyne Isotopes, New Jersey, who provided the following radiocarbon date:—

2850 ± 90 B.P. (Sample no. I–12,322) [uncalib]

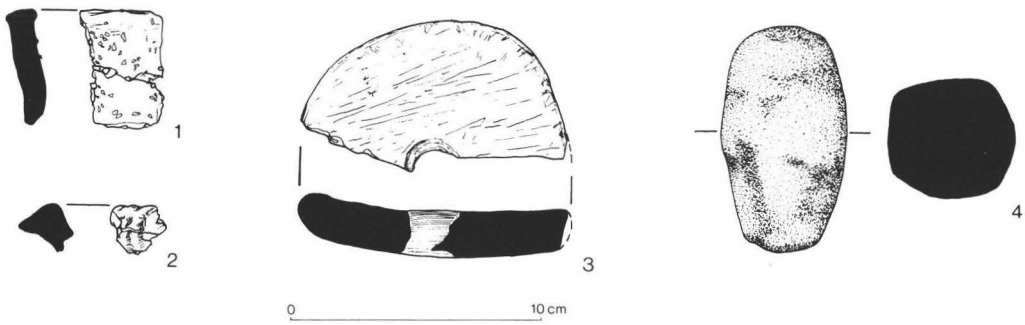

Fig. 7. Halnaker Hill; artefacts. Nos. 1 and 2; pottery: no. 3; perforated chalk object: no. 4; sandstone.

TABLE 1

Context	A						B			F	
Type	*1*	*3*	*4*	*5*	*6*	*7*	*1*	*4*	*5*	*3*	*Total*
Flakes	56	37	21	5	19	50*	53	5	15	1	262
Rough Workshop Waste		1			3	1					5
Cores:											
Type A2					2						2
Type C	1					1					2
Scrapers:											
Short end	1	1									2
Hollow							1				1
Retouched flakes	1	1					3				5
Totals:											279
Fire cracked flints		3			2		1				6

*Including 49 very small flakes and chips

Evidence of past environments and land-use at Halnaker Hill from a study of the land molluscs by K. D. Thomas

The land molluscs recovered from the calcareous sediments within the enclosure ditch represent the only source of paleoenvironmental data. For the analysis of land snails, soil samples were taken from each of the ditch contexts in trench A (Fig. 4, section AB, contexts 1–7). The weights of sample extracted are shown at the foot of Table 2. The assemblages of snails which were recovered are generally very small (Table 2) and would not normally be worth much comment, except that they may be usefully compared with similar sets of data from other (Neolithic) enclosures in Sussex (Thomas 1981).

Context A7, the primary fill of the ditch, consists of abundant chalk rubble (in a fairly unweathered, angular state) in a soft, buff soil matrix. It probably consists mostly of weathered material from the bank. Very few snail shells were recovered from this deposit, but they include *Pupilla muscorum* and *Vallonia costata*, indicating the presence of open-country habitats in the vicinity of the ditch (Tables 2 and 3).

Context A6 consists of large and abundant unweathered chalk lumps, loosely packed, with numerous air spaces and a little buff matrix. (Note the excavator's comment: 'It looked very much as if the original chalk bank had been pushed back into the ditch after a very short time.'). Again, very few shells were recovered (Table 2), but the assemblage was dominated by shade-loving and other, ecologically compatible

TABLE 2
Absolute frequencies of molluscs from Halnaker Hill

Species	*Sample:* *7*	*6*	*5*	*4*	*3*	*1*
Pomatias elegans (Müller)	3	+	3	12	3	14
Acicula fusca (Montagu)	–	2	1	–	–	–
Carychium tridentatum (Risso)	–	3	3	2	–	–
Cochlicopa lubricella (Porro)	–	–	1	–	–	–
Vertigo pygmaea (Draparnaud)	–	–	–	–	1	2
Pupilla muscorum (Linnaeus)	1	+	+	+	4	2
Vallonia costata (Müller)	3	–	–	–	5	7
Vallonia excentrica Sterki	–	–	–	7	1	–
Vallonia sp.	1	–	–	–	–	–
Punctum pygmaeum (Draparnaud)	–	–	–	–	1	–
Discus rotundatus (Müller)	1	1	11	16	–	2
Vitrea contracta (Westerlund)	1	–	2	–	–	–
Nesovitrea hammonis (Ström)	1	1	5	2	–	–
Aegopinella nitidula (Draparnaud)	–	1	5	1	–	–
Oxychilus cellarius (Müller)	–	1	1	3	–	–
Oxychilus sp.	–	2	3	–	–	–
Cecilioides acicula (Müller)	–	2	4	34	–	3
Cochlodina laminata (Montagu)	–	–	1	–	–	–
Clausilia bidentata (Ström)	–	–	–	1	1	–
Balea perversa (Linnaeus)	–	1	–	–	–	–
Candidula intersecta (Poiret)	–	–	–	–	–	1
Helicella itala (Linnaeus)	–	–	–	–	–	+
Trichia striolata (C. Pfeiffer)	1	–	–	–	2	5
Trichia hispida (Linnaeus)	–	1	–	1	–	–
Cepaea sp.	+	+	1	+	–	3
Totals*	12	13	37	45	18	36
Sample weight (kg)	1.0	1.0	1.0	1.0	0.7	2.0

*Excluding *Cecilioides acicula*
Non-apical fragments represented as +

species (Table 3). Open-country species were represented by only two body-whorl fragments of *Pupilla muscorum*. Rather more taxa were identified in this sample than the sample from context A7 (Table 3).

TABLE 3
Percentage frequencies of different ecological groups in the assemblages of snails from Halnaker Hill

Ecological group	*Sample:*	*7*	*6*	*5*	*4*	*3*	*1*
Shade-loving		25.0	92.3	86.5	55.5	11.1	5.5
Pomatias elegans		25.0	+	8.1	26.7	16.7	38.9
Catholic		8.3	7.7	5.4	2.2	11.1	22.2
Open-country		41.7	+	+	15.5	61.1	33.3
Total (Snails/kg.)*		12	13	37	45	26	18

*Excluding *Cacilioides acicula*

TABLE 4
Numbers of taxa in the different ecological groups in the assemblages of snails from Halnaker Hill

Ecological group	*Sample:*	*7*	*6*	*5*	*4*	*3*	*1*
Shade-loving		3	8	9	6	2	9
Pomatias elegans		1	1	1	1	1	1
Catholic		2	1	1	2	1	1
Open-country		3	1	1	2	4	5
Total taxa:		9	11	12	11	8	9

Context A5 consists of a matrix of light brown soil containing numerous small and weathered fragments of chalk. Rather more shells were extracted from this sample (Table 2) and more taxa identified (Table 4). The assemblage consists of shade-loving and other compatible elements; as with the sample from context A6, *Pupilla muscorum* is the only open-country species present and is represented by a few fragments of body-whorls.

Context A4 is a dark brown soil with numerous weathered chalk fragments. The sample from this context yielded the largest number of shells (Table 2) and a relatively large number of taxa (Table 4). Most interesting is the ecological diversity, or heterogeneity, of the assemblage (Table 3). Shade-loving elements are most abundant, but *Pomatias elegans* is at a high frequency and open-country forms have a strong representation.

Context A3 consists of fine, crumbly very dark soil with a few chalk fragments. A small assemblage of snails, of relatively low taxonomic diversity, was extracted (Tables 2 and 4). The assemblage is dominated by open-country taxa and other species which are able to exist in open habitats.

Context A1, the modern ploughsoil, consists of chalk fragments (many more than in the sample from context A3) in a matrix of dark brown crumbly soil. The assemblages of land-snails is fairly small (Table 2) and of relatively low diversity (Table 4). It is dominated, as one might expect, by open-country and other compatible species, shade-loving forms being rare (Table 3).

Discussion

I have discussed elsewhere (Thomas 1981) the problems of reconstructing past environments from assemblages of land-snails derived from ditch sediments, and in particular how far such assemblages merely reflect the sheltered microhabitat of the ditch. A ditch dug in totally open country may provide considerable shade, and favour many species of snails normally associated with woodland and other shaded habitats. In such situations, however, the snail assemblages accumulating in the sediments of these ditches invariably include a significant representation of the snail faunas in the landscape around the ditch. Where assemblages of snails from deposits in a ditch contain very few, or no, species which prefer open habitats, we may reasonably doubt the existence of such habitats in the vicinity of the ditch. This is particularly true for shallow ditches, which would offer less in the way of sheltered and moist microhabitats (the samples described here were from a ditch only about one metre deep and about two metres wide at the top) and in which open-country species may be able to exist. Thus, the assemblages described here may not merely be what one would expect (*a priori*) from a ditch, regardless of the more general habitat, but may be an indication of the environment around the site at various times.

In the absence of a buried soil, the sample from the primary fill of the ditch (context A7) provides the only evidence for the environment

contemporary with the earliest use of the site. The sediment forming context A7 was probably derived in the main from weathering of the bank and sides of the ditch. The land snails indicate the existence of a cleared area around the site. Samples from contexts A6 and A5 may relate to the early abandonment of the site. We have noted the possibility that context A6 may represent bank material pushed, or otherwise fallen, into the ditch. The assemblages of land snails from these samples are totally dominated by species indicative of shaded conditions, or which are tolerant of such conditions. The overall ecological diversity of the assemblages indicates the presence of a range of spatial and trophic microhabitats usually associated with deciduous woodland ecosystems.

The sample from context A4 contains a markedly different assemblage of snails in which the decline in frequency of shade-loving species is compensated by an increase in the abundance of both open-country species and *Pomatias elegans*. The assemblage may reflect a more open habitat, with plenty of bare, loose soil, and may therefore indicate a phase of woodland clearance. The open nature of the landscape around the site is also reflected in the snails from context A3 and A1. Context A3 consists of dark, crumbly, relatively stone-free soil which resembles the dark humic soils (rendzinas) under grassland on the Chalk at the present day. The snails from this sample are of open-country preference, and *Pomatias elegans* is at a lower frequency compared with the samples from contexts A4 and A1, perhaps suggesting rather stable soil conditions associated with predominantly grassland habitats. The modern ploughsoil contains assemblages of snails of rather mixed character, although shade-requiring elements are very rare. The abundance of *Pomatias elegans* in this sample may reflect the broken-up nature of the ploughsoil. *Trichia striolata* is a synanthropic species of catholic ecological preference.

Conclusions

The following sequence of change in the local habitats around the site is tentatively suggested:

1. At the time of constructing the enclosure, a clearance was made in the woodland on Halnaker Hill. The cleared area, of unknown extent but probably quite localised, was colonised by a few species of land snails with a preference for open habitats.
2. The enclosure had a relatively short lifespan and, following abandonment, woodland encroached over the site.
3. Later woodland clearance (as suggested by molluscs from context A4) was succeeded by mainly pastoral land-use (as indicated by the evidence from context A3). The date of these events is unclear.
4. Later, the whole site was ploughed over and this pattern of land-use persisted up to the present. The microtopography of the site was destroyed by this ploughing and the rendzina soil (represented as a palimpsest by context A3) was converted into the ploughsoil of context A1.

The environmental evidence thus suggests localised clearance of woodland for the construction of the enclosure, followed by its abandonment. Regeneration of woodland then occurs over the site, followed by permanent and more extensive clearance of woodland at some later date.

DISCUSSION

The results from the investigations of each of the main earthworks will be considered in turn.

The hilltop enclosure

The evidence for the date of this enclosure is unfortunately equivocal. The 'linked pit' type of construction seen in trench A suggests an early Neolithic date broadly contemporary with the classic causewayed enclosures and with Bury Hill. The results of the molluscan analysis (above), although based on small numbers of snail shells, are comparable with the pattern of the construction of early Neolithic enclosures in limited woodland clearings (e.g. Offham, Bury Hill, Barkhale—summarised in Thomas 1981). The artefact evidence is, however, weak and may hint at a short lifetime for the site. Pottery of the early Neolithic did predominate in trenches A and B, but the amounts involved were so small as to be barely significant. Equally, the flintwork is not especially helpful, as the few tool types may be Neolithic or later. Finally, there is the radiocarbon date of 2850 ± 90 B.P., in the later

Bronze Age. The bone material which provided this date came from context A6, which is not the primary silt, although the section (Fig. 5) suggests that this chalky rubble must have been deposited fairly soon after the ditch was cut.

Two possible interpretations therefore present themselves:

(a) that the enclosure is of early Neolithic origin, and the radiocarbon date is a 'rogue' one;

(b) that the enclosure belongs to the later Bronze Age, but there is residual early Neolithic material from previous use of the hill top.

On balance, the author prefers the former. However, whichever interpretation is correct, it is clear that this enclosure can no longer plausibly be classified as an Iron Age hill fort.

The oval mound

This was confirmed as the remains of a ploughed-out barrow, rather than a natural feature of the type investigated at Slindon (Drewett 1978). Although no dating evidence was obtained, this is presumably of Neolithic origin, and should be added to the list of known oval barrows.

The field system and round barrows

Trench D, through one of the better preserved lynchets, produced abraded, flint-gritted pottery from the lynchet build-up that can be dated only generally to the late Bronze Age/early Iron Age. This broad dating is nevertheless of interest, since there are two known Romano-British settlements nearby (West Sussex County Council SMR), but no contemporary prehistoric settlement, unless one favours the evidence for the later Bronze Age date of the enclosure (above), and further assumes that the enclosure was a settlement.

Of equal importance is the siting of one of the denuded round barrows on top of the corner formed by two of these lynchets. This clearly implies that the barrow post-dates the later Bronze Age/early Iron Age; the most likely interpretation is that it is Saxon. If so, this positioning of a Saxon round barrow on top of a prehistoric field boundary parallels the situation at New Barn Down (Curwen 1934), and may indicate Saxon burial (and ?settlement) rather nearer to Chichester than Apple Down (Down and Welch 1990).

To sum up, the original aim of dating all the earthworks on Halnaker Hill and of establishing the sequence of landscape development has only been partially achieved, the inability to date the hill-top enclosure precisely being particularly disappointing. It had been the author's intention to return for further excavation after 1983, but moving from Sussex to Essex at the end of that year made this impossible. Clearly, however, there remains considerable potential for further field work in the area.

Acknowledgements

The author is grateful to Mr M. J. Langmead for permission to excavate, to Mark Roberts and Peter Reeves for help on site, and to Lys Drewett for Fig. 7. Thanks are also due to those who have provided specialist reports, and to F. G. Aldsworth for his help and encouragement and for Figs. 1 and 2.

The finds have been retained by the landowner; a copy of the site archive can be consulted at the Field Archaeology Unit, Institute of Archaeology, University College London.

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References

Bedwin, O. 1981 'Excavations at the Neolithic enclosure on Bury Hill, Houghton, West Sussex 1979', *Proc. Prehist. Soc.* **47**, 69–86.

Bedwin, O. 1984 'The excavation of a small hilltop enclosure on Court Hill, Singleton, West Sussex 1982', *Suss. Arch. Coll.* **122**, 13–22.

Curwen, E. C. 1934 'A late Bronze Age farm and a Neolithic pit dwelling on New Barn Down, Clapham, near Worthing', *Suss. Arch. Coll.* **74**, 153–7.

Down, A. and Welch, M. G. 1990 *Apple Down and the Mardens*, Chichester Excavations 7: Chichester District Council.

Drewett, P. L. 1978 'The excavation of an oval mound and a round barrow at Slindon, West Sussex 1976', *Suss. Arch. Coll.* **116**, 257–60.

Drewett, P. L. 1980 'Neolithic pottery in Sussex', *Suss. Arch. Coll.* **118**, 23–9.

Drewett, P. L. 1985 'Settlement, economy, ceremony and territorial organisation in Sussex, 4th–2nd millenium B.C.', unpublished Ph.D. thesis, University of London.

Thomas, K. D. 1981 'Neolithic enclosures and woodland habitats on the South Downs in Sussex, England', in *Archaeological aspects of woodland ecology* (eds M. Bell and S. Limbrey), B.A.R. **146**, 147–70.

Sussex Archaeological Collections **130** (1992), 13–21

FURTHER FIELDWALKING AT NOVINGTON MANOR, PLUMPTON, EAST SUSSEX

by Chris Butler and John Funnell

INTRODUCTION

During the autumn of 1989 two fields (Fig. 1, Fields 2 and 3) were walked at Novington Manor, Plumpton; this was arranged and supervised by John Funnell as part of an 'A' level archaeology project. A further field (Fig. 1, Field 1), walked by Mr L. Gaston during the preceding year, was also brought into this survey. These three fields were adjacent to the field previously surveyed in 1987 (Butler, 1989), and together comprised a rectangular block of land just off the north scarp slope of the South Downs (Fig. 1).

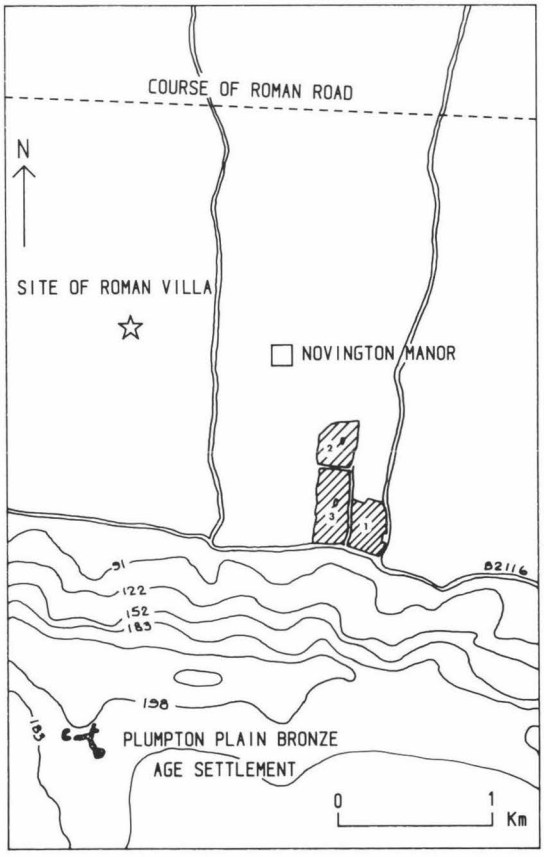

Fig. 1. Location of the Fields at Novington Manor.

The fields were walked in transects spaced at 20 metre intervals and orientated on grid north. All material likely to be of archaeological interest was collected and bagged in 20 metre collection units. The two fields surveyed in 1989 had been sown, the crop having just emerged; the field walked the preceding year was fallow.

As with an earlier survey, a wide range of finds were recovered and are discussed below, together with further items that were found with the aid of a metal detector.

THE FINDS

The Flint

Over 1000 pieces of flintwork were recovered during the survey, and are summarised in Table 1. The flint is of the same types as were found in the previous survey of the adjacent field (Butler 1989, 31).

A small proportion of the flakes and blades are soft hammer struck which, together with a number of blade tools and other implements, probably date from the Mesolithic. They indicate limited activity here, possibly from hunting groups, in the Mesolithic.

The remainder of the debitage is hard hammer struck and, along with most of the implements, is typical of the flintwork found in the later Neolithic and early Bronze Age, although a few pieces may be later in date. The large quantity of implements and debitage suggests an activity site or sites of some size, and from the range of implements found; scrapers, piercers, knives, and other tools (Fig. 2), indicates that a range of activities was being carried out here (Holden, 1975).

Pottery

Over 1000 sherds of pottery, together with pieces of clay pipe and burnt clay were found during the survey (Table 2).

Prehistoric

The prehistoric pottery comprised five fabrics,

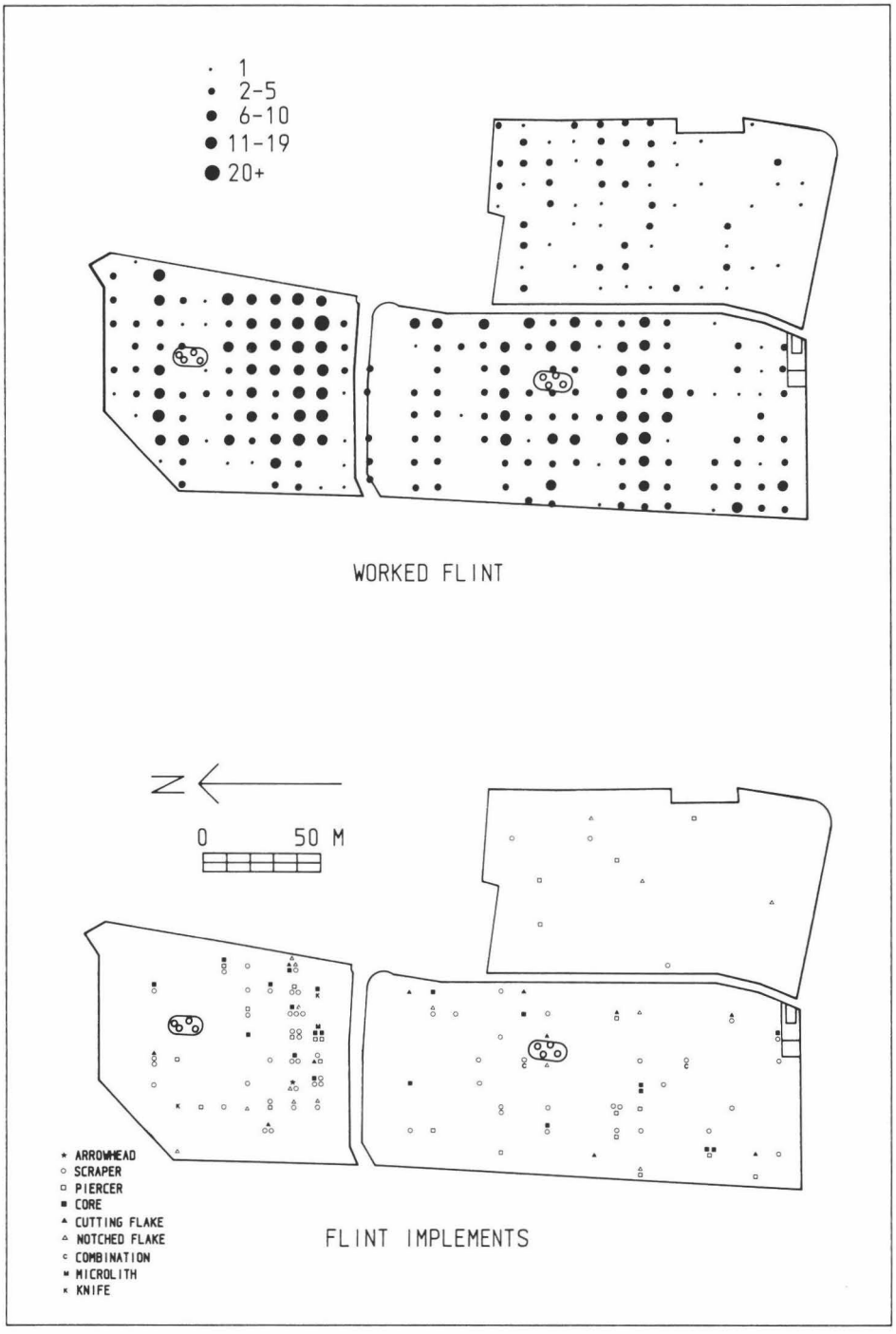

Fig. 2. Distribution of Worked flint and Flint Implements.

TABLE 1
The Flint Assemblage

	Field 1	*Field 2*	*Field 3*	*Total*
Debitage				
Flakes	85	296	339	720
Blades	7	16	13	36
Crested blades	–	2	–	2
Miscellaneous retouched pieces	1	43	16	60
Shattered pieces	4	60	62	126
Burin spall	–	1	–	1
Single platform, flake core	–	3	3	6
Two platform, flake core	–	5	3	8
Three platform, flake core	–	1	1	2
Single platform, blade core	–	2	2	4
Core tablets	–	5	1	6
Core rejuventation flake	–	1	–	1
Implements				
Leaf shaped arrowhead	–	1	–	1
Scrapers	3	33	26	62
Piercers	4	10	9	23
Notched pieces	3	8	4	15
Knives	–	2	–	2
Cutting flake/blades	1	4	7	12
Combination tool	–	–	2	2
Microlith	–	1	–	1
Hammerstone	–	–	1	1
Total	108	494	489	1091
Fire-fractured flint	284	312	841	1437
Total	392	806	1330	2528

TABLE 2
Pottery (Sherds)

	Field 1	*Field 2*	*Field 3*	*Total*
Prehistoric	3	11	13	27
Roman	13	14	24	51
Medieval	359	17	313	689
Post-medieval	154	12	87	253
Clay pipe	6	–	–	6
Burnt clay	41	79	275	395
Total	576	133	712	1421

dating from the early Bronze Age through to the early Iron Age; however the majority of the prehistoric pottery found appeared to be typical of fabrics found in the Bronze Age.

1. Buff to red or black sandy fabric with frequent medium sized calcinated flint inclusions. Holes left from burnt-out organic material. Probably Bronze Age.
2. Black sandy fabric with small to medium sized flint inclusions. Late Bronze Age/early Iron Age.
3. Grog-tempered dark grey or red brown/brown fabric with occasional medium sized calcined flint inclusions. Early Bronze Age.
4. Grey/black and brown fabric. Small to medium sized calcined flint inclusions. Holes left from burnt-out organic material. Probably Bronze Age (similar to Fabric 1).
5. Orange red to brown grog tempered fabric with medium sized calcined flint and quartz inclusions. Probably Bronze Age.

Roman

Four different fabrics of Roman pottery were found, however the majority (70 per cent) of the sherds were of East Sussex Ware, with the remainder being finer sandy wares.

6. Fine sandy buff ware.
7. Sandy orange-red ware, sometimes with reduced core.
8. Sandy grey ware.
9. Grog-tempered ware with soapy feel. Rare flint inclusion. Various colours from buff to black. East Sussex Ware.

Medieval

Medieval pottery made up the largest proportion of all the sherds found. They were all of a sandy fabric, most had flint inclusions of variable size and frequency, and some were glazed.

10. Sandy ware with variable sized flint inclusions of variable frequencies. Colours range from buff, red to brown. Some sherds have a green or yellow-green glaze. Mostly 12th–13th century in date, some may be earlier Saxo-Norman type ware.

Post-medieval

Over 250 post-medieval sherds and 6 fragments of clay pipe were found, mainly in Field 1. These ranged in date from the 17th Century up to the present day.

11. Various fabrics and types of ware.
12. Clay pipe, no makers marks present on pieces found, but some stems are thick, indicating an earlier rather than later date.

Burnt Clay

The survey revealed almost 400 fragments of burnt clay, the majority of which came from Field 3. This material, most of which was of the same composition and texture, probably represents daub of an indeterminate date.

The Purse Bar

One of the side bars from this purse bar was found during the earlier project at Novington (Butler 1989, Fig. 2, No. 16). The remainder of it was found more recently, near to the findspot of the first sidebar, by Mr L. Gaston with the aid of a metal detector. The reconstructed purse bar is shown in Fig. 6.

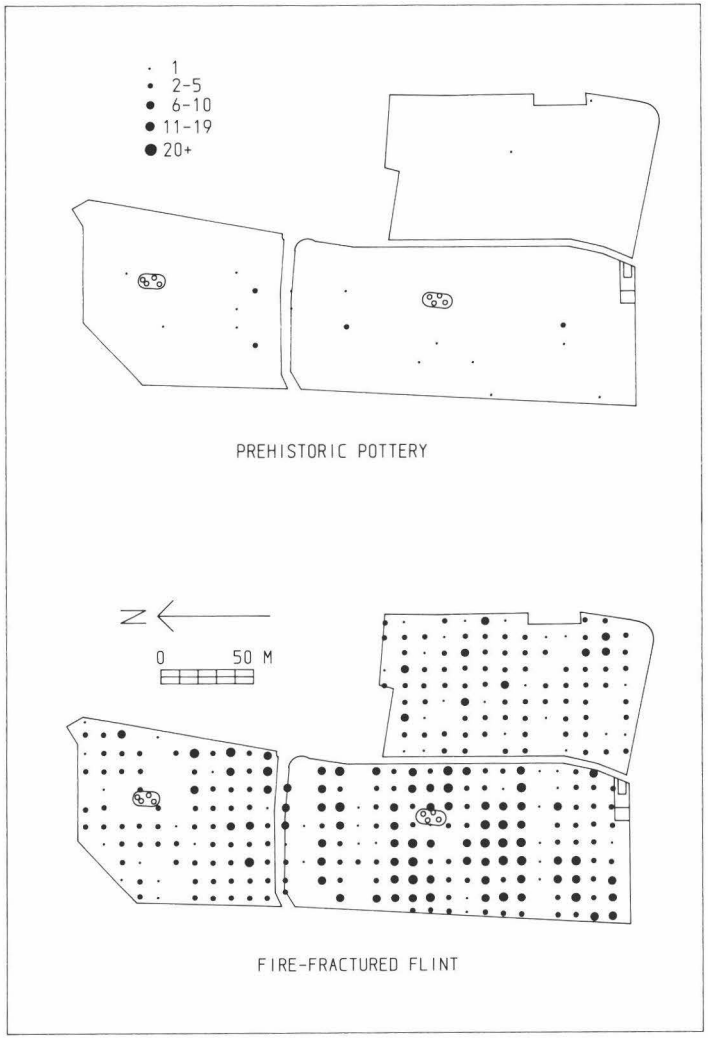

Fig. 3. Distribution of Prehistoric Pottery and Fire-fractured Flint.

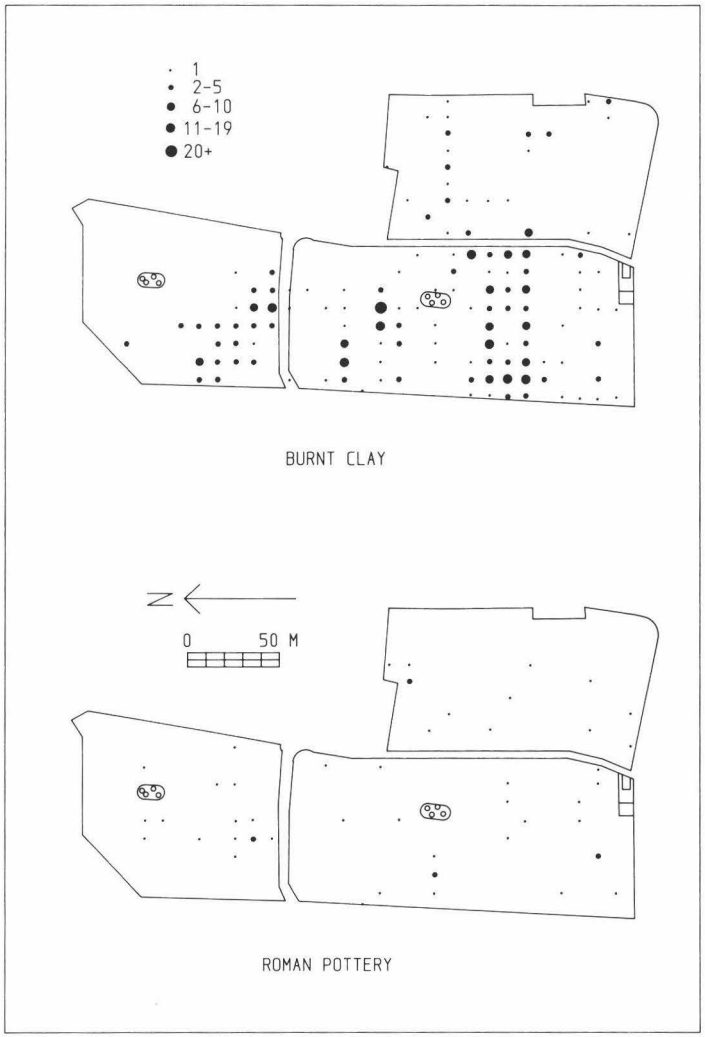

Fig. 4. Distribution of Burnt Clay and Roman Pottery.

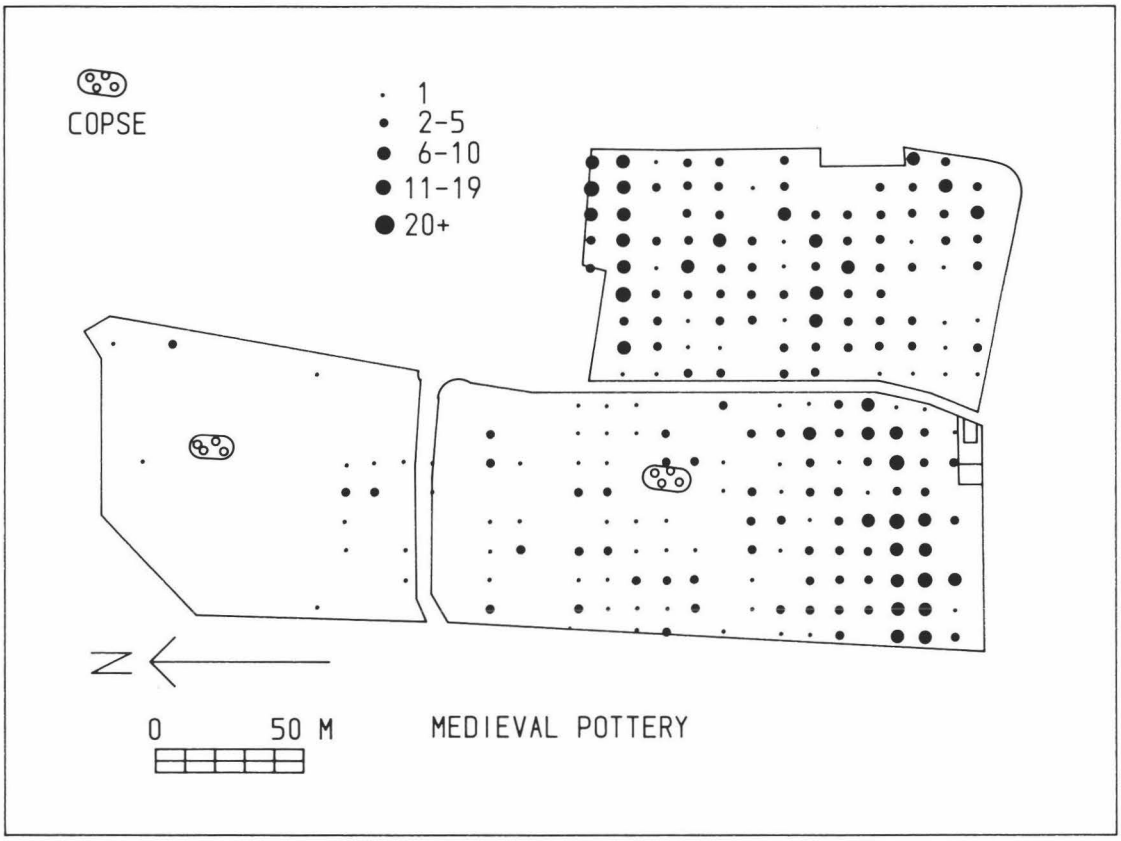

Fig. 5. Distribution of Medieval Pottery.

The purse bar is made of bronze or copper-alloy. The side bars are circular in section and take the form of animal's heads at their junction with the central boss. The side bars are decorated with a diagonal lattice-pattern on both the back and front. On one side of the central boss is a simple star, and on the other, what appears to be three almost vertical lines, but which may be a simple 'W', an initial which was quite common on this type of purse bar. The central loop, used for suspending the purse bar from a belt, is undecorated.

This particular form of purse bar is typical of a Type A1 (London Museum Catalogue, 1940, 164), which is amongst the earliest and most elaborate known in the country, and dates from the 15th Century.

Other Non-ferrous Metal objects

1. *The Disc Brooch:*

A 'Ring and Dot' ornamented disc brooch (Fig. 7) was found (at the south end) of Field 1, by Mr R. Burgess.

Made in copper alloy, the disc brooch contains a 'ring and dot' design comprising; a central large 'dot' enclosed within an incised ring, Around this are eight smaller dots each within its own incised ring. The whole design is then enclosed within a larger (double?) ring. On the reverse of the brooch are the broken remains of two lugs which would originally have held the fastening pin.

Ring and dot ornamented disc brooches are commonly found in Anglo-Saxon cemeteries and settlements in southern England (Welch, 1983),

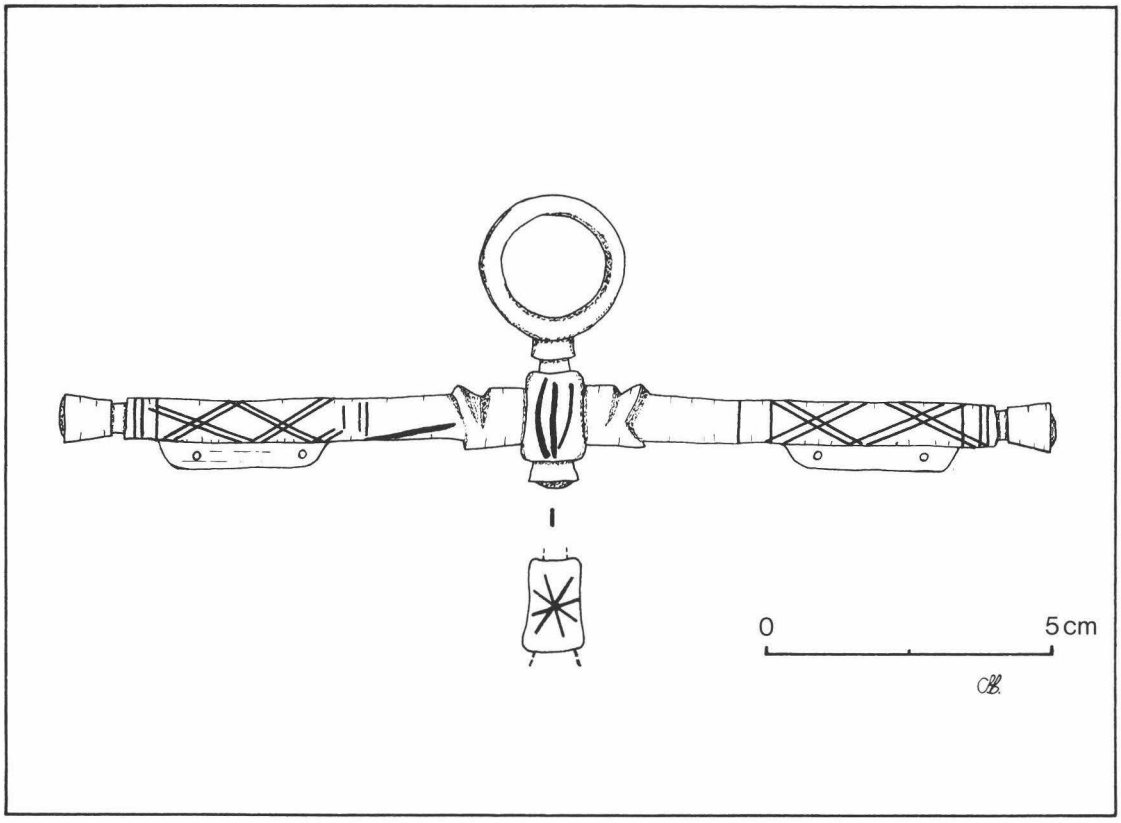

Fig. 6. 15th Century Purse Bar.

with examples in Sussex coming from Alfriston, Beddingham and Highdown. They date from the second half of the 5th Century and into the later 6th Century.

2. *The Strap-end:*

A 9th-Century Anglo-Saxon strap-end of copper-alloy (Fig. 8) was also found by Mr R. Burgess in Field 1. It is broken at the split-end, with the upper part of the front missing, and the back is broken at the rivet holes. As with other strap-ends recently found in Sussex (Graham-Campbell 1988 and 1989), this latest one has 'Trewhiddle style' decoration. The terminal is in the form of an animal's head viewed from above, with oval ears containing lunate incisions and a fan shaped field on its forehead, containing a stylised plant-motif. There is a beaded border along either side of the main body of the strap-end, with a plain inner border framing a field which contains a stylised animal with nicked contours; however, part of this field is missing. The reverse of the strap-end is plain. Length: 39 mm.

This find takes the number of 9th Century Anglo-Saxon strap-ends found in Sussex to six in total, one of which was found in 1984 at Westmeston, only some 3 km from this latest one. We would like to thank Mr Graham-Campbell for his comments on the strap-end.

3. *The Buckles:*

Six copper-alloy buckles were found in the topsoil of Fields 1 and 3. They include both single and double types. Two of the buckles are decorated, and one has an iron pin. Most of them may date from the medieval period, but some are probably later in date. Three of the buckles have been illustrated previously (Funnell 1990).

4. *Miscellaneous Copper-alloy items*

Three small pieces, possibly belt or horse furniture fittings, were found in Field 1, together with a small strip of copper-alloy.

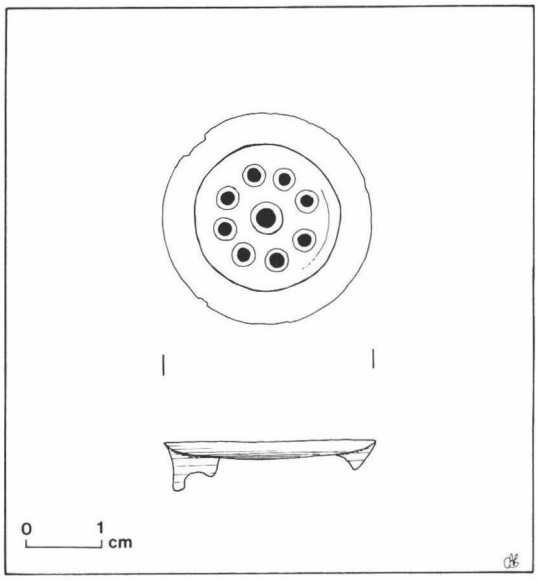

Fig. 7. Anglo-Saxon Disc Brooch.

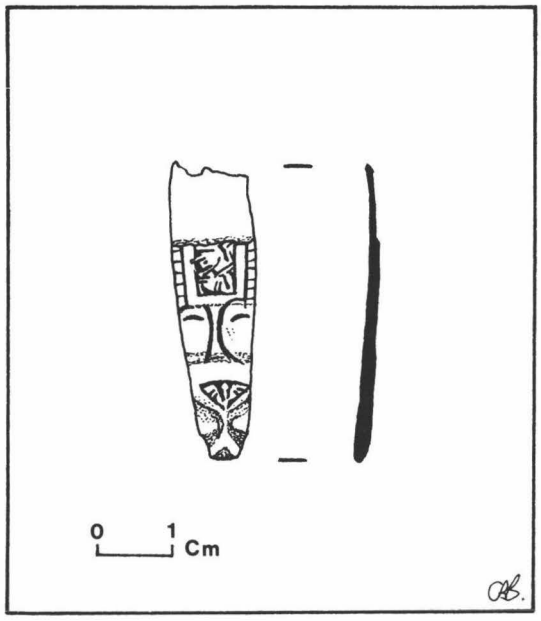

Fig. 8. 9th Century Anglo-Saxon Strap-end.

5. *Musket Balls:*
Three lead musket balls were found, two of which are 5.6 mm. in diameter, the other being 15.5 mm. in diameter.
6. *Lead Weight:*
A lead weight was found in Field 1. It is domed in shape with a hole through the centre. Weight 31 gm.

Iron Object (by David Rudling)
Part of a handled ?knife blade was found in Field 3. The handle is of rectangular section. Date uncertain.

Glass
A single annular glass bead was found in Field 1. It is light blue in colour, is undecorated, and has been broken either in antiquity or more recently. Such beads are commonly found in Anglo-Saxon cemeteries, and date from the late 5th to mid-6th Century (Welch 1983, 83).

Coins (By David Rudling)
a. *Celtic*
1. Verica, King of the Atrebates. *c.* AD10–40. Silver unit. 12 mm. 1.22 gm. Die axis: 90.
Obverse: COMF in tablet; solid crescent with pellet and two rings above and below tablet; large circle around entire image; pellet border outside circle.
Reverse: Eagle faces with wings spread and head turned left; pellet border; VI RI above eagle.
Reference: Van Arsdell (1989, 157) no. 471–1.
Classification: Atrebatic I, AD10–20. Van Arsdell notes that many examples of this type of coin were found at Wanborough, Surrey.
b. *Roman*
2. Commemorative issue of the period AD330–335. Ae 17 mm.
Obverse: CONSTANTINOPOLIS, Helmeted bust left.
Reverse: No legend. Victory standing left; right foot on prow. In exergue: PLG (i.e. the Lugdunum mint).
Ref. *RIC* 185.
c. *English*
3. Henry III. Short Cross Coinage, Class 6c (1210–17). Silver cut halfpenny.
Reverse:]RES.ON.E[, i.e. the moneyer Peres of the York mint.
Reference: North (1980) No. 976.

4. Henry III. Short Cross Coinage, Class 7(b?) (1217/8–42). Silver cut halfpenny.
   Reverse: +WIL[ ]NTE, i.e. the moneyer Willem Ta of the Canterbury mint.
   Reference: North (1980) No. 979.
5. Edward III. Fourth Coinage, Pre-Treaty Period (1351–61). Series D or E (1352–55). Silver penny of the Durham mint.
   Reference (North (1975) No. 1159 or 1170.
6. Elizabeth I, 1558–1603. Threepence. Second Issue. Dated 1573. Initial mark: Eglantine.
   Reference: North (1975) 2000.

d. *Jeton*

7. Anonymous issue of Nuremberg, 'Rose/orb' type brass jeton, *c.* 1500–1550. 23 mm.
   Obverse: Three crowns, alternating with three Fleurs de Lis, arranged centrifugally around a five-petalled rose: fictitious marginal inscription.
   Reverse: Imperial orb surmounted by a cross: within an ornamental tressure that has three main arches: three pairs of pellets around tressure: fictitious marginal inscription.
   Pierced for suspension.
   Reference: Type as Mitchiner (1988) page 377.

Foreign Stone

A possible Whetstone was found in Field 2. This was identified by Tim Gosden as a blue-grey non calcareous metamorphised? siltstone, possibly originating from the Palaeozoic rocks of South West England or Wales.

DISCUSSION

In analysing the information gained from this fieldwalking, reference was also made to the previous fieldwalking carried out in the adjacent field (Butler 1989).

A small scattering, across all of the fields, of Mesolithic flintwork indicates that there was some activity here during this period. This probably amounts to little more than isolated activity connected with the hunting and gathering of food rather than a specific hunting camp, as there is no concentration of Mesolithic material in the fields surveyed.

Evidence increases from the Neolithic and continues into the Bronze Age with two major concentrations of flintwork (Fig. 2), fire fractured flint and prehistoric pottery (Fig. 3) in Fields 2 and 3. Although leaf-shaped arrowheads have been found in this (Table 1) and the previous survey (Butler 1989, Fig. 2, No. 6), and some of the other flintwork is undoubtedly earlier Neolithic, the majority of the diagnostic flintwork is later Neolithic/early Bronze Age. There appears to be little difference in the flintwork from the two concentrations, however the earlier material seems to be concentrated in Field 2. As the flint and pottery concentrations also match that of the daub (Fig. 4), it would seem likely that these two concentrations of material represent a settlement rather than just activity areas as at Rackham (Holden 1975). It would also seem sensible to assume that this is a single settlement rather than two separate ones. The lack of material between the two concentrations could be due to poor artefact collection, whether because of inclement weather or otherwise. However, it is more likely that the flint material found represents waste material carefully disposed of around the edge of a settlement area; as has been suggested elsewhere (Holgate 1988, 32). In any event, the site appears to have been abandoned later in the Bronze Age.

The site discovered here supports the theory that in the later Neolithic/early Bronze Age, settlements were established on the Greensand in conjunction with woodland clearance, but then during the later Bronze Age as the soils became exhausted the settlements moved up onto the Downs (Needham 1987). There is substantial evidence for widespread activity on the Downs nearby in the later Bronze Age, with the Plumpton Plain settlements only some 1.5 km away (Holleyman 1935). There have also been more recent isolated finds of a palstave (Butler 1990) and awl (Butler 1988), less than 1 km from this site.

There is little evidence for occupation or activity during the Iron Age, with just a few sherds of possible early Iron Age pottery being found. In the Roman period there is a fairly general scattering of pottery across all of the fields (Fig. 4), probably as a result of agricultural activities. The results from walking these additional three fields do however highlight the concentration of Roman pottery at the north end

of the field walked in 1987 (Butler 1989). This suggests that there could be a Roman site to the north of that field, and that it is probably worthy of further investigation. This location would be suitable for a villa site, being adjacent to a possible road or track running south off the Greensand Way, and approximately 1.5 km from the villa at Plumpton (Allen 1984).

As with the results from the previous fieldwalking, there is a hiatus in activity during the Saxon period in terms of evidence recovered. However, the disc brooch and glass bead from the southern end of Field 1 could indicate the presence of a Saxon cemetery, dating from the late 5th to mid-6th century. This sort of position, at the foot of a spur running off the north scarp slope of the Downs, appears to have been favoured by the Saxons for their cemeteries, as at Beddingham and Keymer. However these finds may alternatively be simply accidental losses. The 9th century Saxon strap-end is also likely to have been an isolated loss, rather than continued use of any cemetery.

There is a general spread of medieval pottery across all of the fields, especially Fields 1 and 3 (Fig. 5), probably as a result of agricultural activities. There are one or two concentrations of medieval material, which may relate to some activity or settlement on, or adjacent to, those concentrations. The lack of pottery at the northern end of Field 2 could indicate that the adjacent wood once extended into the northern part of the field thereby limiting any agricultural activities, with clearance taking place in the post-medieval period.

This additional fieldwalking has helped to complete a little more of the picture on past activity in the Novington area, and has highlighted areas that would benefit from further investigation in the future.

Acknowledgements
We would like to thank the farmer Mr R. Thomas for giving permission to carry out the fieldwalking, and also the members of the Mid Sussex Field Archaeological Team who assisted, especially David Dunkin, Lawrence Gaston, Joan Heath, Kathy Mcquigan, Bridget Neeves and David Yates. We would also like to thank the individuals mentioned in the text for their assistance in analysing the finds.

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References

Allen, M. 1984 'Plumpton Roman Villa (TQ360147) a Cursory Note', *Suss. Arch. Coll.* **122**, 219–20.

Butler, C. 1988 'A Bronze Age awl from Plumpton, East Sussex', *Suss. Arch. Coll.* **126**, 228.

Butler, C. 1989 'A fieldwalking Project at Novington Manor, Plumpton', *Suss. Arch. Coll.* **127**, 31–38.

Butler, C. 1990 'A Bronze Age palstave and other finds from Plumpton, East Sussex', *Suss. Arch. Coll.* **128**, 243–4.

Funnell, J. 1990 'Novington', *Mid Sussex Field Archaeological Team Newsletter* **9**, April 1990.

Graham-Campbell, J. 1988 'Two 9th-Century Anglo-Saxon Strap-ends from East Sussex', *Suss. Arch. Coll.* **126**, 239–41.

Graham-Campbell, J. 1989 'Two New 9th-Century Anglo-Saxon Strap-ends from East Sussex', *Suss. Arch. Coll.* **127**, 244–5.

Holden, E. W. & Bradley, R. J. 1975 'A Late Neolithic Site at Rackham', *Suss. Arch. Coll.* **113**, 85–103.

Holgate, R. 1988 Neolithic Settlement of the Thames Basin *British Archaeological Report* **194**.

Holleyman, G. A. & Curwen, E. C. 1935 'Late Bronze Age lynchet-settlements on Plumpton Plain, Sussex', *Proc. Prehist. Soc.* **1**, 16–38.

London Museum Catalogue 1940 Medieval Catalogue, H.M.S.O., London.

Mitchiner, M. 1988 *Jetons, Medalets and Tokens: The Medieval Period*, London.

Needham, S. 1987 'The Bronze Age' in *The Archaeology of Surrey to 1540*, (eds. J. & D. G. Bird) 97–137, Guildford.

North, J. J. 1975 *English Hammered Coinage Volume 2*, (2nd edition). London.

North, J. J. 1980 *English Hammered Coinage Volume 1*, (2nd edition). London.

Van Arsdell, R. D. 1989 *Celtic Coinage of Britain*, London.

Welch M.G. 1983 'Early Anglo Saxon Sussex' *British Archaeological Report* **112**.

Sussex Archaeological Collections **130** (1992), 22–59

THE EXCAVATION OF A ROMANO-BRITISH IRON WORKING SITE AT BROADFIELD, CRAWLEY, WEST SUSSEX

Excavated by the late John Gibson-Hill and edited for publication by Caroline Cartwright with contributions by D. S. Butler, S. D. Hamilton, C. Johns, P. J. Ovenden and D. R. Rudling

Broadfield, the most north-westerly of the known early Wealden iron sites, was excavated from 1970–1975 (Fig. 1). The site consisted of ore-workings (mine-pits) extending for several kilometres along an outcrop of clay ironstone and associated industrial and domestic areas. There is some possible evidence of agriculture being practised here before or during the late Iron Age. By that time a settlement was established at Goffs Park, the inhabitants using Eastern Atrebatic pottery and manufacturing iron in cylindrical shaft furnaces (to date the earliest examples to be found in Britain, with radiocarbon dates of 60 b.c. and 190 b.c.). Shortly after 43 A.D. the settlement at Goffs Park was abandoned and a new site founded in the vale of Broadfield.

This new site consisted of a rectangular enclosure with several rectangular domestic buildings. To the south of this area on the adjacent bank of the River Mole, iron was smelted in what appear to have been free-standing cylindrical shaft furnaces and then consolidated in a stone-lined forge.

The ironworks and reservoir covered an area of roughly the same dimensions as that occupied by the domestic site. The need for deforested land on which to erect more furnaces, and possible localised pollution, were factors that brought about the demolition of the settlement and a move of quarters to Site 4. Industrial activity continued on Site 1 and was expanded north of the Mole to Site 2.

There followed (early 2nd century A.D.) at least one other major change to the site when the domestic settlement in the vale was closed in favour of a new establishment on the Weald clay and sandstone ridge to the north (Southgate West). Iron working continued at Broadfield until the 3rd century, if not later.

The site lacks uniform vertical stratification, with most of the remains consisting of features cut into the Weald clay, and with ploughing and erosion having removed all other traces of occupation. This, and the detrimental effects on small finds of an acidic soil and conditions prevalent on iron working sites, made it impossible to date this settlement precisely using conventional techniques. Consequently, the sequence described above is based on two absolute dating processes: Carbon 14 and archaeomagnetism. The results obtained from features representative of each phase were corroborated by the more general date indicated by the pottery sequence.

Background

John Gibson-Hill started excavating the Romano-British industrial site centred on Broadfield south-west of Crawley in 1970, in advance of a series of building developments. Excavations continued into 1975, after which he started the preparation of the report intended for publication. His untimely death occurred before the report was completed.

Unfortunately the nature and state of the surviving site documentation is patchy and incomplete in a number of key aspects. It has been almost impossible to match contextual information relating to material with contextual information on the plans, sections (where present), site sketches and interpretation. The collator has therefore had to present, as closely as possible, John Gibson-Hill's actual descriptions, text and interpretation, fully recognising that such work (carried out in the mid and late 1970s) must of necessity be evaluated in the light of much subsequent research and excavation in the Wealden area. The reader is therefore strongly urged to consult the work of Henry Cleere, David Crossley, Fred Tebbutt and members of the Wealden Iron Research Group (especially Cleere and Crossley 1985) when considering the Broadfield report. On the same principle, in order to preserve 'impartiality', the decision has been made to respect John Gibson-Hill's

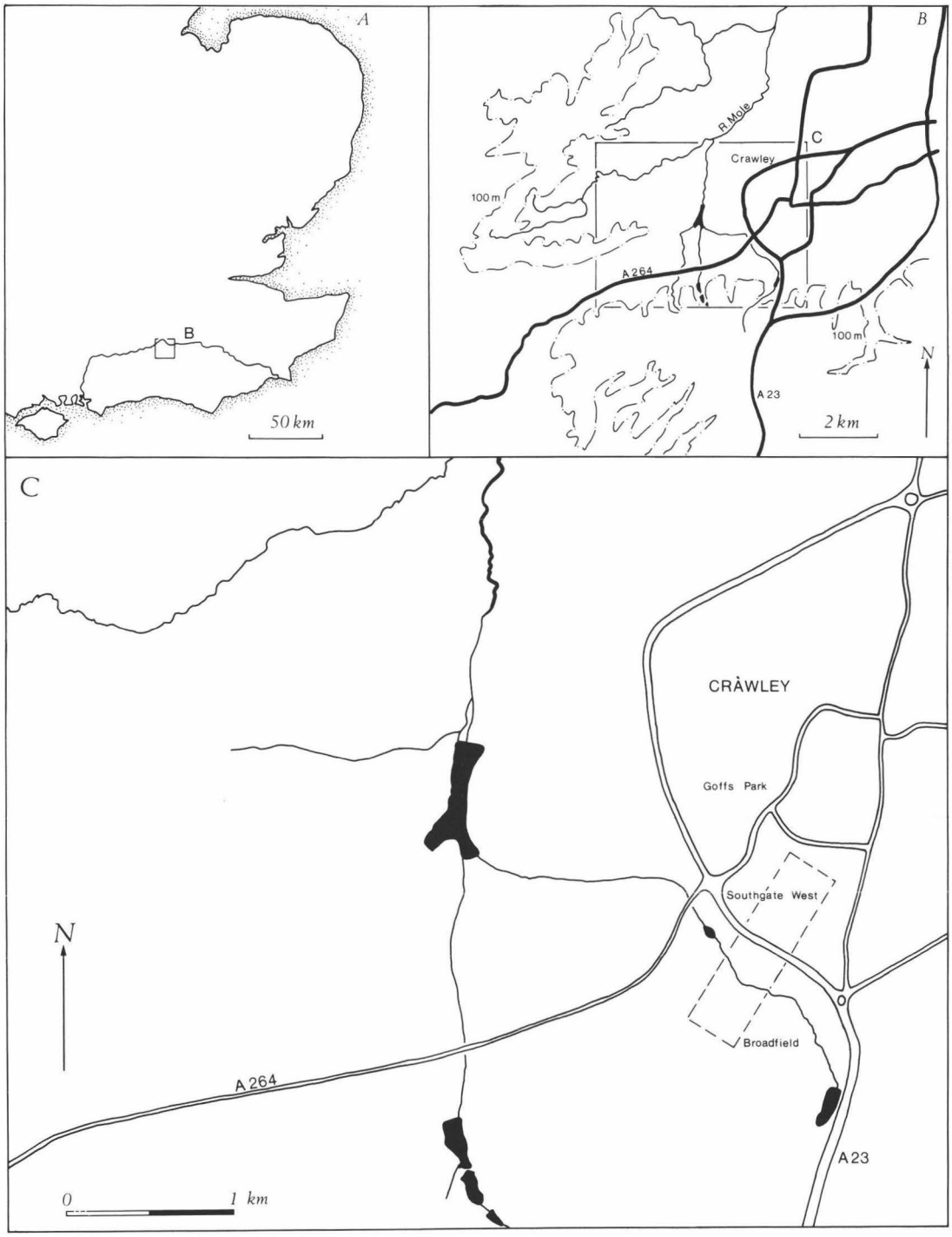


Fig. 1. Broadfield, Crawley. Site Location.

intentions to present the report according to the available documentation and material, and not be influenced by personal recollection by other individuals without the material evidence to corroborate any changes.

On the subject of material evidence, again it must be stated that a great deal of material was unavailable for study. Originally John Gibson-Hill had planned to present chapters in his report devoted to the finds including pottery, tile, possible crucible fragments, tuyeres, metalwork, flint and other stone, clay pipes and glass. His draft, as received by the collator, did not contain any written documentation on any aspect of the finds. Consequently, much time has been expended searching for the material to attempt a substitute series of analyses. Such material as was available had been stored in an extremely haphazard fashion on the top floor of Iford Mill, Crawley. Much time was spent by the collator, ably assisted by Pat Bracher, Jeremy Hodgkinson and members of the Wealden Iron Research Group, in an effort to restore some order to the assorted finds. Owing to the methods of storage of this material, any attempt to specify archaeological context and locate it on site documentation was beset by enormous difficulties.

Where context information could be established and cross-checked with site documentation, artefactual material has been used as a basis for a number of up-to-date reports (see Rudling and Hamilton below). However, there are many instances where we have to record a certain amount of material as present, but we are aware from the site records that there should be a great deal more, precise details of the material being absent. Almost all of the more important pottery vessels, metalwork (including coins), tuyeres etc. are missing and thus not available for study. It has therefore been necessary to find suitable groups of reasonably-documented available material to substitute, e.g. the Goffs Park assemblage from a site adjacent to the main Broadfield areas (see Sue Hamilton's report below).

A certain number of (presumably residual) flint flakes was present, but their contextual location and relationship was unclear. There are some iron nails and fragments of iron, but the bulk of the metalwork was not present at Iford Mill and could therefore not be included in a finds report. Some tuyere fragments were available for study, but John Gibson-Hill's report includes their relevant characteristics and further examination was deemed superfluous at the present time.

Some geological material was available for examination. The fragments mostly derive from the thin limestone layers in the Wadhurst Clay formerly known as 'Cyrena' limestone. (The limestone contains small bivalve shells of the genus *Nemiodon*.) Fragments of calcareous shelly ironstone (from an adjacent source) are also present. Fragments of clay ironstone nodules, ferruginous sandstone, and greensand seemed to have occurred regularly across the excavation areas.

A small amount of bone was available for examination, mostly cattle and sheep, but due to poor contextual information no further analysis was attempted. Glass and clay pipe fragments may relate to subsequent utilisation of the site.

The available site documentation has been archived and as much of the material at Iford Mill as possible has been cleaned, repackaged, assigned accurate contextual designation and re-boxed. Much remains undesignated, having been separated from its original label during storage, or having suffered through disintegration of paper labels in conjunction with damp finds inadequately packaged.

All finds have been deposited at Crawley Museum.

BROADFIELD, SITE 1 (Figs. 2, 3 and 4)

Separated from Site 2 by former marshland and a stream, this area was used for industrial activity for the duration of the occupation (Fig. 2).

PHASE III

The first evidence of occupation is roughly contemporary with Phase III and consisted of 12 shaft-type smelting furnaces and a forge.

Furnace No. 1. Circular area of light grey burnt clay with slag base and slag-impregnated clay lining present on the southern side. As with all the other furnaces this was surrounded by burnt natural clay.

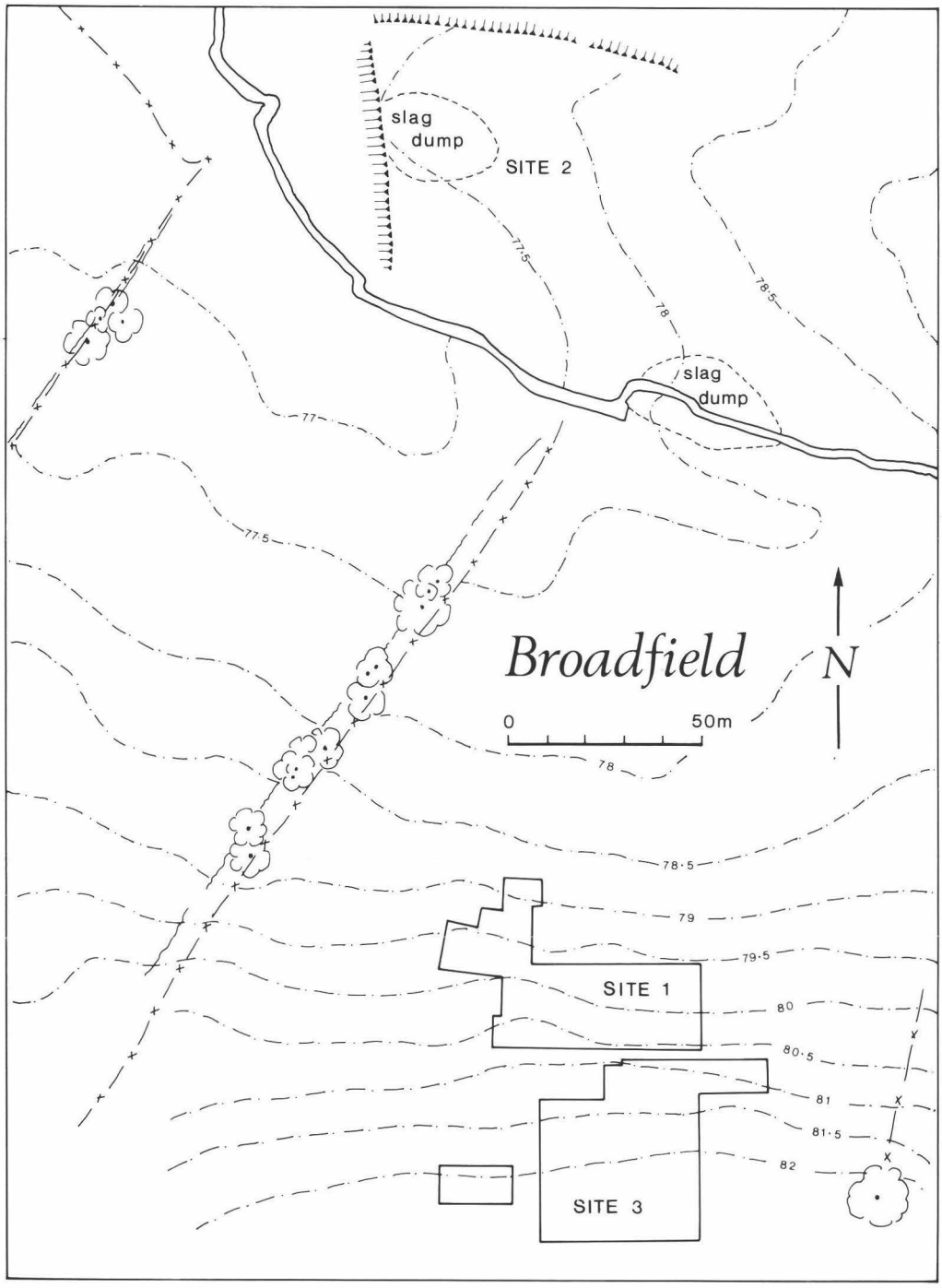


Fig. 2. Location of Sites 1, 2 and 3. Contours in metres O.D.

Furnace No. 3. Circular area of grey burnt clay (61 cm. in diameter), showing in section several re-linings. On the north side there was a large oval depression 1.22 metres long and 76 cm. wide filled with a mixture of tap-slag and charcoal fragments. This probable slag-tapping hollow was 69 cm. wide at the junction with the front arch and 76 mm. deep.

Furnace No. 4. Oval area of grey burnt clay cut into on the western side by Furnace No. 6.

Furnace No. 5. North-west of this furnace were two roughly circular depressions filled with tap-slag and charcoal fragments.

Furnace No. 6. Oval area of grey burnt clay (76 cm. in diameter) showing several re-linings replacing and post-dating Furnace No. 4.

Furnace No. 8. Circular area of grey burnt clay (46 cm. in diameter) surrounded by and on top of red burnt natural clay. A slight depression extends south towards the ditch. This and Furnaces Nos. 1, 9, 11 and 13 appear to have their slag tapping hollows oriented towards the ditch. Below the base and separated by a thin lens of charcoal was another area of burnt clay, thought to represent the original lining.

Furnace No. 9. Circular area of grey burnt clay. There was clear evidence of re-lining, the original base being 53 cm. in diameter with a 50 mm. thick lining of puddled clay and separated from the second lining by a 121 mm. thick layer of burnt red clay.

Furnace No. 10. Circular area of burnt grey clay 46 cm. in diameter with no evidence of re-lining.

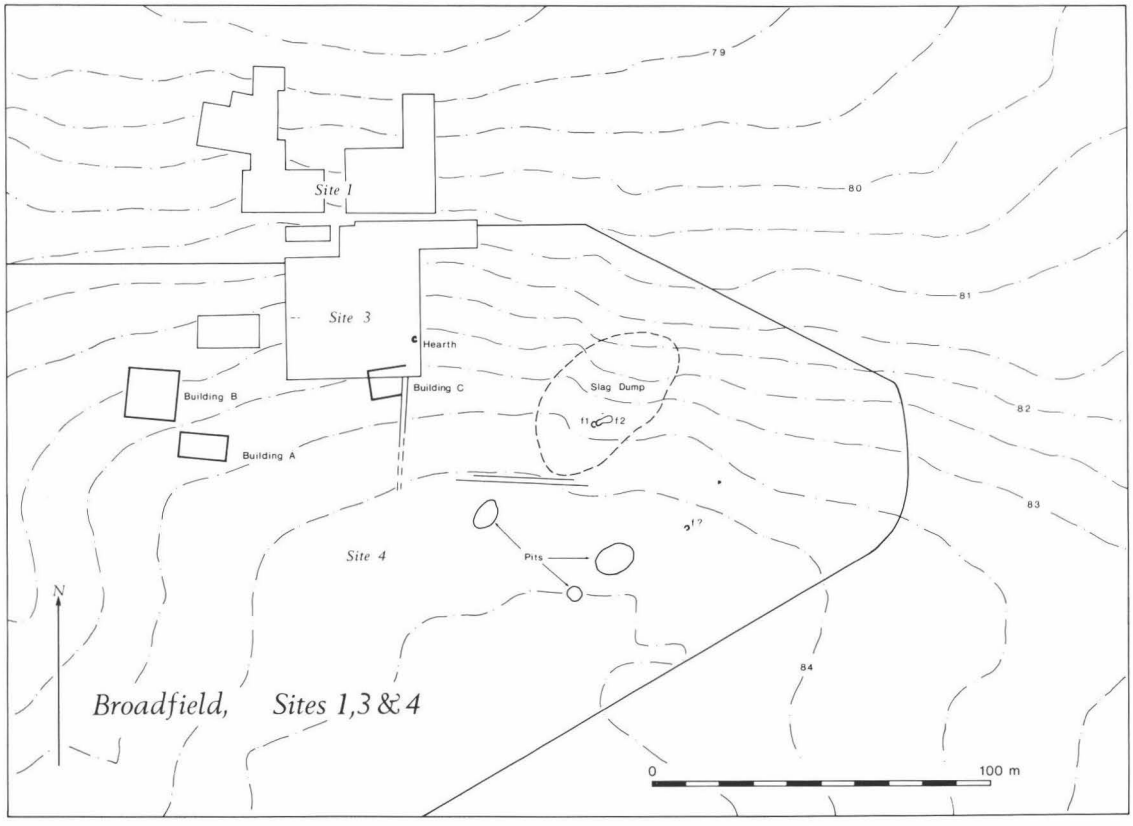
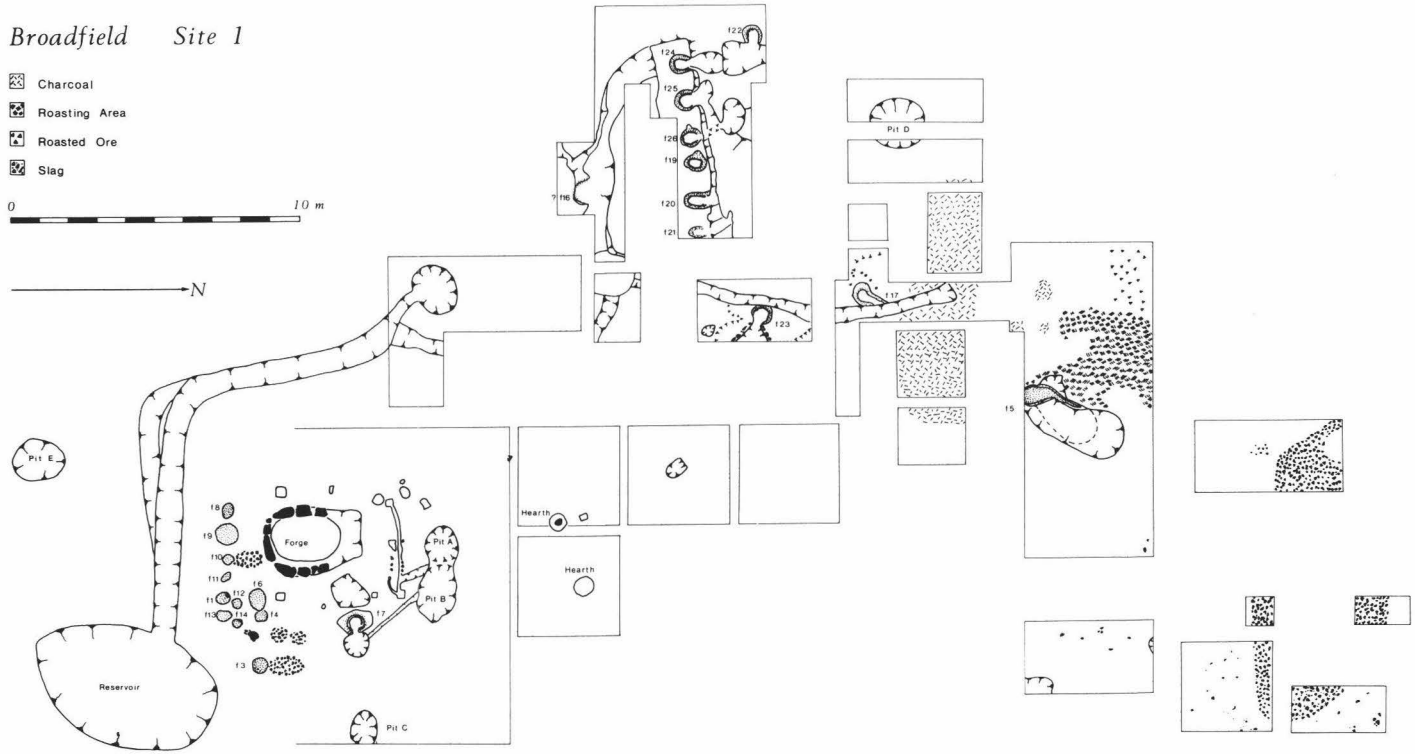


Fig. 3. Location of Sites 1, 3 and 4. Contours in metres O.D.


Broadfield Site 1
Charcoal
Roasting Area
Roasted Ore
Slag
0
10 m
N
Pit E
Reservoir
Forge
Pit A
Pit B
Pit C
Pit D
Hearth
Hearth
f1
f2
f3
f4
f5
f6
f7
f8
f9
f10
f11
f12
f13
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f25
f26

Fig. 4. Site 1.

To the north there was a shallow depression containing tap-slag and charcoal.

Furnace No. 11. Circular area of light grey burnt clay surrounded by burnt red clay and charcoal.

Furnace No. 12. Circular area of grey burnt clay 38 cm. in diameter. No obvious signs of re-lining.

Furnace No. 13. Oval shaped area of grey burnt clay 53 cm. in diameter. No obvious signs of re-lining. The shape of the remains in this area result from contractors' machinery grading to make a level platform and are therefore not truly representative of the original shape or dimensions of a furnace base.

Furnace No. 14. Circular area of grey burnt clay with a slag-impregnated lining. The base was intact. Evidence for a slag-tapping hollow was lacking but 60 cm. north-east of this a slight depression filled with large pieces of tap-slag was found (Table II on microfiche).

Servicing this furnace group was a large forge where blooms were consolidated. A shelter to cover the forge and associated working area is indicated by a series of post-holes outlining in plan a rectangular area measuring 4.57 metres × 3.66 metres.

Forging Hearth (Fig. 4, 'Forge'). An oval depression 2.3 metres long and 1.30 metres wide, surrounded on three sides by large Tunbridge Wells sandstone blocks, each showing evidence of burning at high temperature. These blocks were set into an irregular shaped hollow that enclosed the pit. The natural clay for some distance around the forge had been burnt a dark red colour. Strewn around this working surface were pieces of forge-slag, hammer scale, rust and charcoal.

The structure covering the forge area was probably larger than shown on Fig. 4, as the southern end was disturbed by road construction work. What remains indicates a building open to the elements on three sides, the northern side being enclosed behind a screen of wattle, represented by two parallel rows of holes between post-holes 7 and 8 (see microfiche).

South-east of the furnace group, a large oval pit (6.5 metres long and 3.66 metres wide) possibly served as a reservoir during this phase. It was connected via a ditch (16.5 metres long and 90 cm. wide) to a small pit. Surplus water was carried away in a gully leading to another small pit (reservoir) and ditch system. The exact purpose of this complex layout is far from clear. It is possible that the reservoirs provided a convenient supply for quenching during the forging process although there is no evidence for the production of steel. Pits A and B are both associated with this phase and were probably dug for clay to be used in the construction of furnaces.

At the end of this phase the hearth and building were demolished and levelled, resulting in charcoal and industrial debris (from 50 mm. thick) being sealed by a layer of burnt clay and furnace superstructure approximately 23 cm. thick covering an area 10 metres long and 8 metres wide.

PHASE IV–V (Fig. 4)

The forge continued in use for some time, servicing several newly constructed furnaces; the products finished off in two small hearths. These hearths were 1.75 metres apart, the largest was oval in plan 69 cm. × 61 cm. with a base formed by a slightly concave depression coated with green silica and with vitrified clay. The smaller hearth (61 cm.) was circular in plan. In this case the inner surface was covered with black and white vitrified clay, and slag was found adhering to the centre of the base.

Furnace No. 23 (Type A). The remains of a furnace base 48 cm. in diameter and some slag impregnated superstructure were found *in situ*. Below and surrounding was a grey burnt clay lining approximately 50 mm. thick resting on an earlier lining. On the eastern side there was a gap in the structure approximately 28 cm. wide, leading into the slag-tapping hollow. The shaft contained a 50 mm. thick layer of charcoal covered by an 89 mm. thick deposit consisting of slagged lining, burnt clay lumps and charcoal.

The slag-tapping hollow was unusual in that it had nearly vertical sides defined by large pieces of tap slag and furnace superstructure. A large piece of tap slag 44 mm. thick had fused with the clay at the base of the hollow, covering an area extending 43 cm. from the front arch.

Furnace No. 7. The slag-impregnated lining of the interior of the furnace survived to a height of 26 cm., rising vertically from the 15 mm. thick slag base, adhering to a 50 mm. thick lining of grey burnt clay. These two layers represent a re-lining; the primary surface is represented by hard black burnt clay 10 cm. thick surrounded by a 76 mm. thick band of red-burnt clay. The original interior was quite small (38 cm. in diameter) and reduced by the re-lining to a 25 cm. internal diameter. The slag-tapping hollow was oval in plan 91 cm. × 84 cm. with a channel (15 cm. × 22 cm. × 6 cm. deep) on its western side leading towards the furnace. The slag-tapping hollow contained a fill of charcoal and tap-slag, sealed by collapsed fragments of furnace superstructure. A tuyere was recovered from below the debris of the front arch.

The truncated base of the shaft measuring 1.22 cm. × 84 cm. in plan was separated from the underlying clay by an 8 mm. thick layer of charcoal and soil.

Furnace No. 17. This furnace, although damaged by ploughing, still showed in plan the characteristic alternate bands of burnt clay, covering an area approximately 80 cm. in diameter. The grey burnt clay lining upon which a broken slag base stood was found in situ. Slag tapping facilities were provided by a gully that extended south-east into the adjacent ditch. Its grey puddled clay surface comprised wood strips running diagonally across the hollow. A flagon neck discovered during the excavation of this feature may have been used as a tuyere.

A group of small holes (50 mm. in diameter and 55 mm. deep) around the furnace may indicate some form of temporary cover, placed over the furnace when not in use.

Furnace No. 5. Badly damaged base and slag-tapping hollow, consisting of an irregular shaped area of black/grey burnt clay 2.13 metres long and 46 cm. wide. Three circular pits (C, D and E) were apparently dug for clay and back filled with smelting refuse.

To the north of the furnaces an area of charcoal 15 cm. thick would seem to represent the residue of a fuel dump. Nearby there was an area of burnt clay resembling the ore-roasting feature found below the western slag dump on Site 2. Associated with this burnt clay were fragments and ore fines; most were red-purple but some were blue-black in colour. Immediately north-west of this area the remains of a pile of roasted ore were found.

During the early part of this phase the reservoir and ditch system was gradually back-filled. In the main tap-slag was used but several lenses of domestic refuse were located in the ditches. The filling of Pits A and B was completed at the same time.

Soon after the ditches had been back-filled a group of six furnaces was constructed in a row adjacent to each other. The clay insert to the north of Furnaces Nos. 26, 27, 28 and 29 falls away abruptly into the slag-tapping hollow which contained a fill of brown soil and charcoal containing a large quantity of red and orange burnt clay fragments derived from the collapsed furnace superstructure. Sherds were also present, some of which were incorporated into the clay of the southern slope of the hollow. Below this layer a deposit of furnace superstructure and burnt clay occurred sealing a 63 mm. thick layer of soil mixed with charcoal, rusty? metallic lumps, tap-slag and roasted ore fragments.

At the base of the slag-tapping hollow the insert of prepared clay was only 25 mm. thick, separated from natural clay by an intermittent layer of charcoal 50 mm. thick. Fragments of double tuyeres were found near the front arch area of these furnaces in the burnt clay debris.

Furnace No. 19. Roughly circular in plan with an internal diameter of 38 cm. The slag lining in comparison with the other furnaces in the groups was quite thick (53 cm.).

Furnace No. 20. An oval in plan whose long axis measured 81 cm. × 60 cm. The internal dimensions of the shaft had narrowed, through relinings and a thick coating of slag, to 30 cm. in diameter. A large pair of tongs was recovered from the slag-tapping hollow opposite the front arch of this furnace.

Furnace No. 21. Circular in plan and similar to Furnace No. 19. However, the slag lining was absent, leaving an internal diameter of 61 cm.

Furnace No. 22. Plough-damaged base of a shaft furnace consisting of a slag base 38 cm. in diameter, surrounded by several alternate bands of clay connected to an irregularly shaped pit that served as the slag-tapping hollow (1 metre × 1.9 metres × 30 cm.). Two large slag bases and fragments of double tuyeres were found in its fill. The furnace was unusual in that the cylindrical shaft was constructed on a levelled base of crushed tap-slag fragments.

Furnace No. 24. Oval in plan, measuring 43 cm. × 38 cm. The insert, extended for a second time, cut through the back-filled ditch of Phase III. The shaft was not quite as deep as the initial group, but deeper than Furnace No. 25 at 56 cm. The slag base (50 mm. thick) and lining remained *in situ.* Unlike the others in the group, this furnace had a separate tapping hollow; unfortunately the fill of this was disturbed during the construction of Furnace No. 22.

Furnace No. 25. Circular in plan, slagging had been removed, together with two thirds of the grey lining.

Furnace No. 26. Very similar to Furnace No. 19 except in this case the outside diameter is 82 cm. This furnace seems to have been a late addition to the group and although the insert was extended to incorporate it, the shaft was not cut as deeply as the others, its remains attaining the height of 46 cm. Most of the shaft was filled with burnt clay debris, but near the base there was an 88 mm. thick layer of charcoal with roasted ore, tap and furnace slag inclusions. (Similar fills

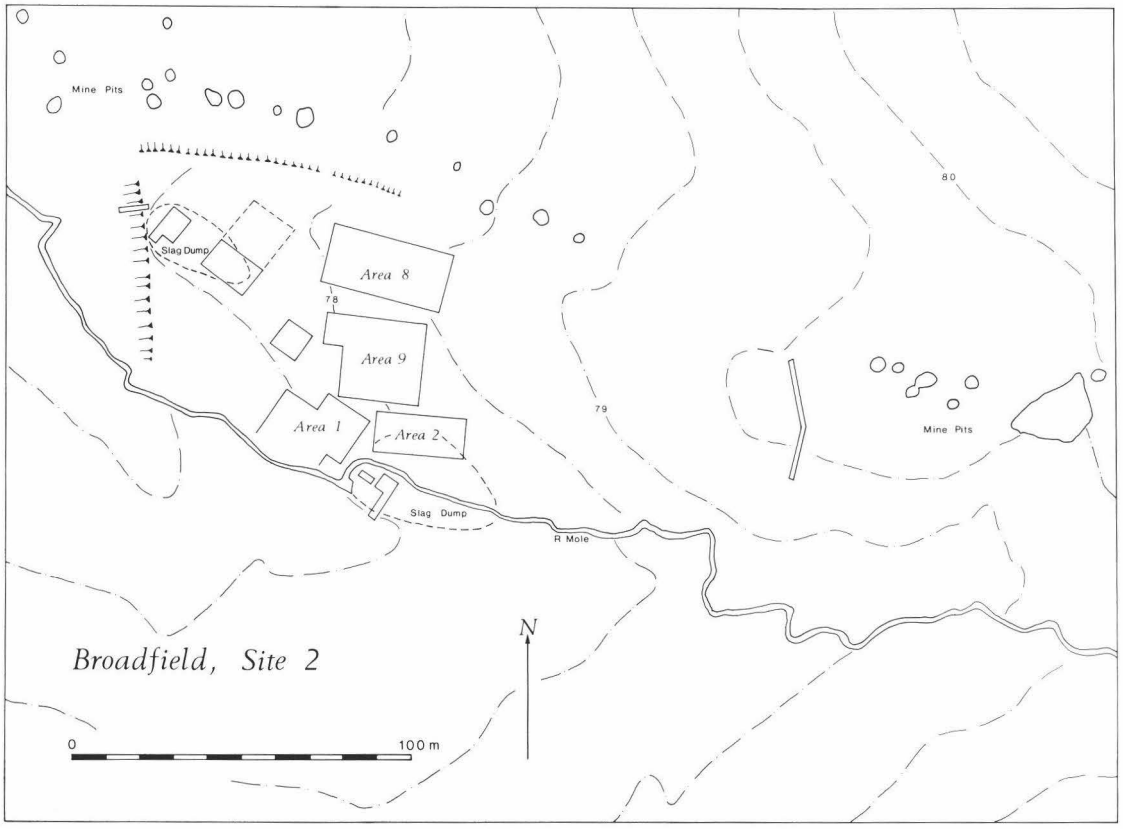

Fig. 5. Site 2. Excavated areas.

were found in the other furnaces.) The furnace base 76 mm. thick was found in situ. The width of the front arch was estimated to be 38 cm.

BROADFIELD SITE 2

PHASE I

Area 1 (Figs 5 and 6): Evidence for Phase I activity includes a series of marks cut into the natural clay. In plan they take the form of a square framework of criss-cross lines. Although they cover a limited area, they were sealed from later disturbance by three layers: (a) a thin soil horizon; (b) the remains of a pile of roasted ore lumps, possibly the residue of the last charge used in Furnace No. 4; and (c) a layer of compacted burnt clay representing the collapsed superstructure of that furnace. As these were cut through by the tapping hollows of Furnaces Nos. 2 and 5, the marks predate all 1st and 2nd century industrial activity on the site. If associated with agricultural ploughing they are, to date, the earliest distinct evidence of arable farming in the Weald.

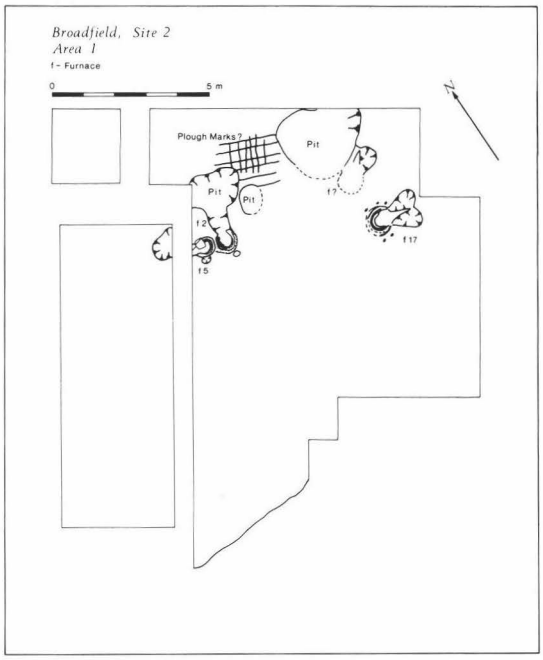

Fig. 6. Site 2, Area 1. Phases I and II.

PHASE II

Area 1: Evidence for the earliest industrial activity at Broadfield is provided by two shaft-type smelting furnaces, dated to the 1st and 2nd centuries b.c. (Furnace No. 2: 2010 ± 60 b.p. [60 b.c.]; Furnace No. 5: 2140 ± 80 b.p. [190 b.c.]). Carbon 14 dating results are given in Table 1.

Furnace No. 2 (Figs 6 and 7). The remains consist of a shallow depression occupied in part by fragments of a slag-furnace base approximately 53 cm. in diameter, also several fragments of tap-slag were found adhering to the bottom of the slag-tapping hollow.

Furnace No. 5 (Figs 6 and 7). Slightly smaller than Furnace No. 2, 46 cm. in diameter but basically similar. In this case the slag furnace base had been completely removed, although some of the slag lining to the interior of the shaft was still *in situ*. Two sandstone blocks were found within the furnace, an unusual feature, both showing signs of burning at high temperature. These were probably an integral part of the structure providing support for the front arch. Closely associated with the above furnace and partly sealed by its collapsed superstructure were two post-holes filled with charcoal.

Furnace No. 17. Shaft-type smelting furnace with fan-shaped tapping hollow. The shaft and tapping hollow had apparently been cleared of slag lining and smelting debris prior to demolition and back-filled with orange and red burnt clay lumps. The remaining base and rear wall was made up of several alternate bands of grey blocks and red burnt clay. A series of small stake holes surrounded the furnace.

One metre north of this furnace there were two connecting depressions. The ridges separating them had a burnt grey clay coating, strongly resembling the tapping hollow of a furnace. The remaining features dated to this phase are two pits. The larger (2.60 metres × 2.30 metres × 46 cm. deep), was kidney-shaped in plan and contained charcoal interspersed with lenses of clay. The second, oval in plan (88 cm. × 69 cm. × 61 cm.) also contained charcoal, some tap-slag and fragments of double tuyere.

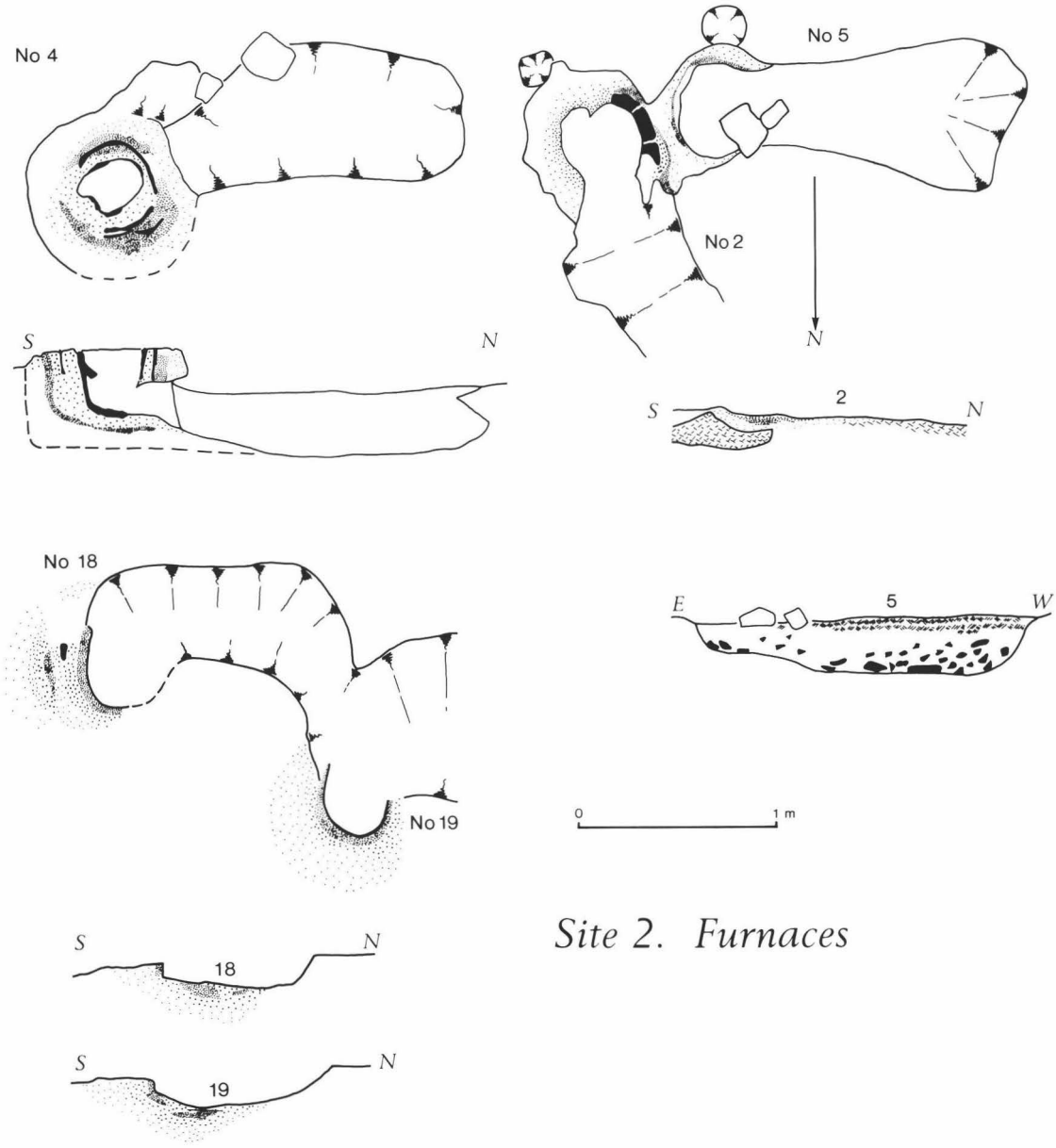

Fig. 7. Site 2. Furnaces nos. 2, 4, 5, 18 and 19.

TABLE 1
Carbon 14 Results

No.	Harwell Ref.	Sample Type	Age b.p. Years	b.p. 1950	M.A.S.C.A. Corrected Date	Furnace No.	Site No.
1	HAR-559	Charcoal	1900 ± 60	a.d.50	70 A.D.	7	2
2	HAR-970	Charcoal	2010 ± 60	60 b.c	60–10 B.C.	2	2
3	HAR-971	Charcoal	2140 ± 80	190 b.c.	370–210 B.C.	5	2
4	HAR-972	Charcoal	1840 ± 80	a.d. 110	130–140 A.D.	3	2
5	HAR-973	Charcoal	1920 ± 70	a.d. 30	60 A.D.	16	2
6	HAR-974	Charcoal	1920 ± 70	a.d. 30	60 A.D.	8	2
7	HAR-975	Charcoal	1920 ± 70	a.d. 30	60 A.D.	Hearth	2

PHASE III

During this period an area measuring 82 metres × 98 metres was enclosed by a ditch and upcast bank (Figs 5 and 13). The interior was occupied by several domestic buildings, and a hard-standing feature. The western side of this settlement was disturbed by the construction of an access road in 1973 which unearthed four stone walls. Unfortunately no plans of these features have been located. Each, orientated to the east-west ditch, comprised several courses of faced Tunbridge Wells sandstone blocks set in a foundation trench. The survival of these short sections of wall is probably due to the protection against the effects of deep ploughing by a thick deposit of material from the western slag dump. Similarly beam slots were found below this dump but could not be traced beyond its boundary, nor did they occur elsewhere in the enclosure.

Area 9

The V-shaped ditch, thought to have served as the eastern perimeter to the enclosure of the primary settlement, was regularly sectioned along its length (Fig. 13). Post holes 1–3 (Fig. 8) may represent the remains of some form of revetment or palisading, but this seems unlikely as only these three were found on the entire western bank.

To the west of the ditch 26 post pits were located, from which it was possible to recognise the remains of a rectangular building measuring 15 × 7 metres, outlined in plan by post pits nos. 1–18 (Fig. 8, Building II). All show remarkable uniformity in that they are 76 cm. in diameter and 84 cm. deep, generally cylindrical in shape. Each post, apparently square in section, was positioned on a base made of large pieces of tap-slag and supported by a packing consisting of several alternate layers of clay and slag.

Two metres south of Building II, a series of post pits lay parallel to the long axis of Building I and could be a composite part of that structure; alternatively they may represent the remains of another less substantial building (Fig. 8, Building 1). With the exception of post-pits numbers 19 and 20 they vary in size and method of construction. The floor and walls of these buildings were probably destroyed by later Roman industrial activity and more recent ploughing in the area, making it quite impossible to ascertain their original function. However, this phase is not associated with any iron-working within the enclosure and the better preserved remains of building No. III indicate a dwelling and associated domestic activity.

Areas 8 and 9

Aligned to the northern side of Building I and extending into Area 8 is a large rectangular feature 27 metres × 21 metres comprising slag and fragments of furnace debris (Fig. 8). This metalled area appears to have served as a hard-standing for vehicles. The hard-standing showed signs of both wear and repair, with the deeper ruts and holes being filled with any material available, including sandstone blocks, slagged furnace lining and domestic rubbish.

Area 1

Building III (Fig. 9): The clearest evidence of domestic occupation (although fragmentary) takes the form of a small rectangular building 15.25 metres long and 7.92 metres wide, delineated by 14 post pits. The pits differed from those mentioned above in that they were square

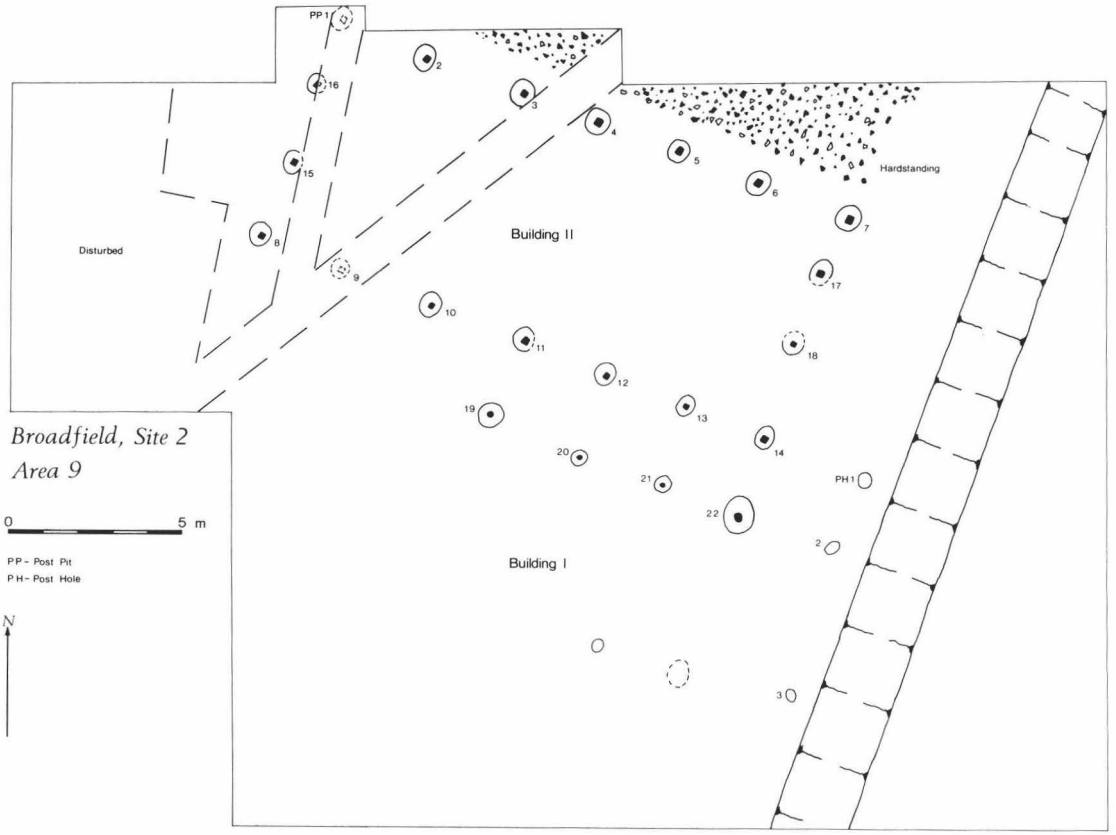

Fig. 8. Site 2, Area 9. Phase III.

in plan, measuring 91 cm. × 91 cm. × 61 cm. deep. The packing would appear to be similar to that used in Building I, i.e. alternate layers of slag and clay, but in this case there was no slag base for the post to rest on, thus compressing the clay. The resulting rectangular depression (457 mm. × 415 mm.) should reflect the dimensions of the timber in section.

The floor of the building was made up of several alternate layers of burnt and natural beaten clay, each between 2 and 4 cm. thick. Set into this floor was an oven constructed in the characteristic pear or horse-shoe shape. The base of the oven was covered with a layer of charcoal, containing small fragments of calcined bone. This was sealed by a deposit of soil and red-burnt clay.

A verandah or some form of covered corridor was probably constructed on the north side of the building, supported by a row of stake-holes. Horizontal timber or wattle was laid in a shallow depression, terminating in an oval post hole, the stake-holes having been sited on alternate sides of the depression to secure horizontal infilling. Each of these stake-holes contained a charcoal fill. The depression was filled with dirty yellow clay, and several fragments of carbonised wood were found lying horizontally at its base.

At the end of this phase the buildings were demolished and the eastern perimeter ditch back-filled (possibly to create further space for the industrial activity of the following phase). Domestic occupation of Site II lasted 20 to 30 years following the Roman invasion of 43 A.D.

PHASE IVa

Area 9 (Figs. 5 and 10)

During this phase a trapezoidal pit was filled

Fig. 9. Site 2, Area 1. Phase III showing Building III.

with burnt clay lumps and fragments of furnace superstructure. The gully remained in use for a short time. Some attempt to back-fill was made by the dumping of tap-slag, but this was eventually abandoned allowing the remaining portion to infill naturally.

Furnace No. 14. This was constructed on a prepared clay base in a pit cut into the fill of the trapezoidal pit. The remains consist of the rear wall and clay insert forming the D shape in plan. The rest of the furnace and most of the slag-tapping hollow had been demolished to make way for Furnace No. 7.

PHASE IV

Area 9 (Fig. 10)

Several shaft smelting furnaces were constructed in this area over the levelled remains of the domestic settlement. In Area 9 the phase is represented by the plough-damaged remains of smelting furnaces and associated post pits.

Furnace No. 12 (Fig. 10). Type A. Showed signs of at least one re-lining. In all other respects it resembles closely other furnaces of this type. It clearly post-dated Building No. I as the superstructure had partly sealed post pit no. 10. Near to the rear wall and contemporary with Furnace no. 12 was a single post pit (A). This was a cylindrical pit dug to accommodate a post held in position by a packing of clay.

Furnace No. 15. The truncated shaft was filled with a mixture of charcoal and cinder. Fragments of a tuyere (No. A54) were found in the front arch area and a further seven in the slag-tapping hollow (A83, 164, 165, 166, 167, 169 and 170). Several large pieces of tap-slag were also found in situ, some adhering to the base of

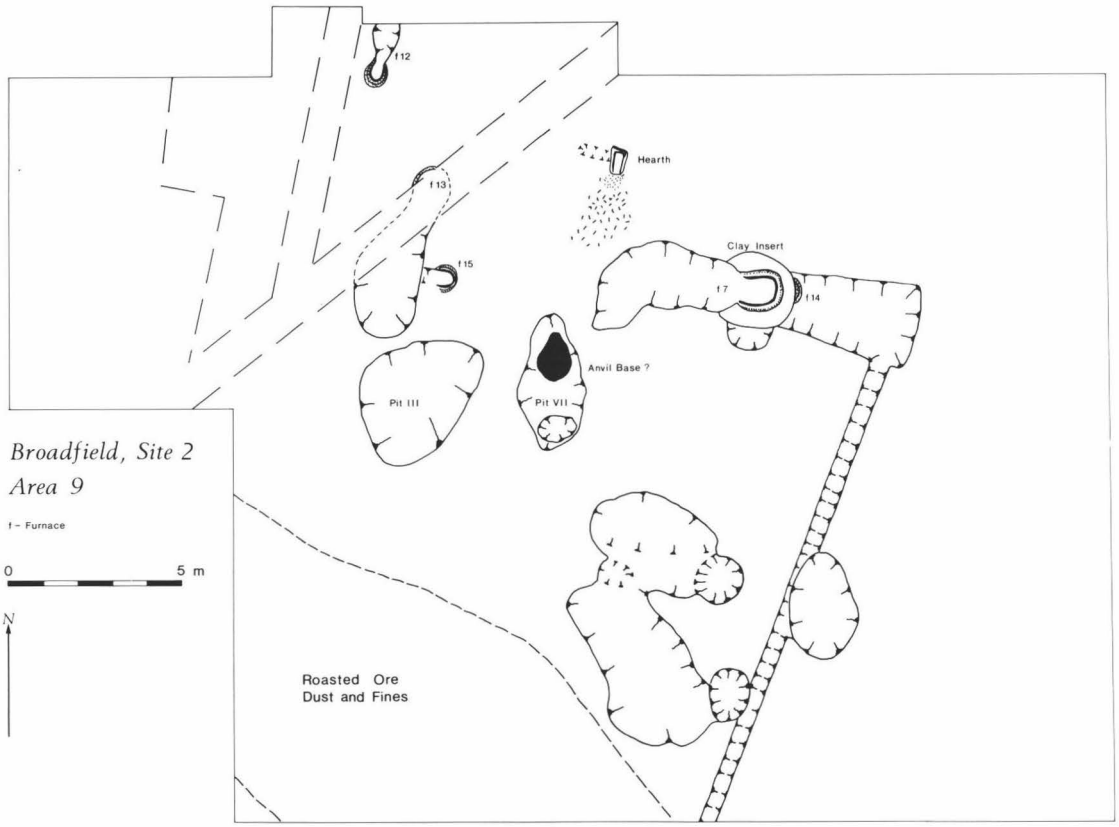

Fig. 10. Site 2, Area 9. Phase IVa, IV and V.

the slag-tapping hollow. Part of the hollow immediately opposite the front arch was lined with puddled clay. Post Pit B, similar to Post Pit A in construction, was filled with a mixture of dirty brown soil and clay. Another circular pit and two stake holes were also located. Cutting through post pits nos. 17 and 18 and therefore post-dating the building, a trapezoidal shaped pit was dug and connected via a gully to a shallow ditch in Area 2. This trapezoidal pit (5.18 metres × 2.50 metres) may have served as a reservoir. The gully may have been plugged (possibly with turf) to regulate the release of water to suit immediate requirements in iron manufacturing. There was a similar, if more complicated, system used on Site 1.

Area 1 (Fig. 11)

Three shaft smelting furnaces (Furnaces Nos. 8, 9 and 16) were constructed in a row adjacent to one another and set into a 3.66 metre square, prepared clay, insert. All of them had, to varying degrees, been disturbed by the construction of a larger furnace during Phase V. However, the most northerly was nearly complete in plan and this assisted greatly in working out the dimensions of the others. The internal diameter varied from 34 to 46 cm., with a slag lining followed by a band of grey puddled clay. Tapping facilities were provided by a pit dug immediately east of the furnace into the clay insert. All the furnaces had been re-lined several times and the base was raised by adding and

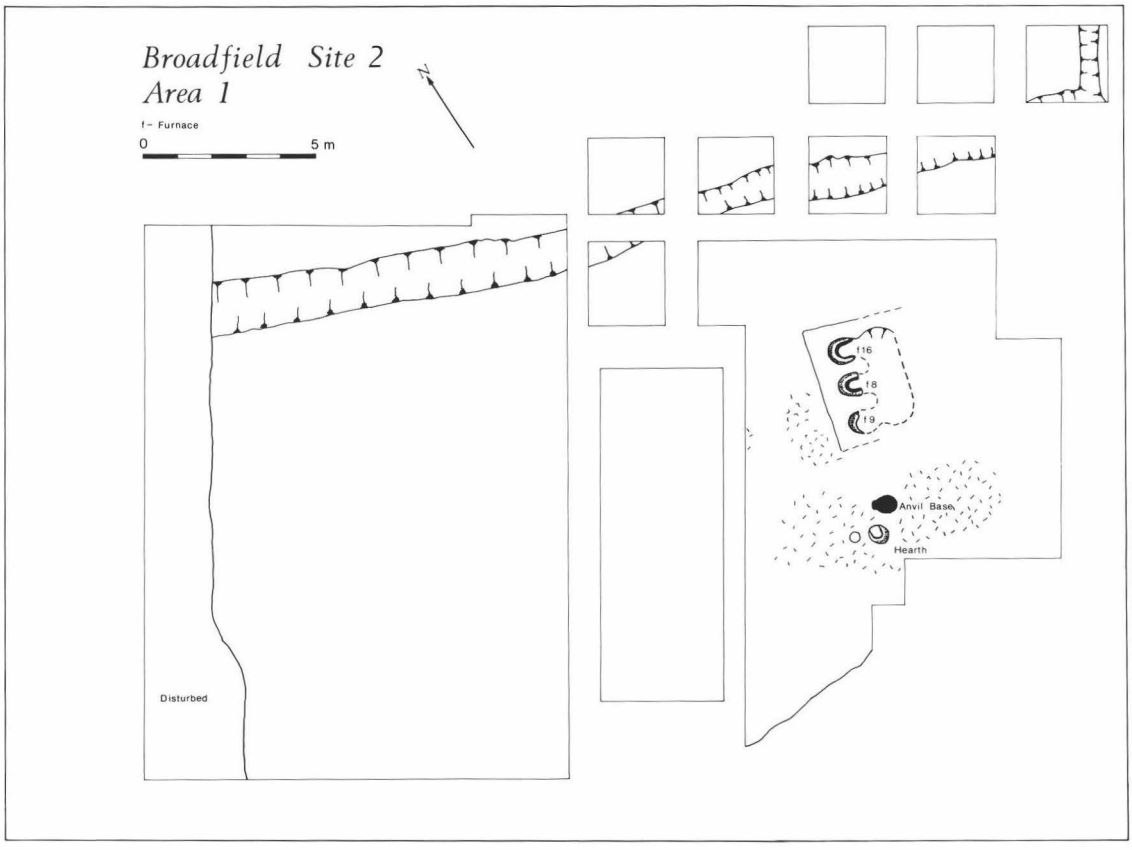

Fig. 11. Site 2, Area 1. Phase IV.

shaping a clay plug and lining. Charcoal samples taken from the base of the shafts of Furnaces Nos. 8 and 16 gave a C-14 date of 1920 ± 70 b.p. (a.d. 30).

To the south of the insert an oval area of furnace slag, hammer-scale and rust had cemented together forming a hard lump. The upper surface was concave and the components had been consolidated, giving the impression of an area frequently hit with a heavy object, suggesting its former use as an anvil base. Its proximity to the hearth and surrounding layer of hammer-scale and other smithing debris may support this view.

A smithing hearth 46 cm. away from the anvil base consisted of a circular depression 52 cm. in diameter cut into the natural clay. The interior was coated and impregnated with slag 50 mm. thick, adhering to a grey puddled clay lining 64 mm. thick. Surrounding this the clay had been burnt red forming a circle 60 cm. in diameter. Charcoal from the base of the hearth gave a C-14 date of 1920 ± 70 b.p. (a.d. 30).

A shallow V-shaped ditch was dug through the northern part of this area. It was joined by the contemporary gully running south from Area 9.

On the western side of the enclosure the building had been demolished and the area levelled as preparation for the construction of smelting furnaces. The ditch running north–south through the area had partially silted up, being eventually sealed by burnt clay debris probably derived from Furnaces Nos. 20 and 22 (Fig. 14).

Furnace No. 21. This smelting furnace consists of a circular depression and rear wall lined with

grey puddled clay. All slag and other debris had been cleared from the slag-tapping hollow to receive the insert of Furnace No. 20, but the slag furnace base was still in situ.

Furnace No. 22. The puddled grey lining was intact at the base of the shaft and covered the remains of the wall. Both the furnace base and most of the tapping hollow were cleared of debris to receive the insert of Furnace No. 23, leaving one large piece of tap-slag adhering to the base of the slag-tapping hollow.

Furnace No. 23. Replaced the above and consisted of a clay insert constructed on top of Furnace No. 22. There were no obvious signs of re-lining. The shaft contained a fill of charcoal and furnace slag sealed by a layer of burnt clay.

Furnace No. 20. Another insert furnace replacing Furnace No. 21. As with the others, the rear wall survived around approximately two thirds of its original circumference. In one place alternate bands of orange, light and dark grey indicated a re-lining. Two small fragments of slag-lining were found adhering to this. The remains of the shaft contained a thin layer of charcoal sealed by a deposit of burnt red clay.

At the southern end of this trench the remains of two smelting furnaces were found. The common slag-tapping hollow was destroyed by road construction just to the east of Furnace No. 19.

Furnace No. 18 (Fig 7). Smelting furnace approximately 41 cm. in diameter, using common slag tapping facilities. There was clear evidence in the form of alternating black-grey-red bands of burnt clay for at least three re-linings.

Furnace No. 19 (Fig. 7). Smelting furnace approximately 33 cm. in diameter, using a common slag-tapping hollow. It had been re-lined on two separate occasions and was equipped with facilities of alternate tapping.

To the south of these furnaces a pit (Pit G), circular in plan, had been dug into the clay, presumably to obtain material for furnace construction, and back-filled with a mixture of charcoal and small fragments of tap-slag. Later, large pieces of slag were dumped in this area sealing the pit beneath it.

PHASE V

Area 9 (Fig. 10)

Dominating the area during this phase are the remains of two large shaft smelting furnaces. One of these, Furnace No. 7, had been constructed in the area occupied by the slag-tapping hollow and front arch of Furnace No. 14. The other, Furnace No. 13, was clearly stratified above Furnace No. 15. Unfortunately, much of its superstructure and part of the slag-tapping hollow had been destroyed by the cutting of a service trench in 1973.

To the south of these furnaces ten irregular-shaped pits were dug into the Weald Clay, the probable objective being to obtain clay for use in the construction of furnaces. The absence of silt, and the fact that the fill consisted entirely of smelting by-products and no other form of refuse or datable artefacts suggests that they were back-filled as soon as they had served their purpose. Pit III is an example of this process, here the tip-lines suggest filling from the north-east side—possibly from Furnace No. 7. The primary fill consists of broken fragments of tap-slag followed by a thin layer of slagged furnace lining. Clay (residue of re-lining?) and several other layers of similar material were also deposited, indicating other maintenance operations before more slag was used to complete the filling of the pit.

Pit VII. Oval shaped pit 3.76 metres long, 1.35 metres wide and 41 cm. deep. It differed from the other pits in the material used for backfilling:

Layer I: consists of an oval area of cemented forge slag, hammer-scale and partially reduced ore lumps surrounded by some broken pieces of tap and furnace slag. Such material is normally found near an anvil and smithy, and is a by-product of the forging process.

Layer II: dirty yellow clay with iron stains. 25 cm. thick.

Layer III: 13 cm. thick deposit of small fragments of roasted ore and fines, mostly purple but some black pieces were present, possibly the residue of screened material from the ore roasting pit, operating prior to and in the area occupied by Furnace No. 7.

Smithing Hearth. In plan it consists of a roughly rectangular-shaped pit filled with a mixture of charcoal and soil. It had been lined on three sides with puddled grey clay impregnated with slag on the inner side. There was clear evidence for one re-lining. Contemporary with the re-lining a hole was cut through the wall in the north-west corner of the hearth. This aperture led to a U-shaped depression. The aperture was sealed with puddled clay and may have served as the entry point for a forced draught, the bellows set near the rear of the depression. Immediately south of the hearth, hammer-scale had been trodden into the natural clay. Contemporary with Layer I, Pit VII.

Furnace No. 7 (Fig. 16). After Furnace No. 14 had been dismantled, an oval pit was dug through its tapping-hollow. In this area ore roasting was carried out, the residue was consolidated to provide a firm base upon which the new furnace could be erected. The remains of a prepared clay insert were set into an enlarged pit on a bedding of charcoal. The insert had been reinforced with several large sandstone blocks. A charcoal sample obtained from the construction level provided a C-14 date of 1900 ± 60 b.p. (a.d. 50). After the last firing, the slag base was removed and most of the superstructure demolished. Fortunately, parts of the slag lining survived on three sides of the shaft, preserving the finger-marks and evidence of re-lining.

The slag-tapping hollow was presumably cleared of slag and other material when the slag furnace base was removed. This would have been normal practice prior to re-lining.

Layer I: Dark brown soil with tap-slag fragments.

Layer II: Sandstone blocks resting on the spread of burnt clay from the shaft. These Tunbridge Wells sandstone blocks were used to reinforce the shaft.

Area 1 (Fig. 12)

The area was levelled prior to the construction of another furnace group. Several pits and a possible kiln complete the features of this phase.

Furnace No. 3. Large, single smelting furnace, built on the demolished remains of Furnaces Nos. 8, 9, 16, C-14 dated to 1840 ± 80 b.p. (a.d. 110). As with other furnaces of this type, a pre-construction phase took the form of an oval pit in which ore roasting was carried out. The base and sides of the pit had been burnt red and orange in several places. The pit fill comprised layers of roasted ore fines and yellow clay. The oval furnace base rested on these layers.

Furnace No. 4 (Fig. 7). Constructed north of Furnace No. 3, it had been re-lined on two occasions. The slag base and lining were found in situ along with the remains of the front arch, which had been reinforced with sandstone blocks. The shaft was filled with a mixture of charcoal, furnace slag and unreduced ore fragments. The slag-tapping hollow contained a mixed deposit of slagged furnace lining, furnace slag, tap-slag and charcoal.

Furnace No. 6. The south side was disturbed by roots, resulting in a D-shape. the slag furnace base survived at the rear of the shaft, but there was no evidence of re-lining. Another earlier tapping hollow ran parallel to the one serving this furnace. Unfortunately this earlier furnace had been totally destroyed by the construction of Furnace No. 6.

To the west of this furnace two irregular-shaped pits had been dug. Pit C was probably dug for clay to be used in furnace construction. It had been back-filled with layers of tap-slag, furnace debris and charcoal. This material was cemented together, covering the surface of the pit with an extremely hard deposit. A small channel linked this pit to another smaller one (Pit A). Pit D cut through both Pit C and the slag-tapping hollow of Furnace No. 6. Pit D, roughly rectangular in plan, was filled with charcoal interspersed with several lenses of clay. To the north of these pits a rectangular-shaped feature was cut into the clay. The clay was piled on the south side and levelled, sealing Pit A. When excavated, the trench contained a pair of forging tongs in a fill of charcoal and cemented forging debris. Contemporary with this deposit is a layer of cemented furnace slag, hammer-scale, ore fines and charcoal covering a circular area centred on this trench-like feature. This was connected to a large pit that had been dug for clay and back-filled with slag.

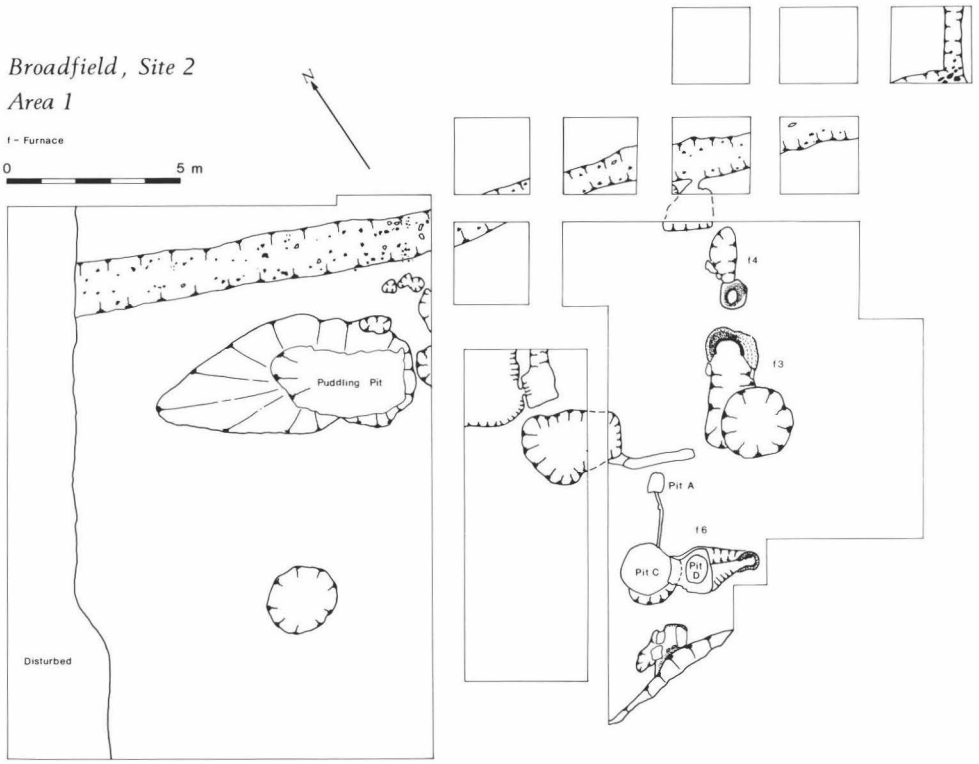

Fig. 12. Site 2, Area 1. Phase V.

Puddling pits. The preparation of clay for lining the furnace was carried out in two shallow pits connected via a gully to the ditch. Each pit had sloping sides tapering towards a flat base and was filled with two layers of grey clay.

A circular pit was back-filled with burnt clay lumps reminiscent of the clay bars used in pottery kilns. One of these objects was recovered from the lowest level of the eastern slag dump.

A circular depression cut through during the re-routing of the stream in 1973 was lined with burnt puddled clay 12 cm. thick and filled with a mixture of charcoal and soil. Encircling the top of the pit was a row of sandstone blocks, all burnt red and black. On the north side of this feature there was a wide gap in this row, leading to a shallow depression also covered with a coating of puddled clay and reinforced along each side with sandstone blocks. The function of this feature is far from clear. There is no obvious connection with iron-production. It is, however, similar in plan to pottery kilns found elsewhere in Roman Britain.

On the south bank of the stream, exposed by recutting, a smelting furnace associated with this phase was revealed:

Furnace No. 26. Shaft smelting furnace, 63.5 cm. in diameter, set into a clay insert large enough to incorporate the slag-tapping hollow (5 metres long and 30 cm. thick). The slag-tapping hollow contained a fill of charcoal and tap-slag, sealed by a lens of dirty dark brown soil. While the shaft fill included furnace slag and charcoal, the interior of the shaft was coated with slag and there were several re-linings indicated by colour changes in the burnt clay surround.

Western Slag Dump (Figs 5 and 14). An oval area of burnt clay 12.88 metres long and 7.32 metres

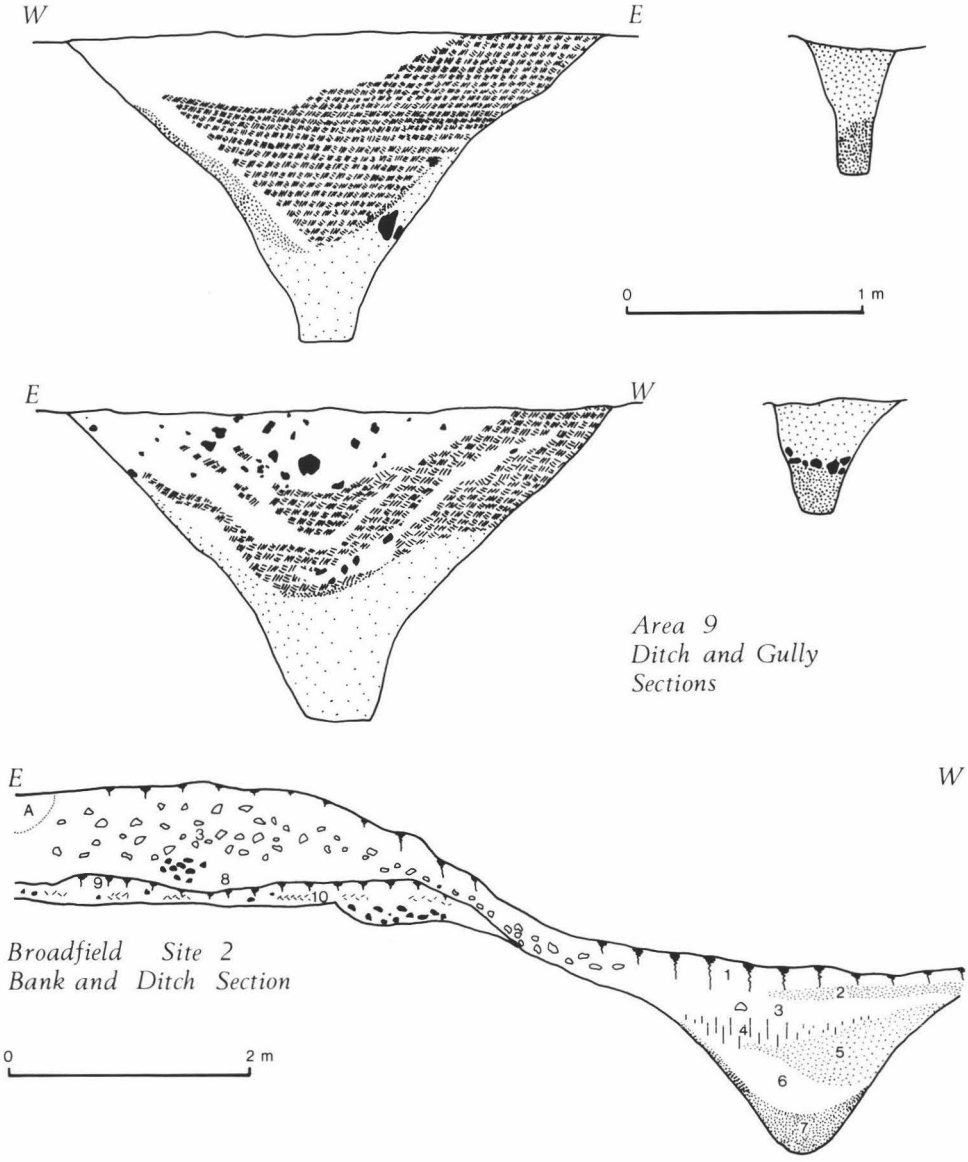

Fig. 13. Site 2. Area 9: ditch and gully sections. Main bank and ditch sections.

wide in a slight natural hollow. The variations in colour of the burnt clay are probably the result of numerous fires being repeatedly set in this depression. Separating this feature from the slag was a layer of ore fines up to 77 mm. thick. Apparently after roasting, the ore had been screened to exclude ore fragments greater than 7 mm. in size, leaving this residue to accumulate in this area. The bulk of the fines would, however, have resulted from fragmentation of the ore during the roasting process. These fines were mostly reddish-purple in colour. Around the periphery of the hollow some unburnt nodules were found. Accumulation of debris would render this area of little value, so it was abandoned in advance of the encroaching slag dump.

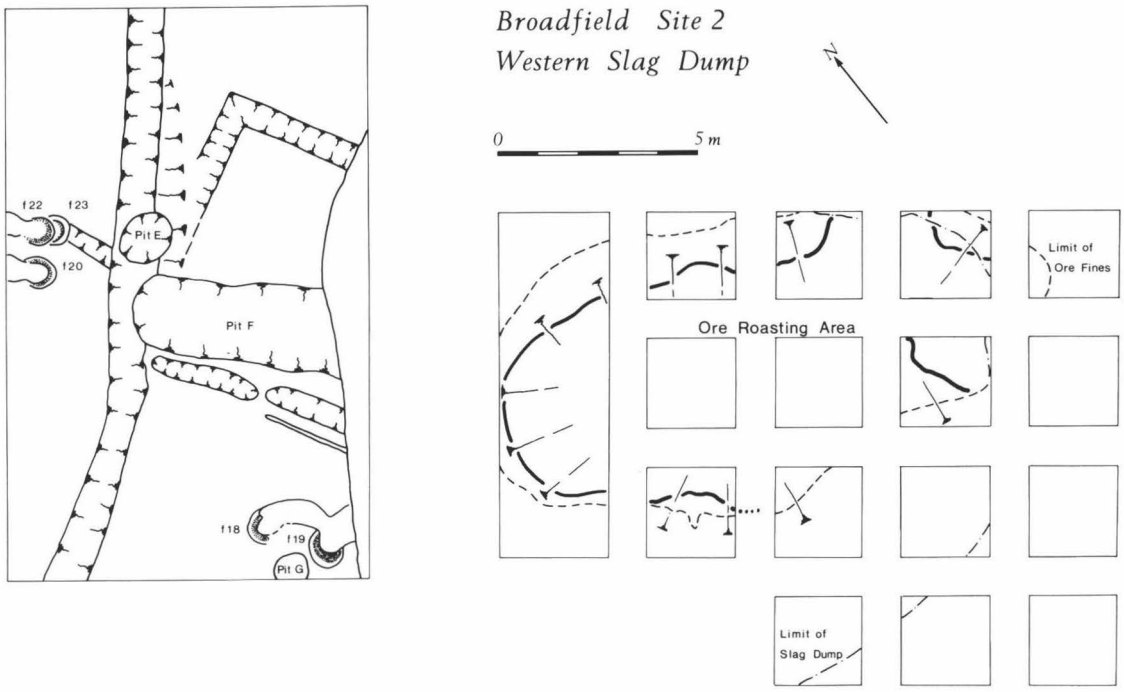

Fig. 14. Site 2. Western slag dumps and Furnace Nos. 18–20, 22 and 23.

Eastern Slag Dump (Fig. 5). Debris was first dumped in this area at the start of Phase V, the initial deposit of red burnt clay incorporating clay 'kiln' bars and covering in part the previously dumped pile of roasted ore fines. The dump was made up by small loads of smelting debris, mostly broken tap-slag fragments, smaller items such as fragments of charcoal and fines were carried to the lower levels by water percolating through the slag after a period of rainfall. Occasionally burnt clay or furnace superstructure were deposited forming distinct lenses in the dump. Numerous sherds of pottery were recovered from this area during the excavation and a study of these and their distribution confirmed the lack of stratification that would follow this method of dumping. On the south side of the stream the base of a smelting furnace was found constructed on a clay insert set into the slag. This furnace (Furnace No. 25) was lifted intact for examination in a laboratory and has subsequently been acquired by the Science Museum (Gibson-Hill 1974, 50–53, Figs 1 and 4).

In its final form the dump covers an oval area measuring approximately 45 metres by 30 metres later to be spread across the eastern part of Area 1, affording some protection against ploughing.

Medieval and Post-Medieval Activity

The slag dumps found at Broadfield are very denuded and small compared with those found on several sites in East Sussex (Lower 1949, 169–220; Straker 1931). Although there are clear records of dumps in East Sussex being used as sources of raw material for construction in recent times, there is as yet little evidence for robbing at an earlier period. At Broadfield the western slag dump (Fig. 14) had numerous small depressions cut into it, frequently associated with medieval or post-medieval pottery, and similar finds were found elsewhere on the site.

BROADFIELD SITE 3 (Figs 3 and 15)

The first period of occupation in this area is represented by a small gully, probably circular in plan and V-shaped in section. Within the area delimited by the ditch and contemporary with it there was a square-section trench, irregular-

shaped in plan, which has been interpreted as a beam-slot. A group of four post pits was situated a short distance from this feature. The exact date of these features is not known, stratigraphically they could be no later than Phase IV–V.

PHASE IV–V

To the east of this area a small domestic hearth was discovered. This had been cut into a ditch that runs north–south through Sites 1, 3 and 4. It consists of a circular depression with a flat base and vertical sides. The superstructure had been demolished at the base of the hearth and back-filled with yellow clay. It is associated with a hearth and building on Site 4.

PHASE V–VI

The ditch located in Phase IV was V-shaped in section with sloping sides and started to accumulate silt during Phase V. Towards the end of this phase building materials, tiles, nails, sandstone and domestic rubbish were being deposited.

PHASE VI

After a short hiatus, the area was converted to industrial activity. The gully which had encircled the building was partly filled by silt when ore roasting operations were started near its southern bank. Soon the remainder of the ditch was filled with charcoal and roasted ore. The ore roasting feature was represented by an area of red, black and yellow burnt clay and covered with a thin layer of roasted ore fragments and fines.

An unusual series of smelting furnaces (Fig. 16) was constructed in the centre of the area previously occupied by the building described above.

Furnace No. 1. This elaborate smelting furnace was set into a pit 89 cm. deep. At the southern end the pit was lined with puddled clay and reinforced with several courses of sandstone blocks. The furnace had a flat base with an internal diameter of 80 cm. The remains of the shaft stood 76 cm. high.

Furnace No. 3. Furnace No. 1 was replaced by a more conventional smelting furnace, which was constructed on a raised clay base set into the demolished remains. Dimensions of this furnace are difficult to estimate as the broken fragments of the slag furnace base give the appearance of a corner, suggesting a square bottom to the furnace. This slag furnace base was 76 mm. thick adhering to the grey puddled clay which was apparently a re-lining, as this was followed by a band of hard black burnt clay surrounded by the red burnt remains of the insert.

This was eventually levelled and ore roasting was carried out in a pit formed in the former slag-tapping hollow and front arch area. The feature consisted of an oval-shaped burnt clay depression measuring 1 metre long and 84 cm. wide, covered with a 10 cm. thick deposit of roasted ore fragments.

A subsequent alteration saw the construction on a prepared clay insert, set into the residue of ore left in the pit described above of another smelting furnace (No. 4) (Fig. 16). This had an internal diameter of 40 cm. The wall of the furnace survived to a height of 41 cm., leaving a ragged surface where the superstructure was broken off.

In its final form this furnace was modified by reducing its superstructure (probably to ground level) and sealing off the front arch with clay and sandstone blocks to create a forge, oval in plan (69 cm. × 43 cm. × 41 cm. deep). During its working life the slag lining increased to a maximum thickness of 23 cm. At the end of this phase the base of the forge (Furnace No. 6) was back-filled with burnt clay (Fig. 16).

Also in this phase were two more conventional furnaces. *Furnace No. 2* was constructed on the western side of the main ditch (which had fallen into disuse) within a shallow pit 61 cm. deep. The slag-coated (12 cm. thick) shaft was approximately 63 cm. in diameter and 53 cm. high. There was clear evidence of at least one re-lining. The superstructure above the front arch had collapsed inwards, the largest fragment 76 cm. long. This, added to the 53 cm. high subterranean portion would give an overall height for the remains of 1.29 m.

Furnace No. 5. This was situated due south of Furnace No. 1 and was cut through by a service trench at the start of excavation in this area. It consisted of an oval pit 1.37 m. in diameter and 43 cm. deep lined with alternate bands of burnt

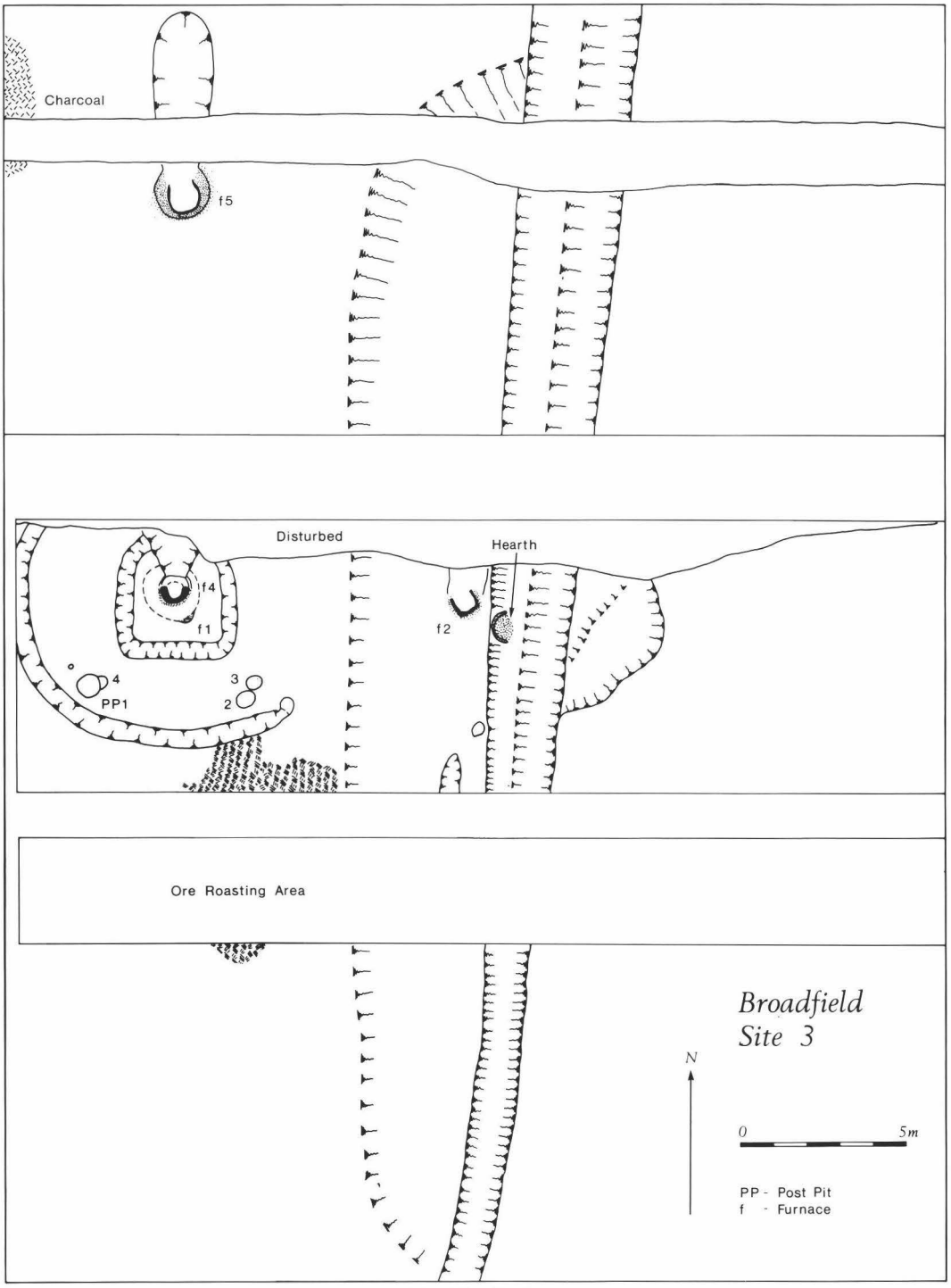
Charcoal
f5
Disturbed
Hearth
f4
f1
f2
4
3
PP1
2
Ore Roasting Area
Broadfield
Site 3
N
0
5m
PP - Post Pit
f - Furnace

Fig. 15. Site 3.

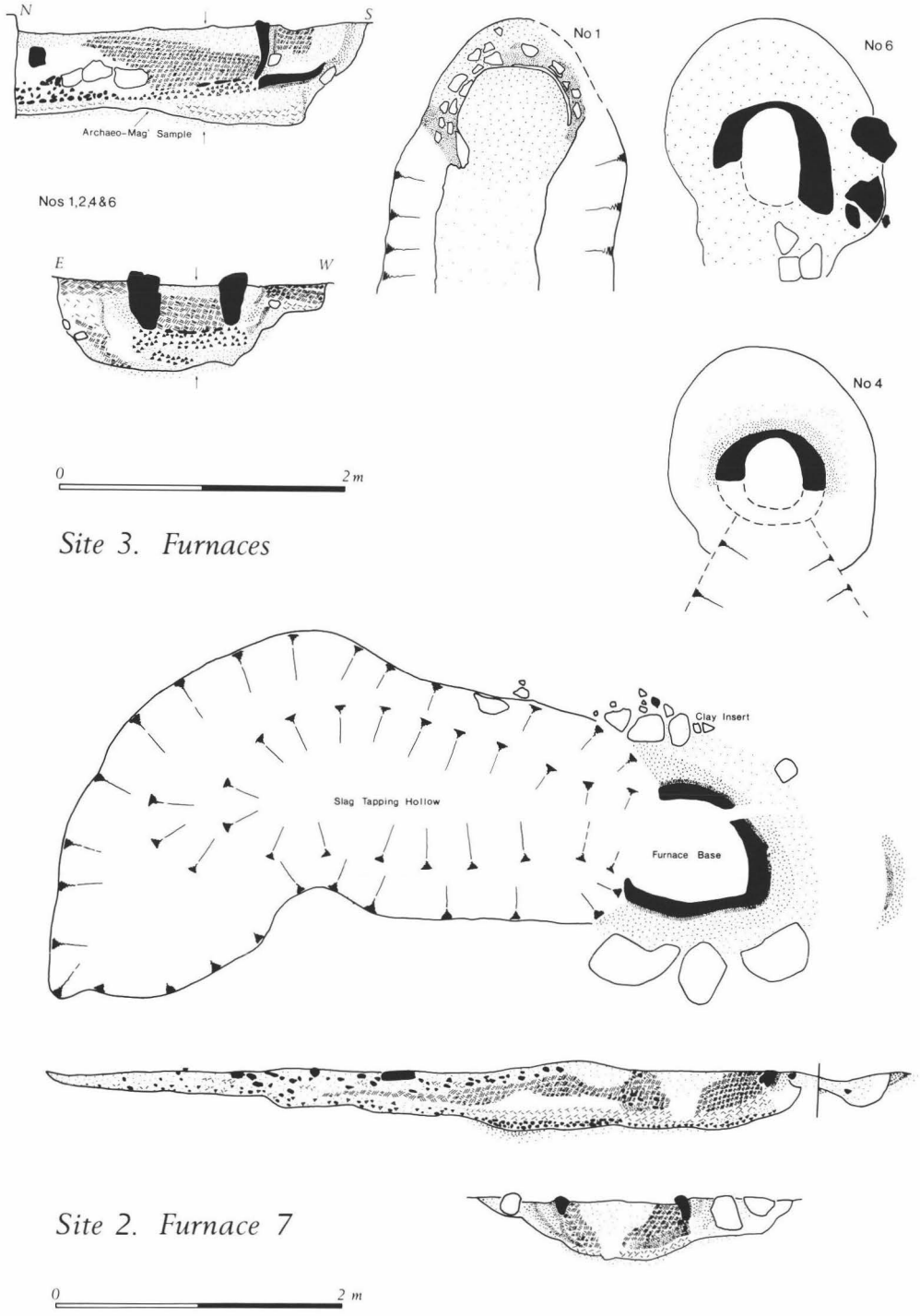

Fig. 16. Sites 2 and 3. Furnaces.

clay. The base of the shaft had become blocked by a mass of charcoal and slag. Smelting continued, forming a slag furnace on top of this material. The slag-tapping hollow was approximately 3.70 metres long and the clay at its base and sides had been burnt red by contact with the molten slag.

The site of a further furnace was observed, but there is little archaeological evidence of it as the area was badly disturbed during road construction.

Immediately east of Furnace No. 5 a thick deposit of charcoal, forming a rectangular shape in plan covered entirely a burnt clay area. At the centre there was a post hole containing a charcoal fill. It is possible that this represented the remains of a charcoal burning area, the post supporting the cover to the wood pile during firing.

BROADFIELD, SITE 4 (Fig. 3)

This site is immediately south of Site 3 and covers a slight rise formed by a clay ironstone outcrop. The remains of the base of the rise were truncated and, because of erosion and ploughing, disappeared some way from the summit.

PHASE IV–V

Following the demolition of the domestic settlement on Site 2, fresh quarters were apparently erected on this site. There is evidence for two dwellings, a granary or warehouse and two domestic hearths.

Buildings, represented by two areas of burnt clay, resemble in construction the floor of Building I on Site 2. One of these areas was rectangular in plan, measuring 12 metres by 1.5 metres. On its northern side, running parallel to the long axis, a shallow trench had served as a beam slot, the burnt clay ending abruptly on its southern edge (Building A). No trace of the beam slot was found on the other three sides, apparently removed by ploughing. The other burnt clay area (Building B), 15 metres square, provided no evidence of beam slots and although several shallow circular depressions of approximately 90 cm. in diameter were found in this vicinity they were truncated, making it impossible to establish whether or not they had supported vertical posts. Nearby, three other smaller areas of burnt clay were located, all were irregular-shaped in plan and had been extensively damaged by ploughing.

Another structure first located on Site 3 was revealed during the excavation of Site 4 (Building C). The remains consisted of five parallel trenches (beam slots) approximately 2 metres apart terminating at one end in a trench set at right angles to the others. The beam slots contained a fill of dirty brown soil, slag and charcoal. The structure was cut through by the ditch described above and while one of the beam slots was found to continue on its eastern bank, it was only possible to trace this for a short distance. Therefore the full extent of the structure is unknown. However, the remains indicated a building that was used either as a store house, or more probably a granary (see above for comments on possible arable farming).

Associated with this building is a domestic hearth similar to that of Site 3. The Site 4 example is more complete and consists of an irregular-shaped depression filled with a layer of charcoal and clay above the collapsed red burnt clay superstructure.

PHASE V–VI

The ditch mentioned above cut through the foundation of the granary and continued south towards the crest of the hill, becoming more truncated until it disappeared near the 83.5 metres contour line. It had been traced in a continuous line for 117 metres. Another ditch running from east to west for 41 metres was probably associated with it, providing drainage of this area. The fills of both ditches were similar and small finds confirmed they were contemporary.

Several minor depressions filled with slag were found on the site, but neither their function nor date could be ascertained. In addition to these there were three larger pits which may represent the remains of shallow excavations for clay and iron ore which outcrops in this area.

No plans appear to survive for two furnaces found on Site 4.

Furnace No. 1. A horse-shoe shaped area of grey burnt clay 67 cm. in diameter surrounded by red burnt clay. The shaft and base were filled with a black mixture of charcoal, slag and soil sealed by a layer of collapsed superstructure which had been levelled to make way for Furnace No. 2.

Furnace No. 2. Constructed in a pit cut into the slag-tapping hollow of Furnace No. 1. The clay insert was reinforced by eight sandstone blocks forming a horse-shoe shape in plan. Each block had one straight, worked surface that was positioned to face inwards and showed signs of burning at a high temperature. On the southern edge of the insert, near the front arch, there was a post pit. The interior of the shaft and base was lined with grey burnt clay 69 cm. in diameter with an opening leading to the slag-tapping hollow. The shaft was filled with a layer of charcoal and furnace slag sealed by fragments of furnace superstructure. The charcoal level continued into the slag-tapping hollow, covering its base to a depth of 50 mm. This in turn was covered by a layer of black-brown soil and tap slag, sealed by a thick deposit of red and orange burnt clay lumps.

Both these furnaces are very truncated and owed their survival to a covering of smelting debris that had been spread on this area by ploughing, the material derived from a nearby slag dump. Approximately 36 metres south-east of these two furnaces a slight depression 50 cm. in diameter was found, this was lined with grey burnt puddled clay and had small fragments of furnace base adhering to its surface. Slag, roasted ore and burnt clay were scattered round and pressed into the sub-soil, but no evidence of a slag-tapping hollow was forthcoming. Although these remains have features characteristic of an iron-working hearth, the evidence is too fragmentary to make a positive identification.

An oval area of smelting debris comprising broken pieces of furnace superstructure, burnt clay lumps, tap- and furnace slag is thought to represent the residue of a slag dump, extensively damaged by ploughing. At the centre of the dump the slag deposit described above rested on a layer of charcoal. Below this a thin layer of roasted ore fines had been pressed into the natural clay. This industrial activity is contemporary and associated with the Phase VI furnace group on Site 3.

GOFFS PARK

Excavations at Bardown and Holbeanwood had shown that iron-working sites in that part of the Weald may well consist of an original core settlement providing accommodation and serving as an administrative centre to a number of later satellite sites where the industrial activities were carried out when core reserves were used up (Cleere 1970). The aim of the Goffs Park survey was to establish whether or not this applied to the Crawley area and if so, to locate sites for examination before construction work started (Fig. 1).

Excavations were restricted to a building site on the west side of the Old Horsham Road (A264) which had previously been occupied by Springfield House. Two areas of occupation debris were exposed by grading. The first was apparently the base of quite a large depression filled with roasted ore and tap-slag. Nearby there was a circular feature approximately 90 cm. in diameter and 10 cm. thick, the clay surface burnt buff to red and through to a blue-grey colour, indicative of heating at a high temperature in reducing conditions. In this it resembles the colour variations noted on smelting furnaces found at Broadfield, but the absence of any structural details made it impossible to ascertain the function of this feature. Approximately 4.5 metres west there was another irregularly-shaped area of industrial debris, comprising a thin layer of broken tap-slag pieces on top of a grey (probably wood ash) stained clay.

The features described above were found to be on a stretch of ground separating two ditches which ran parallel to each other around the contour of the hill. The western (inner?) ditch was least affected by grading. Its fill consisted of a layer of brown soil slightly stained with charcoal flecks. There were inclusions both of burnt clay lumps and rusty metallic particles. Below this the fill changed abruptly to a grey clay textured layer heavily stained with charcoal. Most of the pottery, together with a few pieces of roasted ore, burnt sandstone and fragments of tap-slag were recovered from this layer. The third layer was a light grey silt of a plastic consistency with virtually no inclusions except for a few sherds of pottery. In the section illustrated the top of the remains were approximately 1.55 metres below the surface of the subsoil, giving an overall depth for the ditch of 2.30 metres.

The second ditch had a more irregular profile, sloping outwards from the base. However, the fill was very similar to the one described above. Brown soil was found intermittently at the

surface throughout the length of the ditch. It was iron-stained and numerous tiny rusty lumps were recovered. The second layer was identical to the first ditch and again contained most of the small finds. The silt was inconsistent at various points. It would seem that both ditches were more or less contemporary, silting rapidly with material washed downhill by rain. When iron-working commenced in the immediate vicinity of the ditches, industrial waste and domestic debris were deposited in Layer 2. Pottery from this and the other occupation areas indicate a Late Iron Age date for the site, the total absence of any definite Roman forms suggesting that work ceased in this area prior to 43 A.D. The ditches were apparently no longer maintained after this phase and gradually filled by silting and erosion. The area was probably unoccupied as no further finds were recovered.

Aerial photographs of the area prior to the demolition of Springfield House show two ring-shaped features situated west of the ditch. They may represent the remains of structures (possibly hut-circles) associated with the Iron Age occupation. In any case these features and the area inside Goffs Park were not excavated, as they were not threatened by development.

Goffs Park is significant because of the clear evidence in the form of roasted ore, charcoal, tap- and furnace-slag of iron-working in a probably pre-Roman context. The pottery is similar to types found at Broadfield Site 2, Phase II, suggesting that they are contemporaneous. If the ditches at Goffs Park do in fact enclose a domestic occupation area with dwellings, then the associated smelting furnaces at Broadfield, as out-workings, are not without parallels. The excavations of the Iron Age hill fort and Romano-British settlement at Garden Hill (Money 1976) suggest a connection with several single bloomery sites found in the adjacent Pippingford Park by Mr C. F. Tebbutt (pers. comm. 1976). One of these bloomery sites has been excavated, providing a mid-1st century A.D. date. (Tebbutt and Cleere 1973, 27–41).

CONCLUSIONS

The earliest iron workings in the Weald were probably those associated with the hill forts that occur in the area. They operated in a similar, though possibly less extensive, manner to the outworkings of the later Romano-British settlement at Garden Hill. This limited industrial activity supplied the needs of the community and it is not until the late Iron Age that there is conclusive evidence for iron working on a larger scale, when open sites such as Broadfield and Horsted Keynes were founded. At Broadfield two of the earliest cylindrical shaft smelting furnaces to be found in Britain are dated to this period. They are associated with the probable settlement at Goffs Park, the population of which used pottery of the Eastern Atrebatic type. Although iron working was undoubtedly a major factor in their economy, they may have practised some form of agriculture and were conceivably responsible for the cross-plough marks at Broadfield Site 2.

A further period of expansion took place shortly after the Roman invasion of 43 A.D. The settlement at Goffs Park was abandoned and new quarters were established in the vale of Broadfield (Site 2) with a contemporary industrial area (Site 1) on the adjacent bank of the River Mole. The domestic settlement consisted of an enclosure formed by a ditch and upcast bank containing an area measuring approximately 82 metres × 98 metres. There were at least three timber-framed buildings on the eastern side of the settlement, and sandstone foundations of other structures were found on the west side. Of these Building III was the more complete and clearly served a domestic function, being fitted with an oven and prepared clay floor. There is little doubt that this represents a planned complex, primarily concerned with mining and smelting iron ore. Distribution of the products was presumably via the Pease Pottage–Colgate Trackway to Horsham linking with the newly constructed Stane Street.

During the following phase (IV) the settlement in Broadfield Site 2 was abandoned, the buildings demolished and the eastern perimeter ditch back-filled to be replaced by a series of smelting furnaces. Site 1 still functioned as an industrial area, the reservoir and ditch and the initial furnace group ceased to be used, but the forge was still operative and some smelting furnaces were constructed. Several varieties of smelting furnace new to Broadfield were

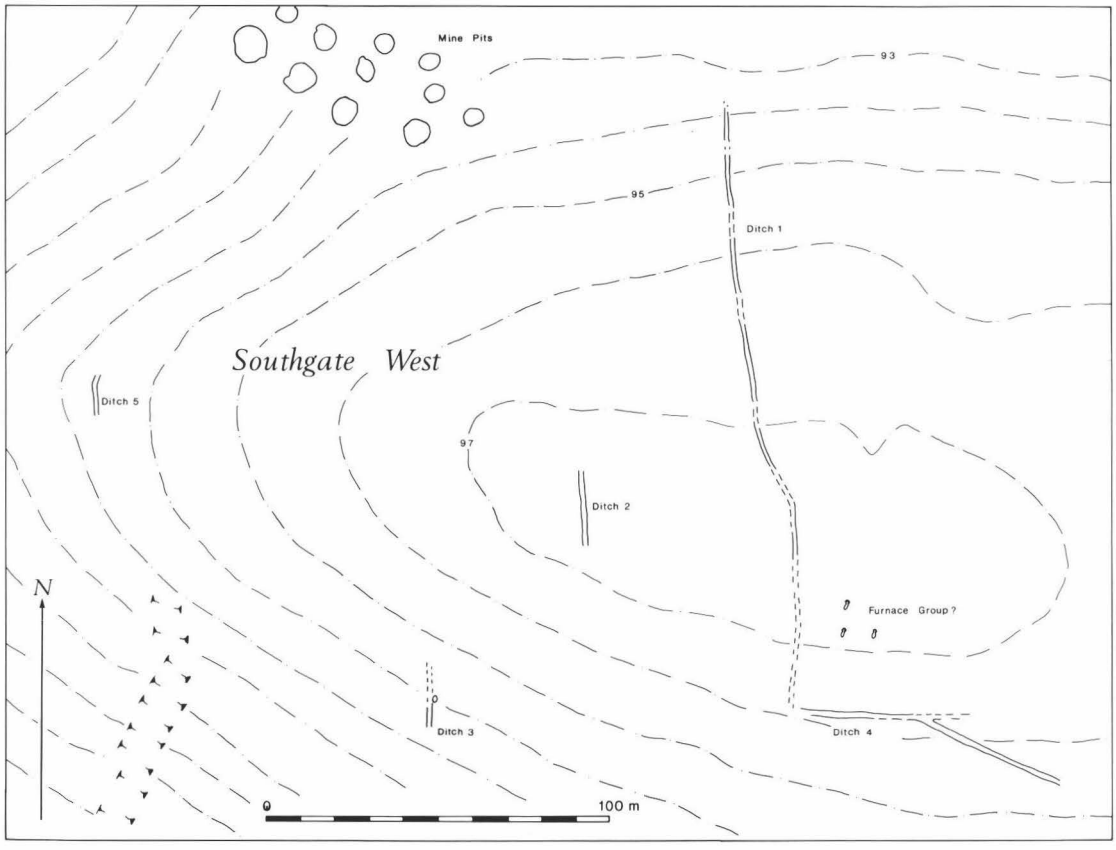

Fig. 17. Archaeological remains at Southgate West.

introduced at this time and occur on both Sites 1 and 2. The domestic accommodation was transferred to the south of this enlarged industrial area near to the crest of a slight rise that is formed by an outcrop of clay ironstone in the Weald Clay (Site 4).

This increase of industrial activity took place towards the end of the 1st century A.D. when iron working areas of the western mid-Weald were opened up by the construction of the London to Lewes and London to Brighton roads, which apparently coincided with the death of Cogidubnus and the acquisition of *civitas* status by Chichester.

All industrial activity had ceased on Broadfield Site 1 by the beginning of the second century, but smelting still took place on Site 2 and in a newly constructed furnace group on Site 3, as well as those found around the periphery of Site 4. Previously the open fire method was used for ore-roasting. Although this technique was still applied there were, in addition, several oval pits fashioned in the slag-tapping hollows of disused smelting furnaces which were used for this purpose.

The buildings on Site 4 were probably dismantled at the start of this phase and new quarters constructed elsewhere. Although no positive evidence of its location was found during the excavation, Southgate West would be the most likely situation. The large quantities of contemporary domestic pottery including storage jars and amphorae, utensils and refuse and building material found in and around the ditches at the crest of the hill may support this view (Fig. 17). The resiting of domestic settlements may be

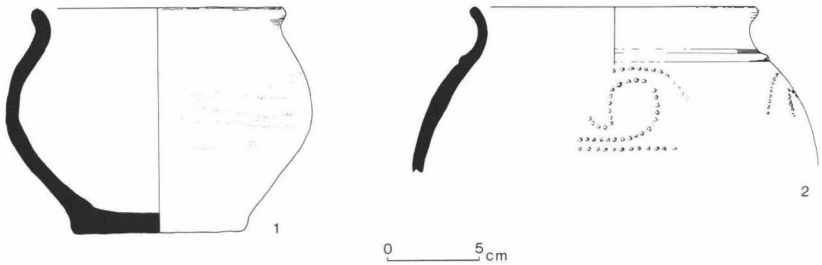

Fig. 18. Broadfield. Late Iron Age pottery (x¼).

attributed to pollution, and the need for cleared land so that more furnaces could be constructed.

The size of the Broadfield slag dumps is quite insignificant in comparison with those found on sites of the 'Coastal' group. There is clear evidence of the dumps at Broadfield being robbed for housing material, besides the large quantities of tap slag utilised as metalling on the Roman roads that cross the Weald. In short, the size of a dump is an example of the random survival of features rather than an indication of the scale of iron working on any given site.

LATE IRON AGE POTTERY FROM GOFFS PARK, CRAWLEY (by Sue Hamilton)

Introduction

Approximately 500 sherds from Goffs Park, probably of late pre-Roman Iron Age date, were examined (Fig. 18). These comprise four fabric categories: Fabrics 1, 2, 3 and 4 discussed below. Fabric 1 dominates and accounts for approximately 85 per cent of the assemblage.

Fabric 1: Grog tempered

Contexts with Fabric 1 sherds: 1, 4, 6, 7, 8, 9, 13, 23, 24, 34, 37, 43, 49, 50, 52, 55, 63, 69, 76, 77, 82 and 83.

Discussion:

Just over 400 sherds of hand-made grog-tempered pottery were considered to date to the immediate pre-Conquest period.

Grog-tempered wares are the commonest fabrics on pre-Roman Iron Age sites in Mid and East Sussex. The fabric tradition probably appears in the 1st century B.C and its production continues through the 1st century A.D. and much beyond (Green 1977, 155). The pre-Roman Iron Age pottery in this fabric falls within Cunliffe's 'Atrebatic' style tradition (Cunliffe 1974, 89), first recognised by Ward-Perkins (1938). Pre-Conquest grog fabrics from Bishopstone, East Sussex and Testers, West Sussex have received detailed analysis (Bishopstone Fabric 5, Hamilton 1977, 91; Testers Fabric 5, Hamilton 1988).

Without good contextual evidence and clear associations with other datable artefacts, it is difficult to ascertain with confidence whether specific Sussex grog assemblages relate to pre- or post-Conquest chronologies. Many of the style and fabric characteristics remain unchanged through this period. The post-Conquest production has been discussed in some detail by Green under the terminology 'Cooking Jar Fabric' (Green 1977) or 'East Sussex Ware' (Green 1980). The pre-Conquest grog tempered sherds from Goffs Park have been classified as pre-Conquest on the basis of the fabric and style characteristics discussed below. Pre-Conquest grog fabrics are frequently more highly fired and the colouring of the grog within individual sherds has a consistently 'reduced' or 'oxidised' appearance. The grog in post-Conquest fabrics is often multi-coloured and more loosely bonded in the clay matrix.

Dating of pre-Conquest grog fabric styles and forms is still not fully clear. There is a shortage of pre-Conquest datable associations together with a general absence of good stratigraphies. Bishopstone provides the only real exception to this for pre-Conquest Sussex grog fabrics (Hamilton 1977). The Goffs Park pre-Conquest grog fabric includes sherds from large globular jars with out-bent rims and narrow necks together with sherds from smaller jar forms with high shoulders and slightly everted rims. This combination compares with the late pre-Roman

Iron Age forms from Pit 20, Bishopstone (Hamilton 1977, Figs. 50–52). The same combination has been isolated by Cunliffe as typical of 'Eastern Atrebatic' forms (Cunliffe 1974, 344, A:29). The Goffs Park everted rims from smaller jar forms ascribed to the pre-Conquest period are less severely everted than post-Conquest rims.

The presence of sherds with lightly tooled 'eyebrow' decoration (Fig. 19) in the Goffs Park assemblage (in one instance emphasised by black paint, Fig. 19, No. 3) is also typical of Cunliffe's 'Eastern Atrebatic' material. It is difficult to date such decorated material earlier than the immediate pre-Conquest period and it certainly continues post Conquest (Green, 1977). Wide-bellied grog vessels with tooled eyebrow decoration on their shoulders were associated at Bishopstone with a 'Colchester fibula' of a type produced during the hundred years preceding the Conquest (Bell 1977, 130). One of the Goffs Park vessels has a rouletted eyebrow design. Rouletted designs are likely to be early in the grog ware tradition since they are absent from wholly Roman sites (Green 1980, 72). (See Hamilton, forthcoming, for further discussion of pre-Conquest grog ware chronologies.)

Fabric 2 Medium-coarse quartz sand and iron oxide inclusions.
Contexts with Fabric 2 sherds: 5, 19, 70, 78, 93 and 98.

Discussion:
Approximately 50 sherds were identified as belonging to this fabric category. The quartz was predominantly of coarse and medium sand size grade (Krumbein and Pettijohn 1938, 30). The grains are polished. Both translucent (milky white and also iron stained in colour) and transparent grains are present. The iron oxides are pisolithic in form and of medium sand size grade.

The fabric is unevenly oxidised red-brown to buff. Its texture, inclusions and colouring suggest that the fabric is comparable with Bishopstone Fabric 3d (Hamilton 1977, 90) for which a High Wealden, possibly Tunbridge Wells Sand, clay source is suggested.

Few diagnostic sherds are present in Fabric 2. Only one form can be isolated. This is a barrel-shaped jar with out-turned rim. This form is current in both middle and late pre-Roman Iron Age contexts in Hampshire, Kent and the Thames Valley and is difficult to date precisely. The form is present in West Sussex 'saucepan' assemblages. In East Sussex however its presence is most commonly associated with the later Iron Age.

Fabric 3: Finer Quartz Sand
Contexts with Fabric 3 sherds: 2, 4, 6, 36, 48 and 49.

Discussion:
Approximately 25 sherds were recovered in this fabric. The fabric comprises fine and medium sand size grade quartz. These quartz grains are polished and transparent. Sherd surfaces are burnished and evenly reduced black. Sherd cores are grey. Fabric 3 compares well with Oving Fabric 3 (Hamilton 1985, 222) and Testers Fabric 6 (Hamilton, 1988). The latter two fabrics belong to a quartz sand fabric tradition which has a distribution concentrated on West Sussex. A Lower Greensand source has been suggested for Oving Fabric 3 (Hamilton 1985, *ibid.*). Hand-made imitations of wheel-thrown forms also occur in this fabric. Insufficient conjoining sherds were present in Goffs Park Fabric 3 to ascertain whether the fabric was associated with hand-made or wheel-thrown pottery production.

This quartz sand fabric tradition which has been isolated and analysed at Oving and Testers is regularly associated with late pre-Roman Iron Age cordoned bowl forms which are Sussex versions of 'Belgic' forms. One of the Goffs Park Fabric 3 sherds was cordoned (Context 8). The only other diagnostic sherds in Goffs Park Fabric 3 were associated with a wide-bellied jar with a shoulder decoration of a lightly tooled involuted design emphasised with impressed dots (Fig. 19, no. 2). The form falls within an 'Eastern Atrebatic' style repertoire (see Goffs Park Fabric 1, discussion above). Some of the Oving and Testers sherds in this quartz sand fabric tradition have tooled 'eyebrow' decoration, which in the case of one of the Testers examples is associated with a wide-bellied jar. This suggests some interchange of style traditions within a single late pre-Roman Iron Age finer quartz fabric tradition. Curvilinear and impressed dot designs have their

origins in mid and West Sussex Middle Iron Age 'saucepan pottery' designs (e.g. Cunliffe 1974, 329, Fig. A:14) but are also found in East Sussex in the late pre-Roman Iron Age, associated with grog wares (e.g. Hamilton 1977, 116, Fig. 53: 94).

Fabric 4: Coarse Flint
Contexts with Fabric 4 sherds: SF 642.

Discussion:
A few sherds of coarse flint-tempered fabric were present. These sherds were undiagnostic. The thickness of the sherds in cross-section (about 7 mm.) and the maximum measurements of the flint grits (6 mm.) suggested a 1st millennium B.C. flint fabric tradition rather than one that was earlier or later. The presence of flint is interesting since it is non-local to the site.

Conclusions
The lack of pre-Roman Iron Age material from the Sussex Weald makes any material of this date from the Weald a valuable contribution to our limited understanding of Wealden Iron Age ceramic traditions (Money 1978). Radiocarbon dates for the Broadfield ironworking sites, which are close to Goffs Park, suggest the possibility of pre-Conquest ironworking in this part of the Weald. Two of the Broadfield dates are of interest, namely 190 ± 80 b.c. (HAR-871) and 60 ± 60 b.c. (HAR-970) (Gibson-Hill 1976, 30). In the context of these dates the above discussed Goffs Park pottery provides further evidence of immediately pre-Conquest activity in the mid-Sussex area, albeit limited.

THE ROMAN POTTERY (by David Rudling)
Introduction (Figs. 19–23)
The Crawley museum has 14 boxes of mixed but mainly Roman pottery from John Gibson-Hill's Crawley excavations, 1970–75. The sherds were found to have been grouped/bagged by Gibson-Hill by pottery types (mainly based on colour and form) rather than by archaeological context. This situation is especially unfortunate since there are many sherds which are unmarked and thus lacking a precise findspot. In addition, it would appear from discussions with volunteers who helped on the excavations that not all of the pottery discovered by Gibson-Hill is now stored at Crawley Museum. The whereabouts of the other pottery is unknown. Given the factors outlined above, it was decided to treat the available Crawley pottery as a single assemblage and to study a sample of it with the following aims:

(a) To provide a guide to the main range of pottery fabrics and vessel forms. This is considered to be particularly important since there is, as yet, little published information about large assemblages of Roman pottery from ironworking sites in the Weald. A representative selection of the pottery is described and illustrated.
(b) To provide a general date range for the excavated Crawley sites.
(c) To provide, where possible, dating evidence for specific archaeological contexts.

Owing to the problems concerning context data and possible missing finds, no attempt is made to quantify the pottery accurately by fabric groups. The dating of individual coarse ware sherds is in many cases hampered by the lack of information concerning associations with more closely dated types.

Fabric Groups
Grog-tempered Wares: Hand-made grog-tempered wares form one of the two largest categories of pottery found at Broadfield. The other large category is that of Sandy Grey Wares. It is interesting to note that at Garden Hill (another Wealden ironworking site), grog-tempered vessels accounted for some 78.4 per cent of all the pottery (Fulford and Eade 1977, 349). Elsewhere in East Sussex, the core area of this ceramic tradition, the locally produced grog-tempered wares usually account for more than 50 per cent of the total pottery assemblage, but sometimes account for as much as 80 or 90 per cent (Green 1980, 79).

The origins of this pottery tradition go back to the first century B.C. and examples of such late pre-Roman Iron Age grog-tempered wares belong to Cunliffe's 'Eastern Atrebatic' style (Cunliffe 1978, 97–100, 381). Examples of grog-tempered wares which date to after the Conquest are often referred to as 'East Sussex Ware'. The tradition continued in East Sussex until at least the late 4th or early 5th century. For a detailed

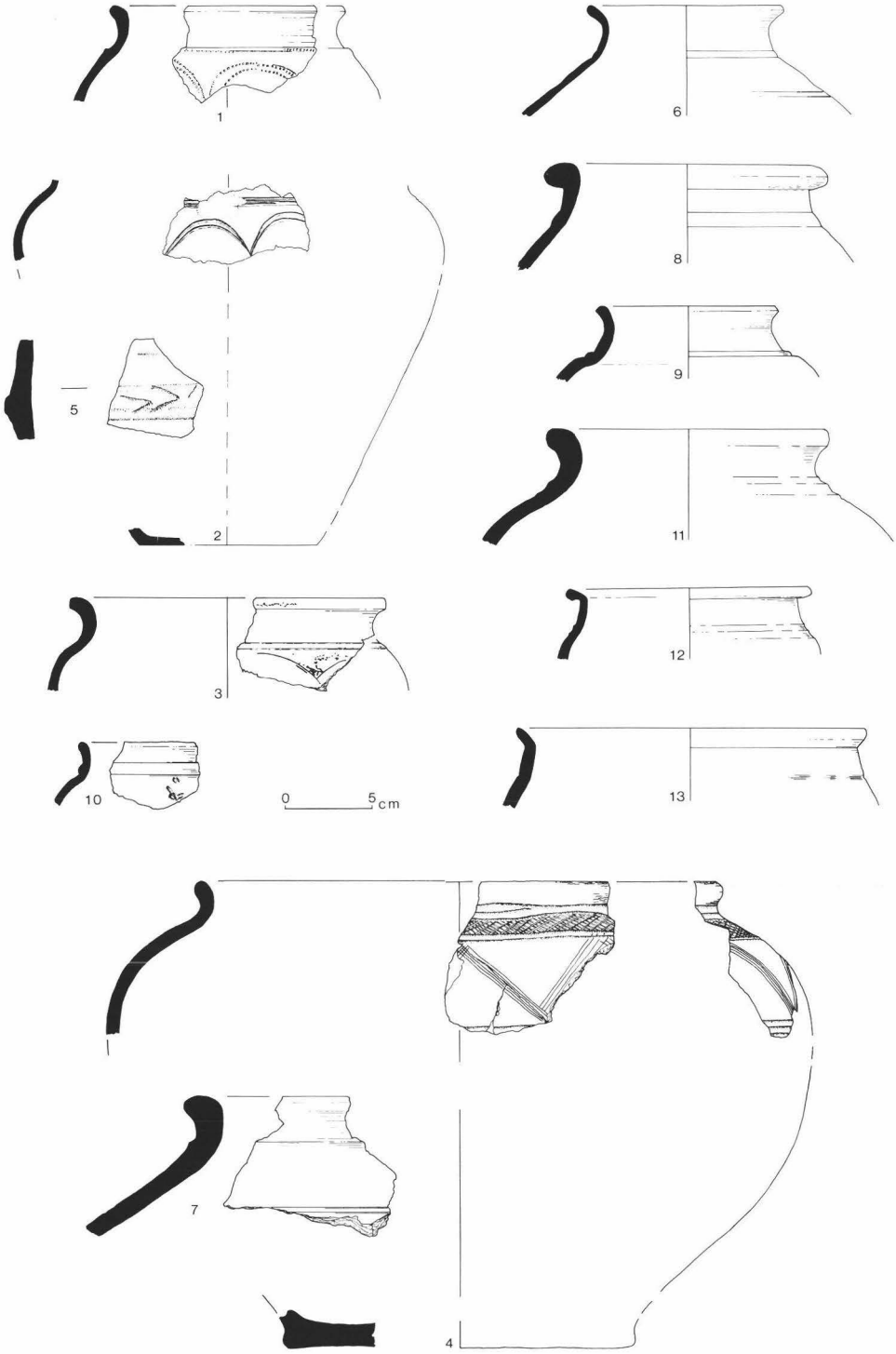

Fig. 19. Broadfield. Grog-tempered Wares (x$\frac{1}{4}$).

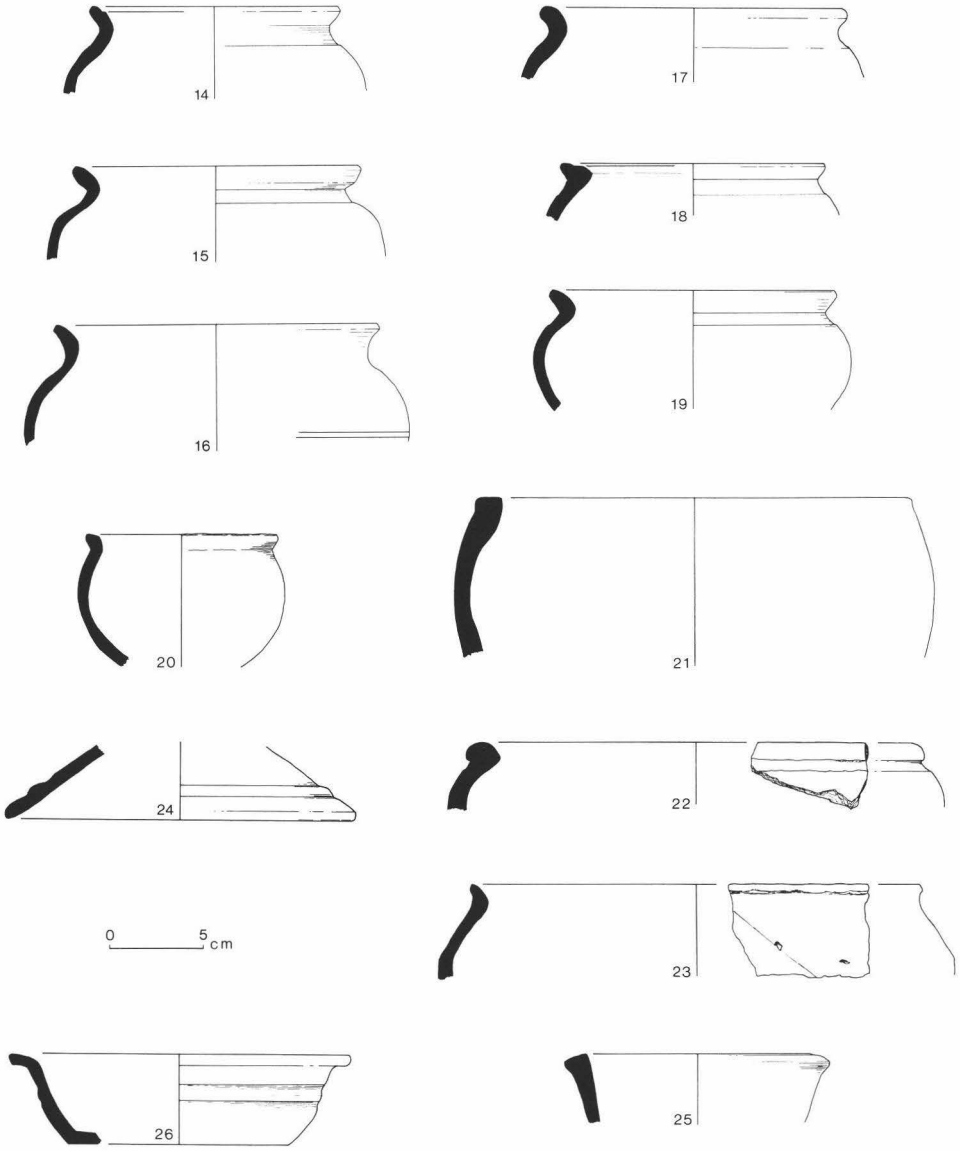

Fig. 20. Broadfield. Grog-tempered Wares (x$\frac{1}{4}$).

study and discussion about this long-lived pottery industry the reader is referred to a paper by Chris Green (1980) and Hamilton (above).

The fabric, which has a 'soapy' feel, is soft to hard, occasionally orange-red but usually grey or brown to black and primarily filled with coarse grog. Catalogue examples: 1–26. (Figs. 19, 20).

Samian Ware or Terra Sigillata (incorporating comments by Catherine Johns). All the Samian appears to be second century and of Central Gaulish manufacture. There are no decorated samian forms.

Vessel forms:

Dragendorff 18/31; 27; 33; 35/36; 38

Curle 11; 15.

Although no samian ware is described or illustrated in the catalogue, a list of samian

sherds identifiable by vessel form is on microfiche.

Imitation Samian: There are two examples of local late 1st/early 2nd century fine ware bowls imitating samian forms. Catalogue examples: 27 and 28 (Fig. 21).

Colour-Coated Wares: The Broadfield pottery assemblage contains very few sherds of non-local colour-coated wares. There are however sherds from three colour-coated beakers which have a date range of mid 2nd century to mid 3rd century. Catalogue examples: 32; 32a; 33 (Fig. 21).

Mortaria: All the mortaria have flint trituration grits and were manufactured in Southern England. Most of the mortaria appear to be of types dating to the late 1st or 2nd century. One example (Cat. no. 40) however, is a product of the New Forest kilns and is dated to *c.* A.D. 270–380. Catalogue examples: 34–40 (Fig. 21).

Amphorae: The only type present is Form Dressel 20 from Southern Spain. Date range: late 1st century B.C. to ?4th century A.D. Catalogue example: 41 (not illustrated).

Light Self-Coloured Wares: Mainly cream, pinks, buff or orange in colour and of varying textures from very well levigated to medium sand tempered. This group of vessels probably comes from various production centres in South East England. The vessel forms include beakers, flagons, jars, bowls and a colander. Date range: late 1st to mid 3rd century. Catalogue examples: 29–31; 42–47 (Fig. 21).

Fine Textured Grey Wares: Most vessels in these wares are beakers, but other forms include jars and bowls. Date range: late 1st–mid 2nd century. Catalogue examples: 48–53 (Fig. 21).

Sand-Tempered Grey Wares: Fine to medium textured sand-tempered wares which are mainly grey or grey-buff in colour. This group of wares forms a major element in the Broadfield pottery assemblage. The wares come from various local production centres, including perhaps the Alice Holt/Farnham kilns. The vessel forms include flagons, jars, lids, and bowls/dishes. Date range: late 1st–3rd/?4th century. Catalogue examples: 55–81 (Figs. 22 and 23).

Grey-Black Burnished Wares: There are a small number of sand-tempered grey-black wares with burnished surfaces and decoration. The forms are either bowls or jars. Date range: 2nd–3rd century. Catalogue examples: 82–84 (Fig. 23).

Discussion

Viewed as one assemblage, the Broadfield Roman pottery indicates an overall date range of 1st–late 3rd century, with the possibility of some activity both earlier (perhaps 1st century B.C.) and later (4th century). The majority of the pottery however appears to date to the late 1st and 2nd centuries. The relatively small number of sherds which can be dated to the 3rd and 4th centuries may indicate that by then the ironworking sites had gone out of use or were much less important than previously. The catalogue of Roman pottery appears as microfiche.

ROMAN TILE (by David Rudling)

Only eight fragments of Roman tile are amongst the finds from the Crawley excavations. Such a very small quantity of tile from a programme of extensive excavations of Roman ironworking sites is surprising.

The examined fragments represent three categories of Roman tile: *tegulae, imbrix* and 'flat' tiles. Of the five tegulae (Tiles 1, 35, 42, 45 and 'Site 4, Ditch LI'), one example has part of a semi-circular 'signature' mark on its upper surface, and another fragment has a flange measuring 3.7 cm. high. Fabrics range from orange sand tempered to highly overfired red ware with ironstone and slag inclusions and a pimply surface (?wasters). The one piece of imbrix tile ('CRBS 70 Southgate West') was in a soft orange fabric with some grog, ironstone and slag inclusions. The two pieces of 'flat' tile (from BR/C/-375 J/C/S 2nd Ditch section, LIV) are both 3.5 cm. thick and are highly fired red ware with ironstone/slag inclusions.

The presence of ironstone and slag inclusions in some of the tile fragments suggests that these tiles, and possibly also the others, may have been manufactured in the vicinity of the ironworking sites.

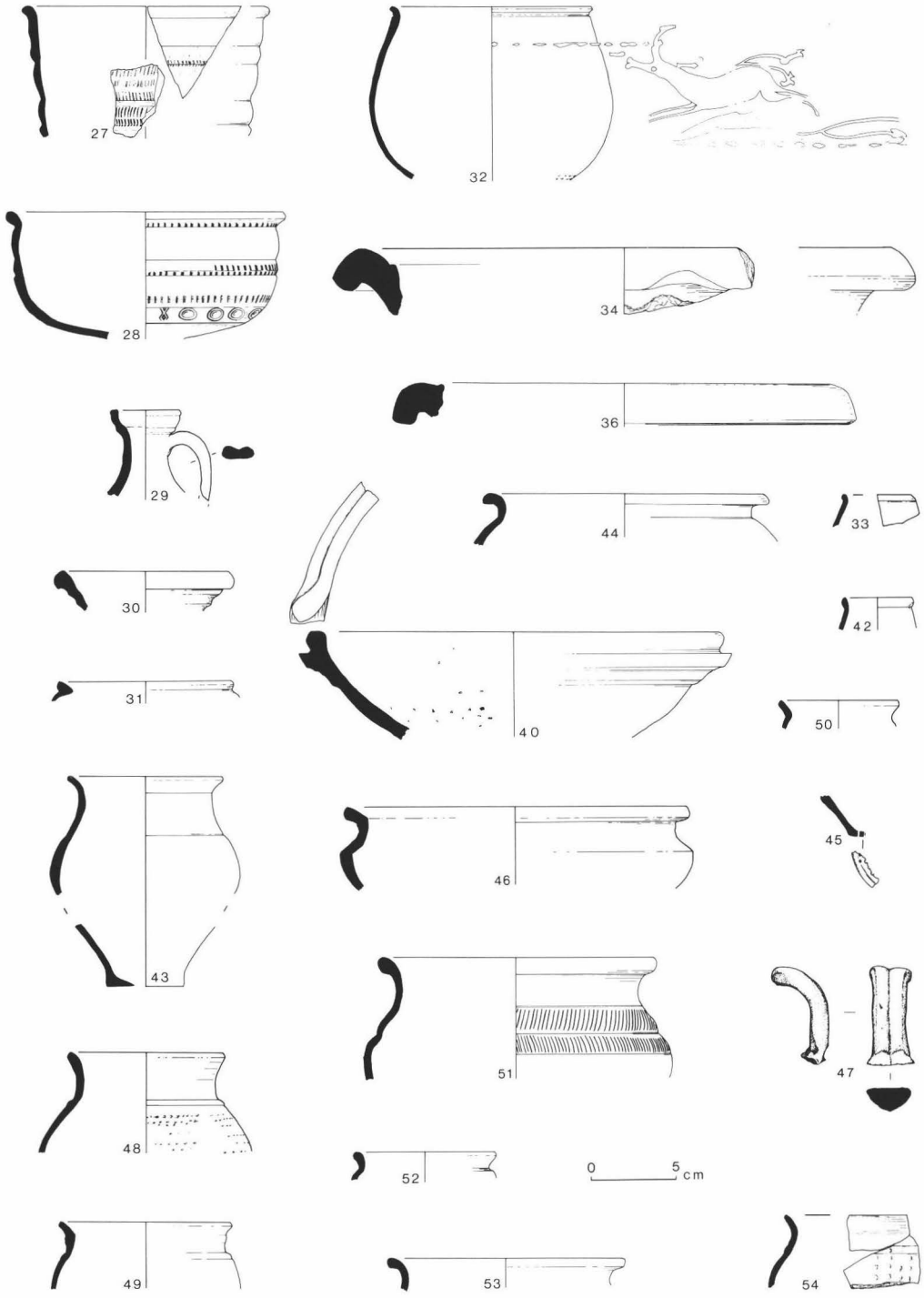

Fig. 21. Broadfield. Roman pottery (x$\frac{1}{4}$).

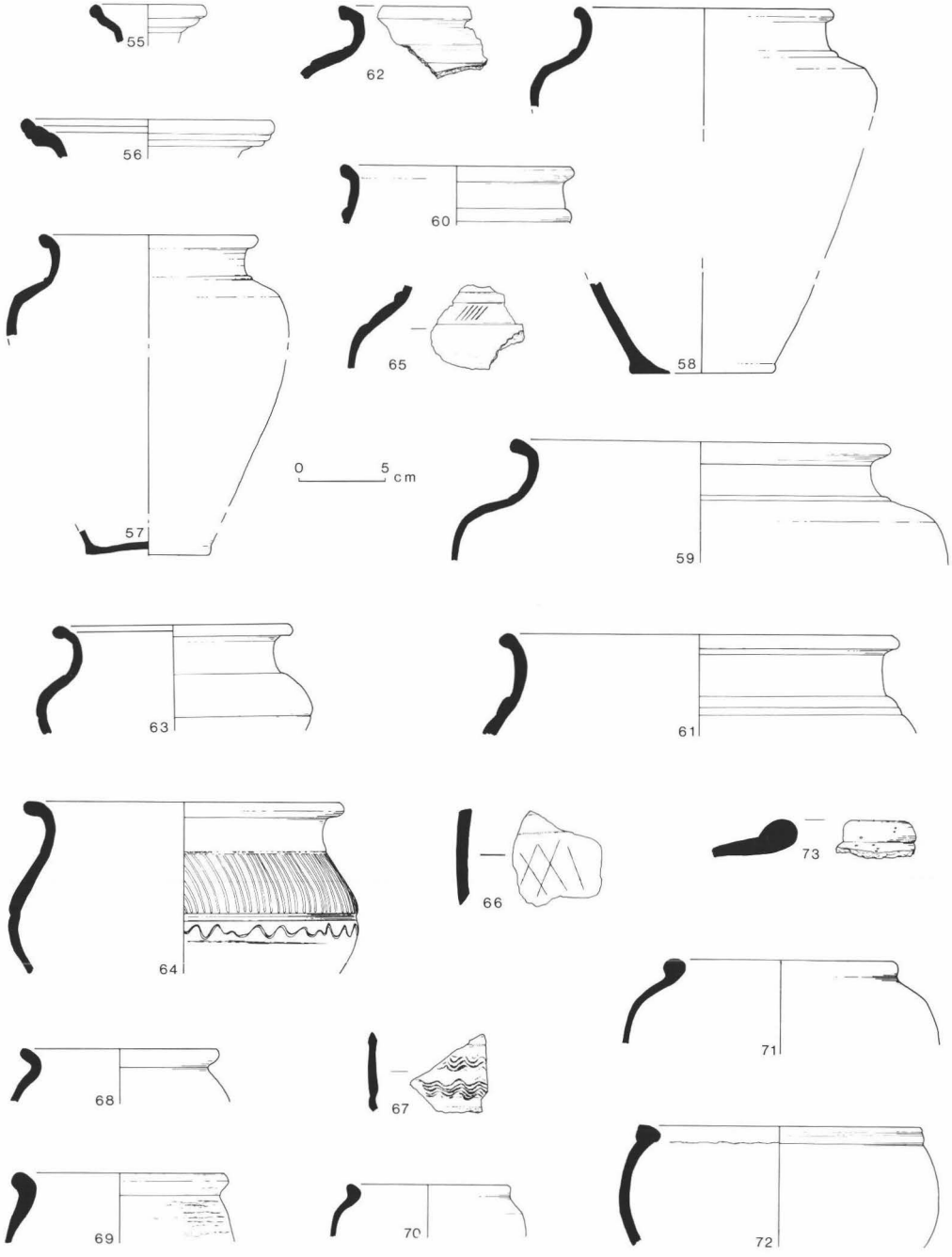

Fig. 22. Broadfield. Roman pottery (x$\frac{1}{4}$).

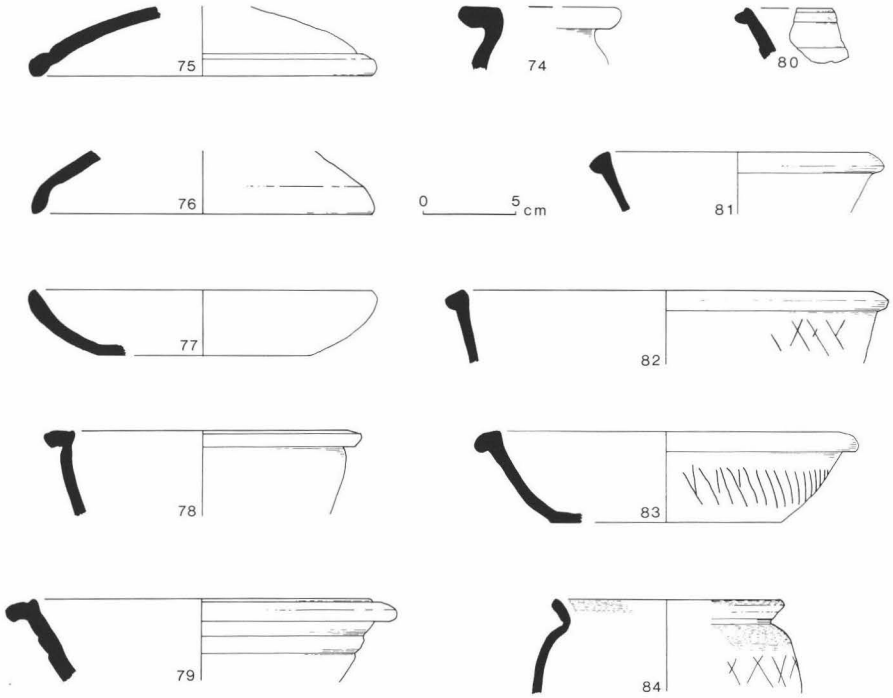

Fig. 23. Broadfield. Roman pottery (x$\frac{1}{4}$).

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References

Anderson, A. C. 1980 *A Guide To Roman Fine Wares*. Vorda Research Series 1.

Bell, M. 1977 'Excavations at Bishopstone'. *Suss. Arch. Coll.* **115**, 1–291.

Brothwell, D. and Higgs, E. (Eds) 1970 *Science in Archaeology* (rev. ed.). New York.

Cattell, C. S. 1970 'Preliminary Research Findings Relating to the Bloomery Period of the Iron Industry in the Upper Basin of the Eastern Rother (East Sussex)'. *Bulletin of the Historical Metallurgy Group* **4**, I, 18–20.

Chown, E. 1947 'Painted Iron Age Pottery at Sedlescombe'. *Sussex Notes and Queries* **11**, 148–51.

Cleere, H. F. 1970 *The Romano-British Industrial Site at Bardown, Wadhurst*. Sussex Archaeological Society Occasional Paper **1**.

Cleere, H. F. and Crossley, D. W. 1985 *The Iron Industry of the Weald*. Leicester.

Cunliffe, B. 1971 *Excavations at Fishbourne 1961–1969, Vol. II: The Finds*.

Cunliffe, B. 1974 and 1978 (2nd edn.) *Iron Age Communities in Britain*.

Evans, K. J. 1974 'Excavations on a Romano-British Site, Wiggonholt, 1964'. *Suss. Arch. Coll.* **112**, 97–151.

Fulford, M. G. 1975 *New Forest Roman Pottery*. B.A.R. **17**.

Fulford, M. G. and Eade, C. 1977 'Romano-British Pottery'. In J. H. Money, 'The Iron-Age Hill-Fort and Romano-British Iron-Working Settlement at Garden Hill, Sussex: Interim Report on Excavations, 1968–76'. *Britannia* **VIII**, 349–350.

Fulford, M. G. 1978 'The Romano-British Pottery'. In R. Hartridge, 'Excavations at the Prehistoric and Romano-British Site on Slonk Hill, Shoreham, Sussex', *Suss. Arch. Coll.* **116**, 119–131.

Gibson-Hill, J. 1974 'Notes on Lifting a Furnace-Base from the Romano-British Bloomery Site at Broadfield, Crawley, Sussex'. *Journal of the Historical Metallurgy Society* **8** (1), 50–52.

Gibson-Hill, J. 1975 'The Excavation of a Romano-British Iron-Working Site at Broadfields, Crawley, West Sussex'. In P. L. Drewett, (ed.) 'Rescue Archaeology in Sussex, 1974'. *Bulletin of the Institute of Archaeology* **12**, 35–42.

Gibson-Hill, J. 1976 'Further Excavations at the Romano-British Iron-Working Site at Broadfield, Crawley'. In P. L. Drewett, (ed.) 'Rescue Archaeology in Sussex, 1975'. *Bulletin of the Institute of Archaeology* **13**, 23–32.

Gibson-Hill, J. 1980 'Cylindrical Shaft Furnaces of the Early Wealden Iron Industry: c. 100 B.C. to A.D. 300'. *Journal of the Historical Metallurgy Society* **14** (1), 21–27.

Gibson-Hill, J and Worssam, B. C. 1976 'Analyses of Wealden Iron Ores and their Archaeological Significance'. *Bulletin of the Institute of Archaeology* **13**, 247–263.

Green, C. M. 1976 'The Coarse Pottery'. In M. Bell, 'The Excavation of an Early Romano-British Site and Pleistocene Land forms at Newhaven'. *Suss. Arch. Coll.* **114**, 256–287.

Green, C. M. 1977 'The Roman Pottery', In Bell 1977, 'Bishopstone', 153–178.

Green, C. M. 1980 'Handmade Pottery and Society in Late Iron Age and Roman East Sussex'. *Suss. Arch. Coll.* **118**, 69–86.

Hamilton, S. 1977 'The Iron Age Pottery'. In Bell 1977, 'Bishopstone' 83–115.

Hamilton, S. 1985 'The Iron Age Pottery'. In O. Bedwin and R. Holgate, 'Excavations at Copse Farm, Oving, West Sussex'. *Proceedings of the Prehistoric Society* **51**, 220–228.

Hamilton, S. 1988 'Latest Bronze Age and Latest Pre-Conquest Pottery'. In M. Gardiner, 'Excavations at Testers, White Horse Square, Steyning'. *Suss. Arch. Coll.* **126**, 53–76.

Hardy, H. R. and Curwen, E. C. 1937 'An Iron Age Pottery Site near Horsted Keynes'. *Suss. Arch. Coll.* **78**, 252–65.

Haslam, J., Biek, L. and Tylecote, R. F. 1980 'A Middle Saxon Iron Smelting Site at Ramsbury, Wiltshire'. *Medieval Archaeology* **24**, 1–68.

Krumbein, W. C. and Pettijohn, F. J. 1938 *Manual of Sedimentary Petrography*.

Lower, M. A. 1849 'Iron Works of the County of Sussex'. *Suss. Arch. Coll.* **2**, 169–220.

Lyne, M. A. B. and Jefferies, R. S. 1979 *The Alice Holt/Farnham Roman Pottery Industry*. C.B.A. Research Report **30**.

Money, J. 1974 'Iron Age and Romano-British Iron-Working Site in Minepit Wood, Rotherfield, Sussex'. *Journal of the Historical Metallurgy Society* **8** (1), 1–20.

Money, J. 1976 'Excavations in the Two Iron Age Hill-forts on Castle Hill, Capel, near Tonbridge, 1965 and 1969–71'. *Archaeologia Cantiana* **91**, 61–85.

Money, J. 1978 'Aspects of the Iron Age in the Weald'. In P. L. Drewett, (ed.) *Archaeology in Sussex to 1500 A.D.*, C.B.A. Research Report **29**, 38–40.

Rudling, D. R. 1980 'The Roman Pottery'. In O. Bedwin, 'Excavations at Chanctonbury Ring, Wiston, West Sussex 1977'. *Britannia* **XI**, 204–214.

Straker, E. 1931 *Wealden Iron*.

Tebbutt, C. F. and Cleere, H. F. 1973 'A Romano-British Bloomery at Pippingford, Hartfield'. *Suss. Arch. Coll.* **111**, 27–40.

Turner, D. J. 1975 'Medieval Pottery Kiln at Bushfield Shaw, Earlswood: Interim Report'. *Surrey Archaeological Collections* **70**, 47–55.

Tylecote, R. F., Austin, J. N., and Wraith A. E. 1971 'The Mechanism of the Bloomery Process in Shaft Furnaces'. *Journal of the Iron and Steel Institute* **209**, 342–63.

Ward-Perkins, J. B. 1938 'An Early Iron Age Site at Crayford, Kent'. *Proceedings of the Prehistoric Society* **4**, 151–68.

Sussex Archaeological Collections **130** (1992), 60–68

EXCAVATIONS AT STEYNING NEW MUSEUM, CHURCH STREET, STEYNING, WEST SUSSEX 1989

by Andrew Reynolds
with contributions by Brian G. Irving and David Rudling

Excavations revealed a shallow ditch and two pits. Although the area examined was limited and only a small number of features were excavated, a wide range of material, dating from the 10th to the 15th centuries, was recovered. Finds included building materials and decorative metalwork.

INTRODUCTION

At the end of September 1989, the author visited the site of building works underway for the construction of the new museum in Church Street, Steyning. Quantities of medieval pottery were observed spread over the area stripped by the contractors. This, taken into consideration with the proximity of Barton's 1962 excavations (Barton 1986), led to rescue excavations over two days.

Numerous archaeological investigations have been carried out within the town (Fig. 1). The results of these excavations, at Cuthmans Field (Barton 1986), Fletchers Croft (Evans 1986), Tanyard Lane (Freke 1979) and Testers (Gardiner 1988) along with the historical evidence discussed by Hudson (1980) have led to the current view that the town shifted from its early focus around the church to its present site in the High Street in the early 12th century.

The evidence from the Steyning New Museum site provides another opportunity to examine this hypothesis due to its position in relation to the earlier excavations. The site lies on

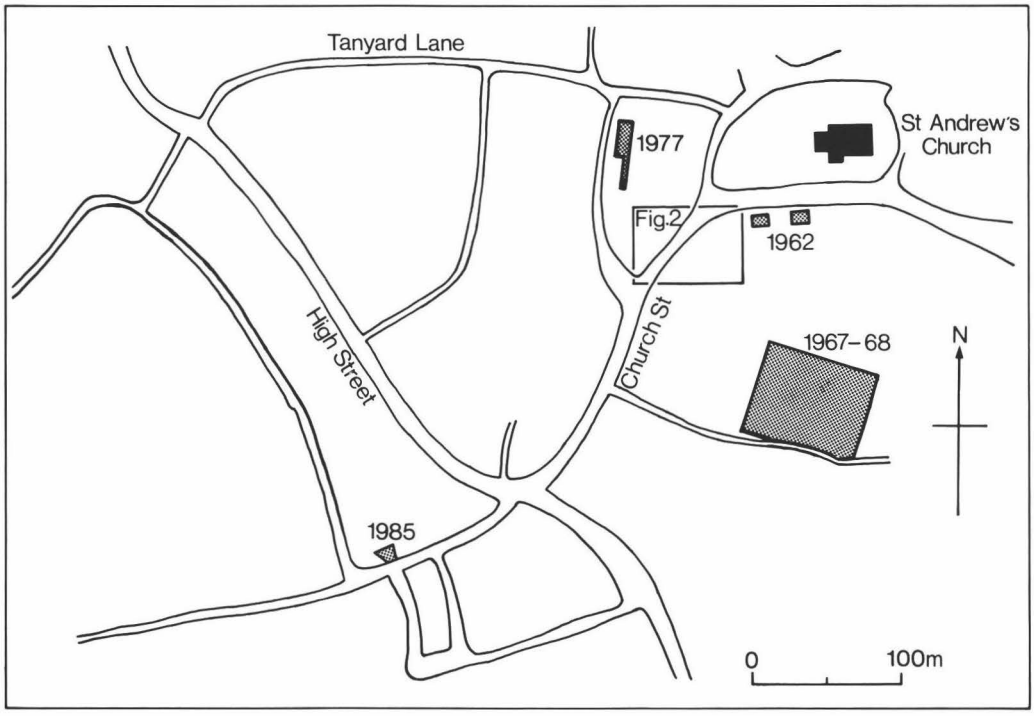

Fig. 1. Location of previous excavations

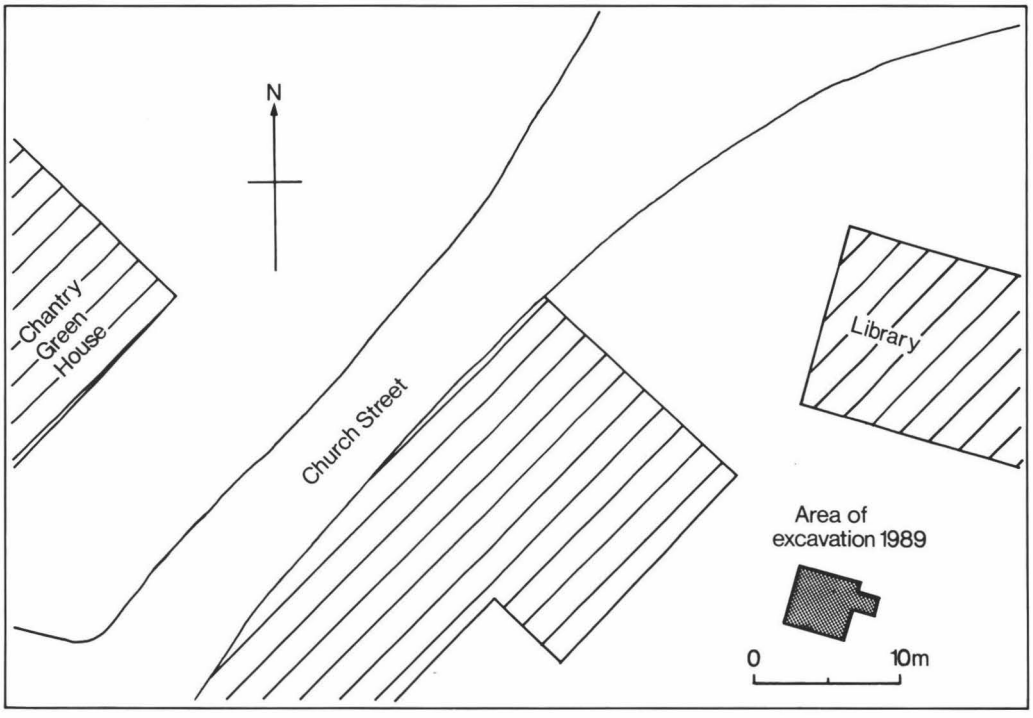

Fig. 2. Location of 1989 excavations

the corner of Church Street behind the library at N.G.R. TQ1782 1133 (Fig. 2).

THE EXCAVATION

As the excavation was actually carried out while construction work was in progress, only a limited area, 22 sq. metres, was available for investigation. The contractors had removed the humic topsoil, which varied between 20 cm. and 1 metre in depth, with a mechanical excavator. This left a layer (1) approximately 2 cm. in depth of loose dark soil laying directly over the solid geology of Lower Chalk. The area was then cleaned by hand, finds included material of 19th- and 20th-century date.

THE FEATURES

Three features were revealed, the earliest of which was the ditch (4). This feature can be dated to the late 11th or early 12th century on ceramic grounds. The section (Fig. 3, section A5) shows two fills. The upper layer (5) contained 13th-century pottery, however it was evident in plan that this layer was only present for approximately 50 cm. either side of the section and is therefore equivalent to context (1). The main fill (16), contained domestic rubbish in the form of animal bones, comminuted oyster shell and unabraded pottery, which suggests deliberate filling, probably in one episode. This was then cut by a pit (2) which also contained pottery of late 11th- or early 12th-century date. The fill (3) contained largely unabraded sherds and appears to have been deposited in one episode. The latest feature, pit (6), can be dated to the late 13th or early 14th century by the occurrence of sherds of this date in the basal fill (18). This feature contained much residual material of 10th to 12th century date. The section (Fig. 3, section A2) shows that the feature was filled gradually.

Two further pits (19) and (21) were very briefly observed, but no form of recording was possible. The latter of these features contained decorative metalwork of probable medieval date.

Steyning New Museum 1989

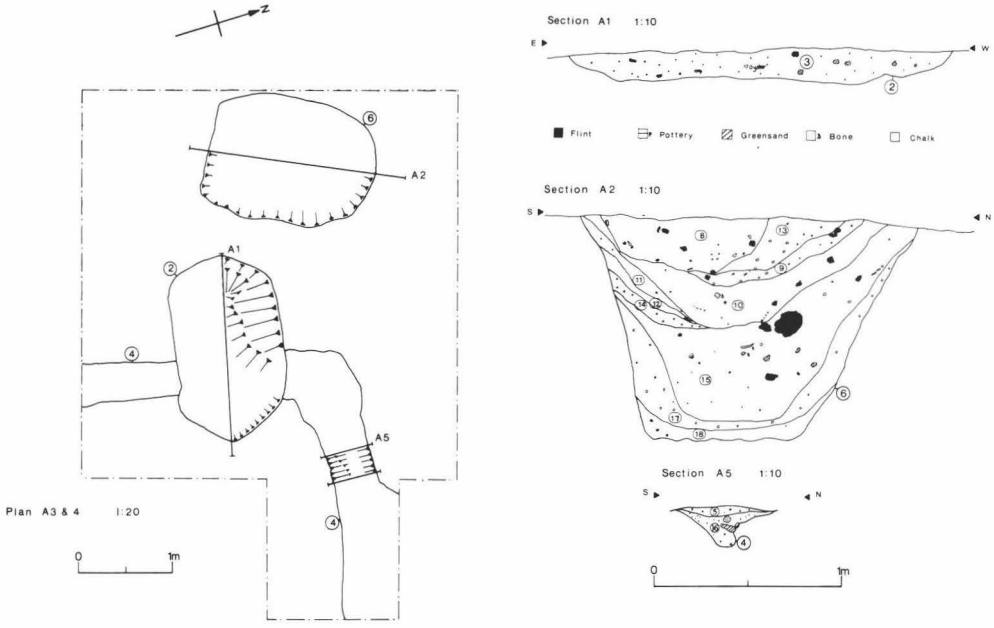

Fig. 3. Steyning 1989 site plan and sections

CONCLUSIONS

The results of the excavation give a further indication of the size of Saxo-Norman Steyning. Freke suggested that early occupation may have been more concentrated on the eastern side of Church Street (Freke 1979, 139) and although our area was limited, features of Saxo-Norman date with primary rubbish fills confirm occupation at this point in time. The ditch (4) may represent a tenement boundary but its filling in one episode and subsequent cutting by a pit (2) of early date suggests its life was short. The 1989 excavations at Market Field, to the north east of the church, revealed settlement evidence in the form of structures and pits dating to the Late Saxon and Saxo-Norman periods (Gardiner 1989, 216). However, the rebuilding of St Andrew's church, from the late 11th century to the mid-12th century, suggests that the focus of the town was situated to the south west, by at least the latter date, as the south side of the Norman work is more decorative than the north. The pit (6) shows occupation in the late 13th- early 14th century. The structural material from this feature would suggest buildings in the immediate vicinity. Barton suggested a 13th- or 14th-century date for a structure found to the east of our site (Barton 1986, 98). The size of the area examined prevents any further conclusions as to whether the later material results from resettlement along Church Street or from continuous occupation of the site. The 1-inch Ordnance Survey map of 1813 (Harley and O'Donoghue 1981) shows occupation in the area covered by Barton's trenches, however it shows that our site was unoccupied. Until 1976 it was still possible to observe that the area including Gatewick House and the church was separated from the rest of the town (Hudson 1980, 221). The absence of finds of 15th to 18th century date within the unstratified context (1) material suggests that our area was largely unoccupied until relatively recently.

FINDS

The Pottery

A total number of 452 sherds of Anglo-Saxon and medieval pottery, weighing 3.855 kg., were recovered. Of these 159 were from context (1) and therefore unstratified. The majority of sherds were unabraded but small in size. However, a small number of either much abraded or comparatively early sherds were recovered from stratified contexts.

After sorting on the grounds of visual characteristics, fourteen fabric groupings were identified. The fabric divisions applied to the ceramic assemblages from Testers, Steyning (Gardiner 1988) and Botolphs (Gardiner 1990) were found to be applicable to the material from our site, which allows it to be seen in a wider local context. It is a generally accepted view that variation within fabric groupings, especially when dealing with coarse wares, may be great. Our material was sorted before comparison with the fabric descriptions from Botolphs, which ensured an objective division into fabric types. The Saxo-Norman and medieval pottery from Botolphs was divided into series DA—DJ and EA—EH and the separate fabrics were described in detail (Gardiner 1990). At Steyning, fabrics DA, DB, DC, DD, DF, DH, DI and DK were represented in the Saxo-Norman assemblage with the medieval wares falling into fabric groups EA, EB, EC, EE, EF and EH. Only significantly diagnostic sherds are illustrated and therefore not all fabric groups are shown.

Fabric DH

Some sherds display scratched decoration comparable to that on sherds in a similar fabric from Old Erringham (Holden 1976, 312, nos. 4 and 5). Rim profiles are generally simple (Fig. 4, no. 5), although occasionally they may be more elaborate (Fig. 4, no. 4). Other decorative features of vessels in this fabric include "pie-crust" treatment of rims and thumbed applied bands up to 18 mm. wide and 3 mm. thick. Represented by 258 sherds, 57 per cent of the total assemblage. Late Anglo-Saxon or Saxo-Norman in date.

1. Light orange-brown margins with light grey core. Rim with lightly impressed "pie-crust" decoration, from a cooking pot. Context (1).
2. Same as above, but with wiped external surface. Context (1).
3. Light orange margins with light grey core. Rim with firmly impressed "pie-crust" decoration. An identical rim form was found at Old Erringham (Holden 1980, 284, no. 40). From a cooking pot. Context (3).
4. Light orange-brown external face, mid grey-brown internal face with light orange-grey core. Wiped external surface. From a cooking pot. Context (1).
5. Light orange margins with light grey core. Wiped external surface. From a cooking pot. Context (3).
6. Same as above, but with wiped internal and external faces. Context (7).
7. Mid orange-brown margins with mid grey core. Wiped internal and external faces. The rim form is ovoid and is of a recurrent type particular to local oxidised Saxo-Norman wares (Gardiner 1988, 68, no. 14; Gardiner 1990, 253). From a cooking pot. Context (15).
8. Mid orange margins with light grey-brown core. From a storage jar. Context (15).
9. Mid orange margins with mid grey core. From a cooking pot. Context (15).
10. Mid grey-brown margins with mid grey core. Rim with lightly impressed "pie-crust" decoration. Similar to Late Saxon and Saxo-Norman rim forms from Old Erringham (Holden 1980, 284, nos. 4 and 46). From a bowl. Context (12).
11. Mid orange-brown margins with mid grey core. From a storage jar. Context (18).

Fabric DK

Some sherds show evidence of crude finger wiping. Represented by seven sherds. Late Anglo-Saxon or Saxo-Norman in date.

12. Mid orange-brown outer face and core with red-brown internal face. Decorated with thumbed applied strips up to 17 mm. wide and 4 mm. thick, which fit Barton's description of Saxo-Norman applied strips (Barton 1979, 79). From a storage jar. Context (1).

Fabric EB

Represented by one sherd. Probably late 13th or early 14th century. Streat type ware.

13. Light red-orange external surface, mid grey internal surface with similarly coloured core. From a cooking pot. Context (15).

Fabric EC

Represented by 67 sherds, 15 per cent of the total assemblage. Probably late 13th or early 14th century.

14. Light orange-brown margins with light grey core. Skillet handle with splashed, orange and green glaze on interior face (cf. Barton 1979, 54, no. 10). The way in which the glaze has run suggests that the skillet was placed upright on its handle during firing. Context (1).
15. Mid orange-brown to dark brown margins with mid to light grey core. Skillet handle, blackened and slightly sooted on exterior. Context (15).
16. Mid brown-grey external surface, mid orange-brown internal surface with light grey core. Moderately sooted on exterior. From a cooking pot. Context (8).
17. Mid orange-brown margins with light grey core. Lightly sooted on exterior. From a cooking pot. Context (8).
18. Mid to dark orange-brown margins with mid grey core. From a cooking pot. Context (11).
19. Mid brown-grey margins with light grey core. From a cooking pot. Context (11).

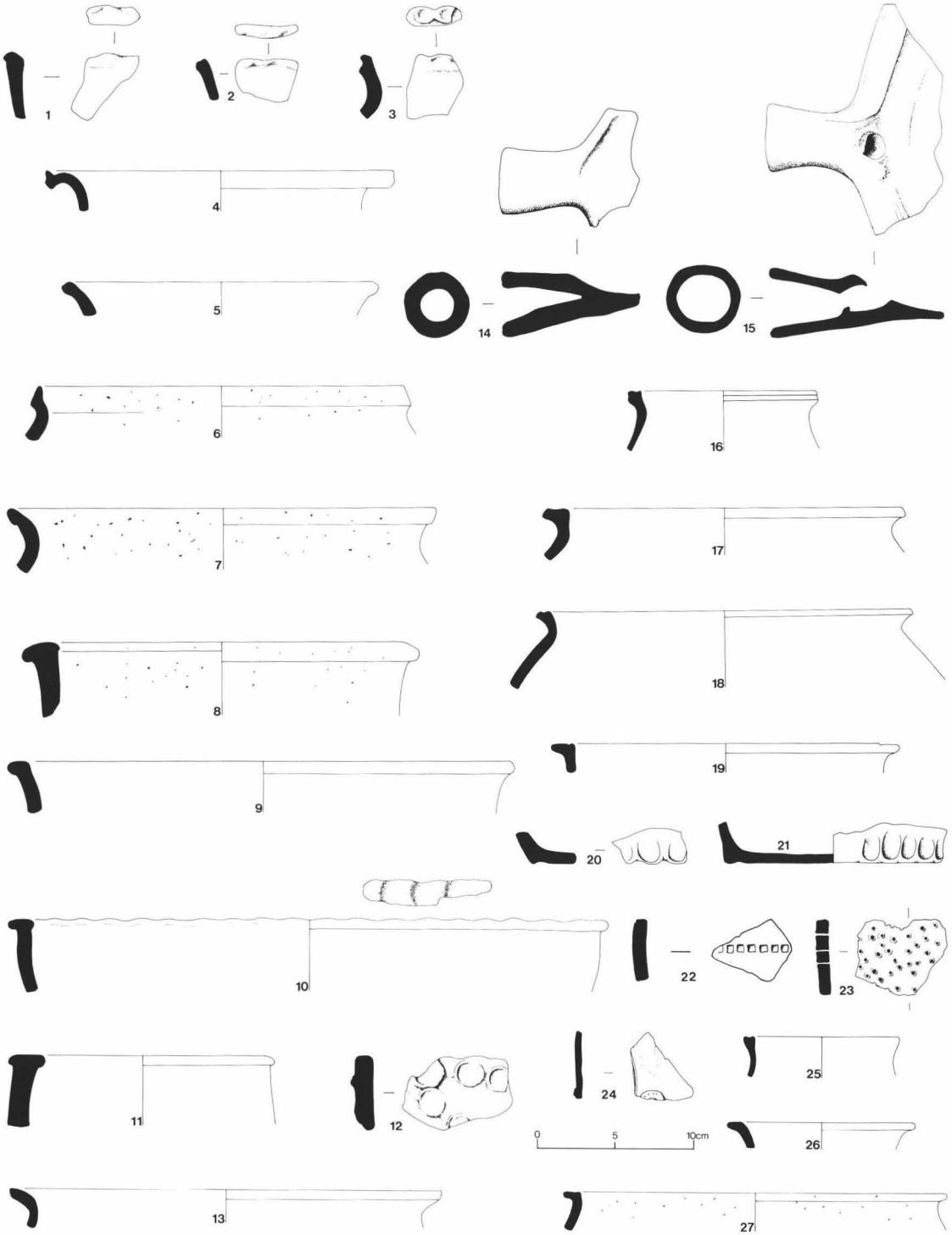

Fig. 4. Steyning 1989 pottery x4 (except 22 x2)

20. Mid to light orange-brown margins with light grey core. Soapy to feel. Jug base with finger impressions where body joins onto base. Traces of light orange splash glaze on exterior. Context (1).
21. Light orange-brown to dark brown-black interior surface, mid to dark grey-brown exterior surface. Jug base with finger impressions where body joins onto base. Green splashed glaze on underside. Context (15).

Fabric EE

The majority of sherds appear to be derived from jugs but cooking, or storage, pots are also represented. Just over 40 per cent of sherds are glazed with colours ranging from dark brown to light orange. Represented by 25 sherds, 5 per cent of the total assemblage. West Sussex type ware.
22. Light cream-grey external surface and core with light cream-yellow internal surface. Body sherd from jug with uncommon rouletted decoration (cf. Barton 1979, 115, no. 10). Glazed light green with dark brown flecks. Context (1).
23. Mid to light orange-brown margins with light grey core. Perforated sherd which may be derived from either a strainer or a watering pot. A mid-15th century watering pot from London, in Late London type ware, is a possible parallel (Pearce *et al* 1985, 118, no. 419). Context (1).

Fabric EF

Just over 50 per cent of sherds are glazed. Represented by 14 sherds, just over 3 per cent of the total assemblage.
24. Light grey-orange margins with light grey core. Body sherd from jug with applied and incised decoration. Unevenly glazed green with dark brown flecks. Context (8).
25. Light orange margins with light grey core. Unevenly glazed mid orange. From a jug. Context (1).

Fabric EH

This fabric grouping applies to a number of sherds which, although varying in terms of quantity of temper, share some common characteristics. The grouping is however broad.
26. Dark grey margins and core. From a cooking pot. Context (1).
27. Mid grey-brown margins with mid grey core. From a cooking pot. Context (1).

Discussion

Considering the relatively small quantity of ceramics recovered the range of fabrics and forms is diverse. The Saxo-Norman fabrics formed 72 per cent of the total assemblage the remainder being medieval. The majority of the material can be readily paralleled locally, notable exceptions being the rouletted sherd (Fig. 4, no. 23) and the perforated sherd (Fig. 4, no. 24).

ANIMAL BONES (by Brian G. Irving)

A total of 326 bone and tooth fragments from nine contexts were examined. From this total 99 fragments have been identified to species. The high frequency of unidentifiable fragments is probably a reflection of good 'on site' recovery, although none of the contexts were sieved. Most of the unidentifiable material consists of limb-bone mid-shaft splinters followed by pelvic, scapula and vertebral fragments. A high number of these fragments have been chewed/gnawed probably by dogs, prior to deposition. The high frequency of butchery on the bones, along with a high frequency of distal limb bones (butchery waste) suggests that the carcasses were butchered close to the site of deposition with some movement by carnivores and trampling when laying on the surface. The fauna (Table 1) is typical, in terms of species representation, from these periods, although there is a dearth of wild species, notably deer, which occur at Testers and Tanyard Lane in Steyning (Parfitt in Gardiner 1988; O'Connor in Freke 1979).

TABLE 1
Species list from Steyning New Museum

Phase	Late 11th C.	Late 13th-Early 14th C.
Horse *Equus caballus*	1	0
Cow *Bos taurus*	20	20
Sheep *Ovis aries*	6	30
Pig *Sus domesticus*	3	10
Dog *Canis familiaris*	3	0
Cat *Felis cattus*	0	1
Chicken *Gallus sp*	2	3
Cod *Gadus morhua*	1	0
Unidentified fragments	36	190
Total fragments	72	254
Grand total	326	

Late 11th century material

The late 11th-century material, which consists of the residue from two contexts (3) and (16), has been grouped together and is dominated by cattle followed by sheep and pig. Further species are dog, horse and domestic fowl (chicken) and the only wild species present is a marine fish, the cod *Gadhus morhua*. This single fish bone, a vertebra, is interesting in terms of its location. There is evidence that a small port existed at Steyning during the 11th century when the river was tidal further upstream than it is today. It is a strong possibility that fishing boats would have landed

their catches at Steyning and that the individual was not imported from elsewhere. The dog from context (3) seems to represent a single large animal and is an old individual based on tooth wear, like the dog identified by Parfitt (in Gardiner 1988) at Testers, it is probably a hunting dog. The single horse bone, a distal metatarsus, shows cutmarks and chopping so has clearly been butchered.

Late 13th to early 14th century material

The late 13th to early 14th century material, from seven contexts, seems to have the same taxonomic history as the 11th century material. The species frequencies, however, change from cattle dominated to sheep dominated in the later period, although this may be a function of differential bone preservation or discard. However, this situation is not reflected from other areas of the town (Parfitt in Gardiner 1988; O'Connor in Freke 1979). The pig remains are from young individuals, probably slaughtered at around five months old which is typical for pig during this period.

Conclusions

From the evidence available, it is clear that domestic stock were butchered on or near to the site of Steyning New Museum. In the earlier period cattle were the most important animal in the diet followed by sheep and pig. The single fish bone is interesting in terms of off-shore fish being brought into the site possibly by boat. The presence of domestic fowl echoes the findings at Tanyard Lane and Fletchers Croft (Sharpe in Evans 1986), although it is absent at Testers. In the later period no wild animals, such as deer, are present which is in contrast to the other sites mentioned above, with sheep becoming the dominant domesticate. No Capriforms (goats) were identified from either period.

Non-Ferrous Objects (coin by David Rudling)

28. Henry VII. Silver halfgroat. Mint of Canterbury. Facing bust issue. Class IIIc. Initial mark: Tun. c.1490–1500. Reference (North 1975, 84, No. 1712). The coin, which is clipped, shows signs of wear on the raised surfaces. Context (1).

29. Copper alloy strap-end. Context (1).

30. Copper alloy strap-end spacer. Similar to examples from Faccombe Netherton, Hampshire (Goodall 1990, 430, Fig. 9.31, nos. 59, 60, 61). Context (1).

31. Copper alloy buckle. Pin missing. Context (8).

32, 33. Decorative copper alloy strips. Gilded on both faces. The strips, broken in antiquity, fit together. However, the object is still not complete. Decoration consists of two raised bands 1 mm. wide, the outer of which is beaded, running around the edges and the surviving end of the object. Unfolded length of joined fragments 70 mm. There are a number of punched holes around the outside edges. Similar to an object from Winchester (Hinton 1990, 1117, no. 4271). Presumably the strip was originally mounted, possibly on a book or a box. Probably medieval. Context (22).

34. Circular pewter brooch with raised central boss. Composition confirmed by laboratory analysis as 80 per cent tin, 20 per cent lead. Diameter 28 mm. thickness 1 mm. Raised central boss 13 mm. in diameter, 3 mm. in height. The catch was of simple hooked type, although the pin is missing. This brooch belongs to the very loose classification of Late Anglo-Saxon disc brooches. There are few examples with much variation. Wilson (1964) made a distinction between high quality pieces in precious metals and copper alloys and cheaper examples in lead alloy. This brooch belongs to the latter category which is dated almost exclusively to the 10th century. Independently, the form or the decoration can be readily paralleled in a number of other examples although there is no piece which fulfils both criteria. Wilson (1964) outlined a number of characteristics common to brooches of this period. Our example displays a number of these including a beaded border, the ladder-like motifs on the central boss, three concentric rings with cross hatching surrounding the central area and the presence of a central raised dot.

The raised central boss is an extremely rare feature, only three other published examples have been located. Two of these are in the British Museum (Wilson 1964, 146, no. 37, 154, no. 51) and one is in a private collection (Hattatt 1989, 220, no. 1679). The first two were found in London and the third in York. Our example is identical in dimension and form to the third example above. The decoration within the central boss is almost exactly paralleled by that on the reverse of a flat 10th century disc brooch from London (Wilson ibid, 155, no. 52). The distribution of disc brooches is widespread over southern and eastern England and it may be seen that the distribution of this rare type has no regional significance.

Ferrous Objects

The iron objects were unexceptional and consisted almost entirely of nails. Of some interest was a possible gouge or spoon bit fragment from context (3) and a probable door latch from context (8).

Discussion

Metalwork is often poorly represented in domestic finds assemblages of the Anglo-Saxon and medieval periods. Sussex is certainly no exception to this, although the publication of the material from Market Field, Steyning, will be of importance regarding the Saxo-Norman period (Gardiner in preparation). Of the previous

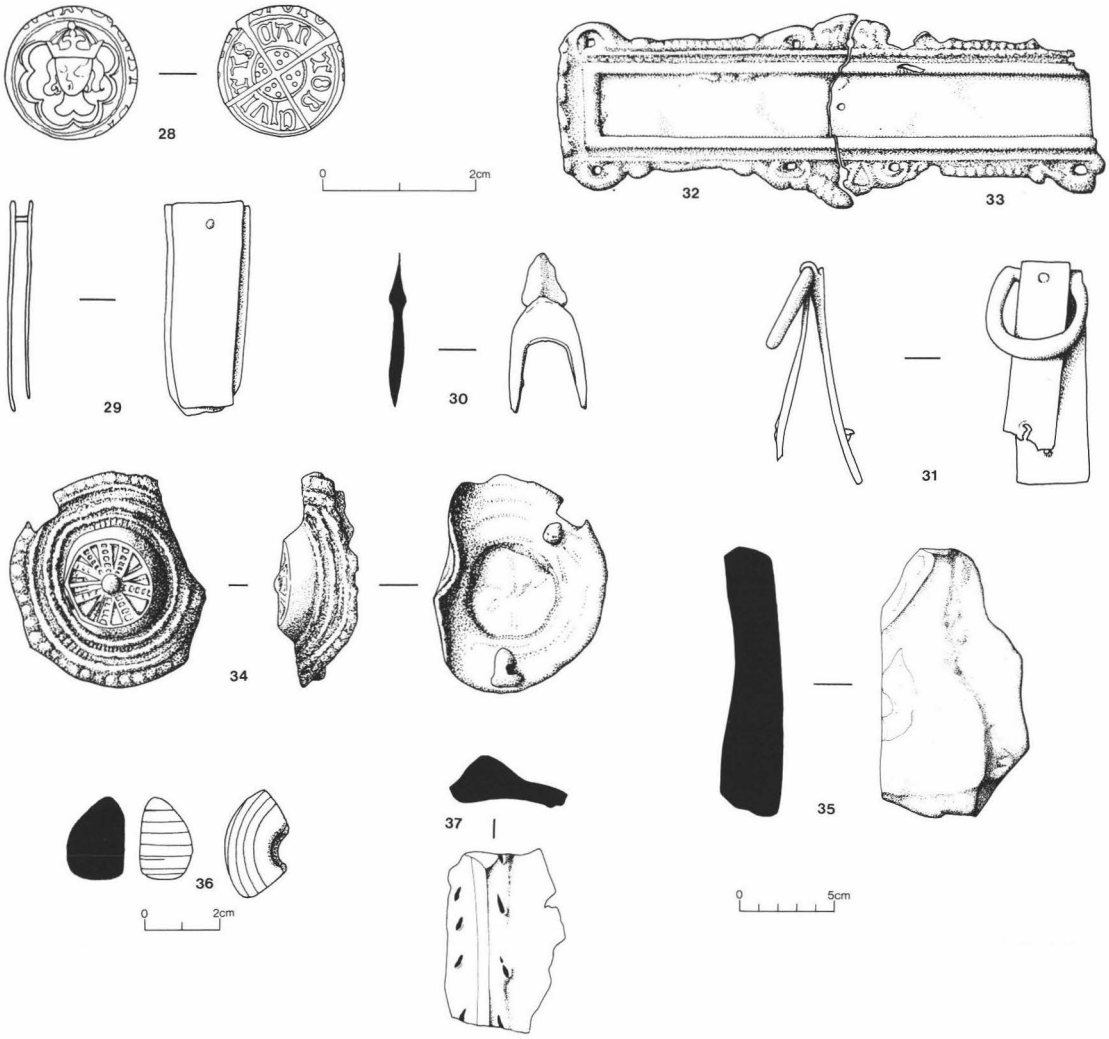

Fig. 5. Steyning 1989 non-ferrous objects x1. Stone objects 35 x4, 36 x2. Tile 37 x4.

excavations within the town, Fletchers Croft and Tanyard Lane produced a small number of metal finds and the latter evidence for Later Anglo-Saxon iron working. The metalwork from Steyning New Museum is a comparatively large assemblage which contains some significant material, notably the Anglo-Saxon disc brooch.

Geological material (identification by John Cooper)

35. Whetstone of burnt fine grained quartzite, possibly a sarsen. Context (15).

36. Fragment of chalk spindle whorl with incised lines (cf. Gardiner 1988, 71, no. 45). Grey in colour due to burning. Context (5).

Geological material occurred in nine contexts, it is largely derived from the Wealden series. Exceptions include a fragment from context (1) which may be porcellaneous limestone.

Tile

37. Fragment of medieval ridge tile. Red brown margins, grey brown core. Medium quartz sand and water rounded,

multi-coloured flint inclusions. The tile is slashed on both outer faces. Context (15).

A fragment of Roman floor tile was found in context (15).

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References

Barton, K. J. 1979 *Medieval Sussex Pottery*. Chichester.

Barton, K. J. 1986 'Excavations at Cuthman's Field, Church Street, Steyning, 1962', *Suss. Arch. Coll.*, **124**, 97–108.

Evans, J. 1986 'Excavations in Fletcher's Croft, Steyning 1967–68', *Suss. Arch. Coll.*, **124**, 79–95.

Freke, D. J. 1979 'Excavations in Tanyard Lane, Steyning 1977', *Sussex. Arch. Coll.*, **117**, 135–50.

Gardiner, M. F. 1988 'Excavations at Testers, White Horse Square, Steyning 1985', *Suss. Arch. Coll.*, **126**, 53–76.

Gardiner, M. F. 1990 'Medieval Britain and Ireland in 1989', *Medieval Archaeology*, **34**, 216, no. 231.

Gardiner, M. F. 1990 'An Anglo-Saxon and Medieval settlement at Botolphs, Bramber, West Sussex', *Arch. Jnl.*, **147**.

Gardiner, M. F. 'The excavation of a Late Anglo-Saxon settlement at Market Field, Steyning, 1988–89' (in preparation).

Goodall, A. R. 1990 'Objects of Copper Alloy and Lead', in J. R. Fairbrother, 'Faccombe Netherton, Excavations of a Saxon and Medieval Manorial Complex', *British Museum Occasional Paper* No. 74, Vol. II, 425–35.

Harley, J. B. & O'Donoghue, Y. 1981 *The Old Series Ordnance Survey Maps of England and Wales*. Harry Margary, Lympne Castle, Kent.

Hattatt, R. 1989 *Ancient Brooches and Other Artefacts*. Oxford.

Hinton, D. A. 1990 'Unidentified Copper Alloy Objects', in M. Biddle (ed.) *Object and Economy in Medieval Winchester*, Winchester Studies, **7**, i, 1115–26.

Holden, E. W. 1976 'Excavations at Old Erringham, Shoreham: Part One, A Saxon Weaving Hut', *Suss. Arch. Coll.*, **114**, 306–21.

Holden, E. W. 1980 'Excavations at Old Erringham, Shoreham: Part Two, the "Chapel" and "Ringwork"', *Suss. Arch. Coll.*, **118**, 257–97.

Hudson, T. P. 1980 'Steyning', in *VCH Sussex*, **6**, (1), 220–35.

North, J. J. 1975 *English Hammered Coinage*, Volume 2. (Second edition) London.

Pearce, J., Vince, A. G. & Jenner, A. 1985 'A Dated Type Series of London Medieval Pottery. Part 2: London Type Ware, London' *Middlesex Archaeol. Soc.* Special Paper No. 6.

Wilson, D. M. 1964 *Anglo-Saxon Ornamental Metalwork, 700–1100, in the British Museum*. London.

Sussex Archaeological Collections **130** (1992), 69–106

EXCAVATIONS AT LEWES CASTLE, EAST SUSSEX 1985–1988

by Peter L. Drewett
With contributions by Mark Gardiner, David Rudling, Marian Archibald, Maureen Bennell, Rodney O'Shea and Caroline Cartwright

Lewes Castle was one of four great castles constructed by William de Warenne in the years following the Norman Conquest. Excavations on the top of the south-western motte between 1985–88 revealed two major phases of domestic building which may be tied to the two main phases of fortification of the motte. Analysis of artefacts and economic data recovered gives a rare insight into the life of a great baronial family in the Anglo-Norman and early medieval periods.

INTRODUCTION

Lewes is a classic gap town constructed on a steep chalk promontory at an easy crossing point of the tidal Ouse, some 10 kilometres from its mouth. The name, from the Old English for a hill, *hlaew*, emphasises its strategic location (see Coates 1990, for alternative view). As a fortified Saxon town it was an obvious location for the construction of a castle in the immediate aftermath of the Norman Conquest. The castle constructed with its unusual twin mottes in the north-western quarter of the town dominated both it and the landscape around.

Being a private castle it is poorly documented, so elucidation of its development must rely heavily on archaeological investigation both of the standing and below ground remains. Study of the standing remains is severely hampered by extensive reconstruction and consolidation work undertaken in the 18th century and in the 1930s. Archaeological investigation has been restricted largely to the south-western motte, first excavated by G. T. Somers Clarke in 1884, then trial trenched by W. H. Godfrey in 1930. In 1984 the Sussex Archaeological Society decided on a programme of excavation in advance of consolidation and reinterpretation of the castle held in its ownership. These excavations were undertaken as a series of training excavations each Easter and summer from 1985 to 1988. This report should be seen primarily as being concerned with the results and finds from these excavations, rather than as a detailed historical interpretation of Lewes Castle.

HISTORICAL BACKGROUND

Lewes was clearly an important Saxon centre. It was given a large assessment in the *Burghal Hideage* in the 910s. Whether the Saxon fortifications were on a new site or an existing royal centre is uncertain (Drewett, Rudling and Gardiner 1988). However, its size suggests that it served as a shire town as well as a significant link in Alfred's defensive system. By the time of the Conquest Lewes was valued at £26 per annum, indicating a town of some wealth (Freke 1976). After the Norman Conquest Lewes was granted to a distant cousin of William the Conqueror, William de Warenne, who constructed the first castle dominating the Saxon town (Fig. 1).

The Warenne family, from Varrenes in Normandy, were close supporters of William I. In return for their service during the Conquest the Warenne family were granted estates across eastern England from Sussex to Yorkshire. Lewes was William de Warenne's chief seat, but he also constructed castles in Reigate, Castle Acre (Coad and Streeten 1982) and Conisborough (Thompson 1971). William de Warenne married Gundrada, daughter of the Earl of Chester (Clay 1949). With her he progressed between his estates. She died on 27 May, 1085, in childbirth at Castle Acre. Her body was returned to Lewes to be buried in the newly constructed Cluniac Priory (Godfrey 1949). Exactly when William de Warenne built the first castle at Lewes is uncertain, but perhaps a timber castle was constructed on Brack Mount within months of the Conquest (Fig. 2). This would have formed part of a solid defence across

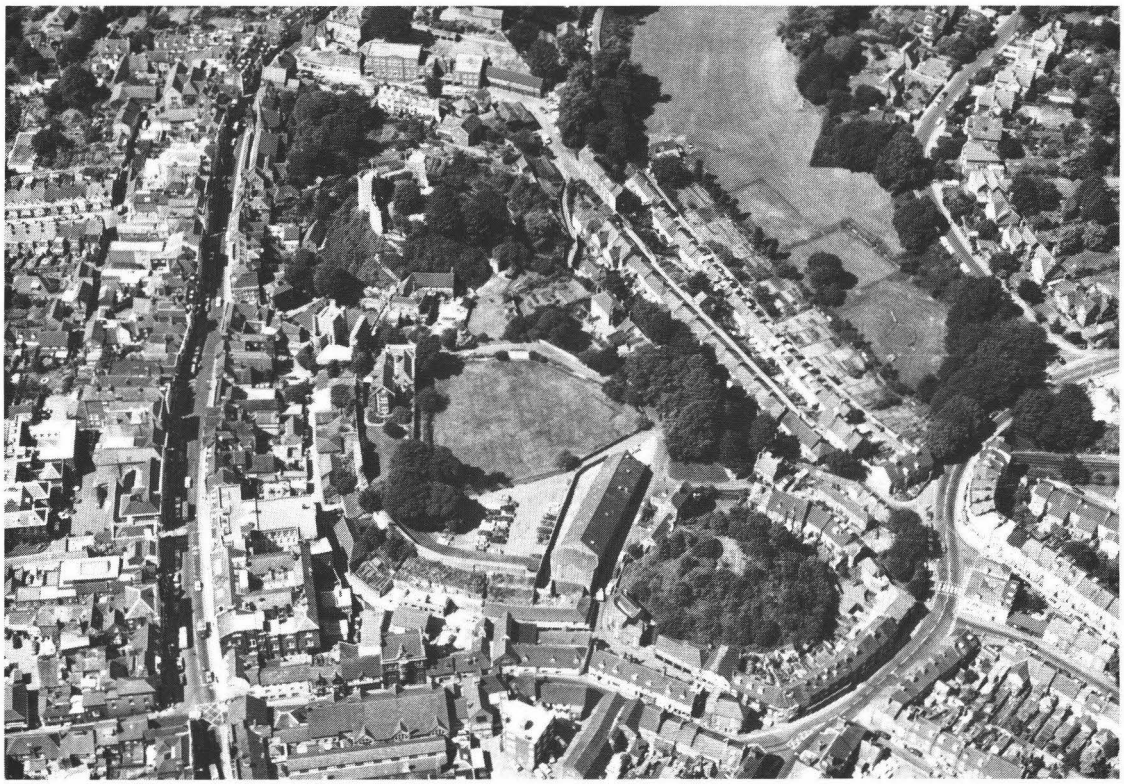

Fig. 1. Lewes Castle. Aerial view from the east. (Photo.: D. Rudling).

Sussex. To the west William de Braose constructed a castle at Bramber, while to the east, Robert Count of Mortain, built a castle within the Saxon Shore Fort at Pevensey (Godfrey 1949).

William de Warenne was appointed joint Chief Justiciar to William I and was active in supressing baronial opposition to the Conqueror. In 1073, for example, Roger, Earl of Hereford's uprising was suppressed and Norwich captured by Warenne together with other loyal barons. William de Warenne continued his support for William II and in return was made Earl of Surrey over Easter 1088. Three months later, however, on 24 June 1088, he died from wounds received during the siege of Pevensey (Salzman 1934). He was buried with his wife Gundrada in Lewes Priory. Their elder son, William, became the second Earl of Surrey.

William de Warenne II briefly risked his estates by backing Robert, eldest son of William the Conqueror, against Henry I. For this he lost his Surrey title and lands, but apparently not Lewes Castle (Godfrey 1949). However, when Robert agreed to forego his claim to the crown of England, the Surrey lands and title were restored to the Warenne family. William de Warenne then became a totally loyal supporter of Henry I until the King's death in 1135. William de Warenne II continued his father's support of the Cluniac order by establishing a daughter house of Lewes adjacent to his castle at Castle Acre in Norfolk (Raby and Baille-Reynolds 1936). The second William de Warenne died in 1138 and, like his father, was buried in Lewes Priory (Clay 1949). He was succeeded by his eldest son, also William de Warenne.

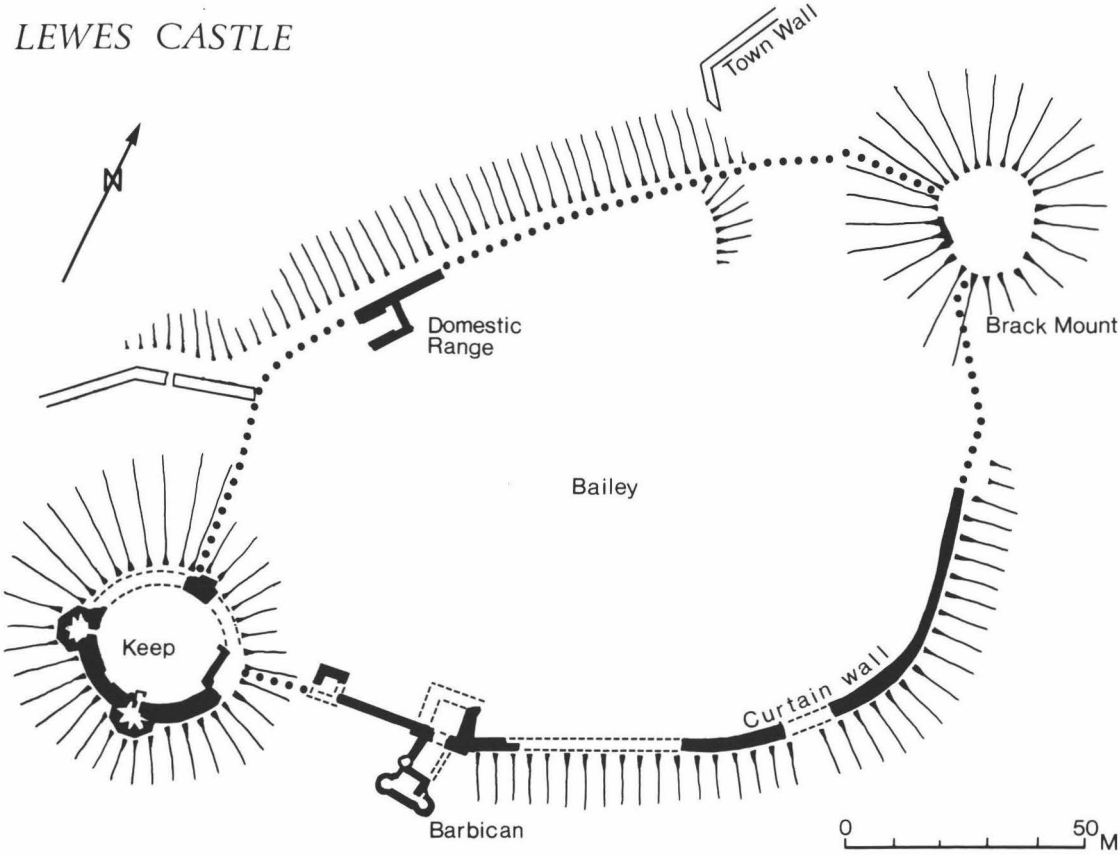

Fig. 2. Lewes Castle. Plan of surviving defences.

William de Warenne III, third Earl of Surrey, became involved in the complexities of the struggle for the crown between Stephen and Matilda. William transferred his allegiance from Stephen to Matilda and back again, becoming a prisoner of Stephen for a while. He left England to join Louis VII of France in the Second Crusade, and was killed near Laodicea by the Turks in 1147 (Godfrey 1949). During William's absence, Lewes was controlled by his brother Reginald who restored to the Burgesses of Lewes a Merchant Guild.

William, the third Earl of Surrey, was the last direct male heir in the Warenne line. His daughter Isabel married William de Blois, the younger son of King Stephen, who then held the title of fourth Earl of Surrey in his wife's right. The fourth Earl died in 1159 without leaving an heir. His widow Isabel then married Hamelin Plantagenet in 1162. Hamelin was an illegitimate brother of Henry II, and by marrying Isabel became the fifth Earl of Surrey and owner of Lewes Castle. Hamelin bestowed further possessions on the monks of Lewes Priory (Godfrey 1949) but his main construction works were concentrated on his great castle at Conisborough (Thompson 1971). He died in 1202 and was buried alongside his wife in Lewes Priory.

The fifth Earl of Surrey was succeeded by his only son, another William, who became a confidant of King John. The sixth Earl became Warden of the Cinque Ports in 1216 and Sheriff of Surrey from 1217 to 1226 (Godfrey 1949).

William married firstly Maud, daughter of the Earl of Arundel, and secondly another Maud, daughter of the Earl of Norfolk. Having served in wars in Wales, Gascony and Poitou he died on 27 May 1240 leaving one son, John, by his second wife. John was only four years old on his father's death, so Peter of Savoy, uncle of Queen Eleanor, acted as Governor of Lewes Castle. At the age of eleven John married Alice, a daughter of Queen Isabella. In 1264 John was with Henry III at the battle of Lewes. On losing to Simon de Montfort, Earl of Leicester, John fled the field and escaped to France. He was then formally banished by de Montfort and lost all his estates except Lewes and Reigate to Gilbert, Earl of Gloucester. In 1265 Earl John returned to England, taking part in the battle of Evesham, where Simon de Montfort was killed. The King then restored all John's estates and in 1274 granted him the title of Earl of Sussex.

Earl John had two daughters, Eleanor and Isabel, and a son William. Unfortunately William died at a tournament in Croydon in 1285, so when Earl John died in 1305 he was succeeded by his grandson John, who was a minor. John, the eighth Earl, married a granddaughter of Edward I, Joan de Bar. However, an infatuation with Maud de Nerford finally led to his excommunication by the Church (Godfrey 1949). When John died in 1347 he had no legitimate male heirs, so the family line became extinct with Lewes Castle passing to the Earl of Arundel, son of John's sister Alice.

From 1347 Lewes Castle had no resident Lord, and by 1382 it was falling into disrepair. In 1620 some of the walls were pulled down and the building materials sold at 4*d.* a cartload. In 1774 the site was leased to Thomas Friend, and in 1850 the Sussex Archaeological Society rented the keep to house their collections. Finally it was purchased by Sir Charles Thomas Stanford, who gave it to the Society in 1920.

PREVIOUS EXCAVATIONS

Lewes Castle (Fig. 3) has only been subjected to limited archaeological excavations in the past. In 1884 Mr Somers Clarke excavated a series of trenches across the south-western motte (Clarke 1886). His main trench ran from the southern angle tower in a north-north-east direction and was relocated in 1988 (Fig. 6). This trench located the 13th century building excavated in 1985–86 (Fig. 12). Mr Clarke, having located the building in his exploratory trench, then dug along the wall in both east and westerly directions. A second trench was then excavated at right angles to the fireplace (Area C in Fig. 8). He recorded that 'Nothing whatever was found'. However, excavations in 1987 indicate that he may have cut through part of the eastern wall of the great hall (Fig. 8). Surprisingly no small finds were recorded.

In 1930 Walter H. Godfrey excavated a series of slit trenches on the north-western edge of the motte to locate the footings of the collapsed shell keep wall. A note on his plan published in 1949 states that 'no solid wall was found'. No other data were published (Godfrey 1949).

In 1962, following slight subsidence on the northern motte, Brack Mount, Mr D. Thompson undertook a limited excavation. He recovered medieval pottery and slate, and located a possible well (Holden, pers. comm. 1985). These data were not published, although the slate is referred to in Holden (1965).

In 1974 Fiona Marsden recorded the excavation of shallow trenches across the south-western motte dug to lay the castle's floodlight cables. These observations were published by Marsden in Rudling (1983). Finally, after the excavation programme described in this article, David Gregory recorded a substantial masonry wall where a tree had been blown down in Castle Precincts (on file, Barbican House).

THE EXCAVATIONS 1985–1988

Methodology

Full area excavation of the top of the south-western motte was prevented by the presence of a large tree in the centre of the mound, together with a need to keep continuous public access to the motte and the 13th century angle towers. Four areas (Fig. 4, A–C) were therefore excavated in four consecutive years. Each area was excavated by hand with all layers and features recorded as contexts numbered discretely for each area. Context details are

Fig. 3. Lewes Castle. Shell keep on south-western motte showing 13th century angle towers.

archived. Sample areas were dry-sieved using 10 mm. mesh sieves to recover artifacts and small bones. Wet sieving using 1 mm. mesh sieves was used to recover carbonized material and smaller fish bones. All masonry located was preserved *in situ* and the excavation concluded at the chalk surface of the man-made mound.

For the sake of clarity this report will describe the structures found by period rather than by individual trench.

Period 1: Norman

Two rectangular buildings were constructed against the south-eastern wall and the north-western wall of the shell keep on the motte (Fig. 4). The structure against the north-western wall was extensively robbed, with little surviving except the last course of the eastern wall (Context 31) and a fragment of the northern wall (Fig. 5, Context 40). The footings consisted of flint and chalk blocks. All the mortar which would have formerly held the footings together had eroded away, leaving a scatter of pebbles. The wall footings were a maximum of 80 cm. wide, suggesting a substantial structure. The building was a maximum of 5 metres wide but its exact length is uncertain. It is likely to have been more than 10 metres long. The absence of mortar spreads within this building suggests the floor was probably beaten earth. The extensive robbing of this building, and destruction even of footings by later building work, makes its interpretation difficult. It is likely, however, to have been an open hall. If so, it is likely that the

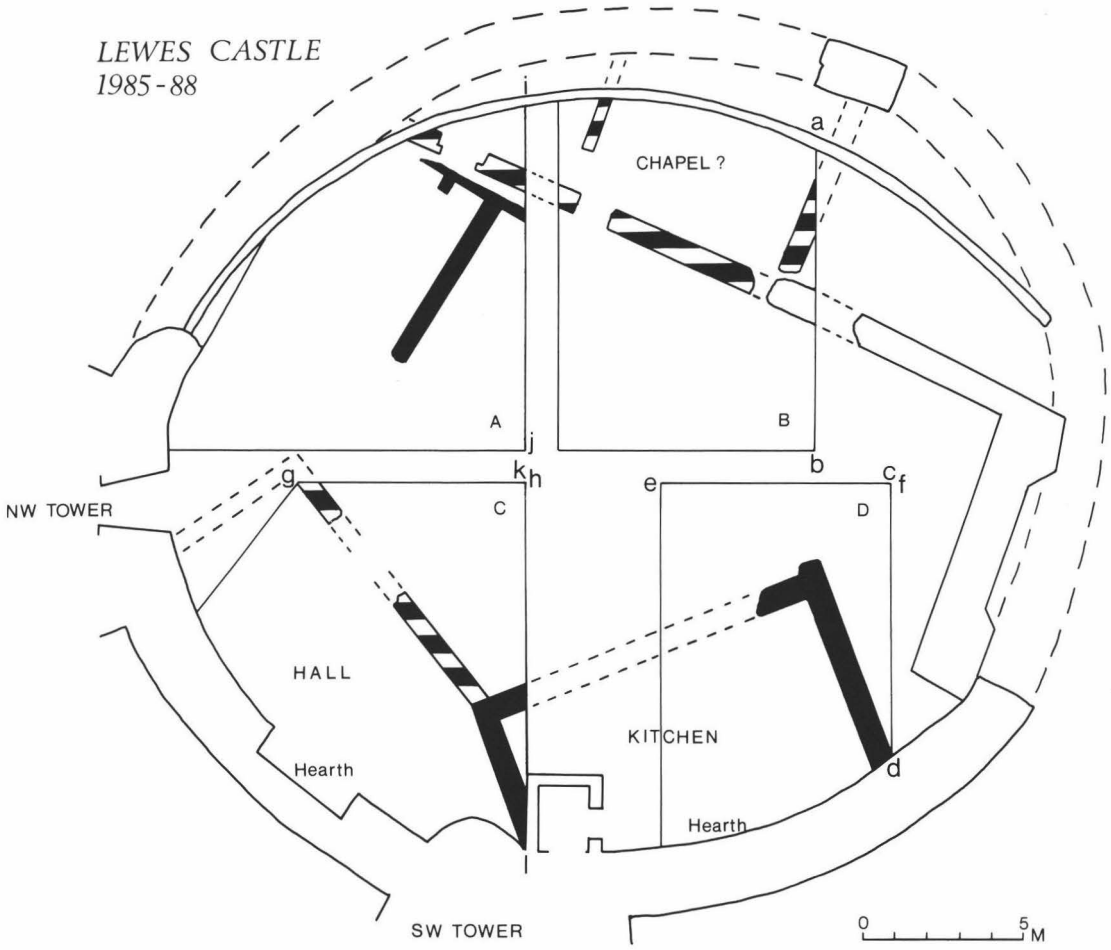

Fig. 4. Lewes Castle, 1985–1988. Excavated areas (A–D) on south-western motte and section lines (lower case letters).

13th-century rebuilding at the north-eastern end probably destroyed its solar block. If the solar were at first floor level, the butt end of a wall running south-west from Context 40 perhaps represents the base of a stair.

The second early structure consisted of a chalk-footed building against the south-eastern wall of the shell keep. This clearly pre-dates a 13th-century structure which abuts it within Area C (Figs. 6 and 7). However, this butt joint suggests the earlier building was still standing in the 13th century. By the 13th century the chalk-footed building was certainly a kitchen. It is likely that this was a free-standing kitchen in the Norman period, serving the hall to the west. The footings were some 60 cm. wide with chalk blocks set in mortar. The northern corner of the building was buttressed (Fig. 6). The floor of the building had traces of a mortar bed, suggesting originally flagstones or tiles. A substantial area of burning against the curtain wall represents the location of a hearth, replaced in the 13th century by a tile-backed fireplace.

Between the hall and kitchen was an open courtyard. In the centre of the courtyard there is likely to have been a well (now under a lime tree).

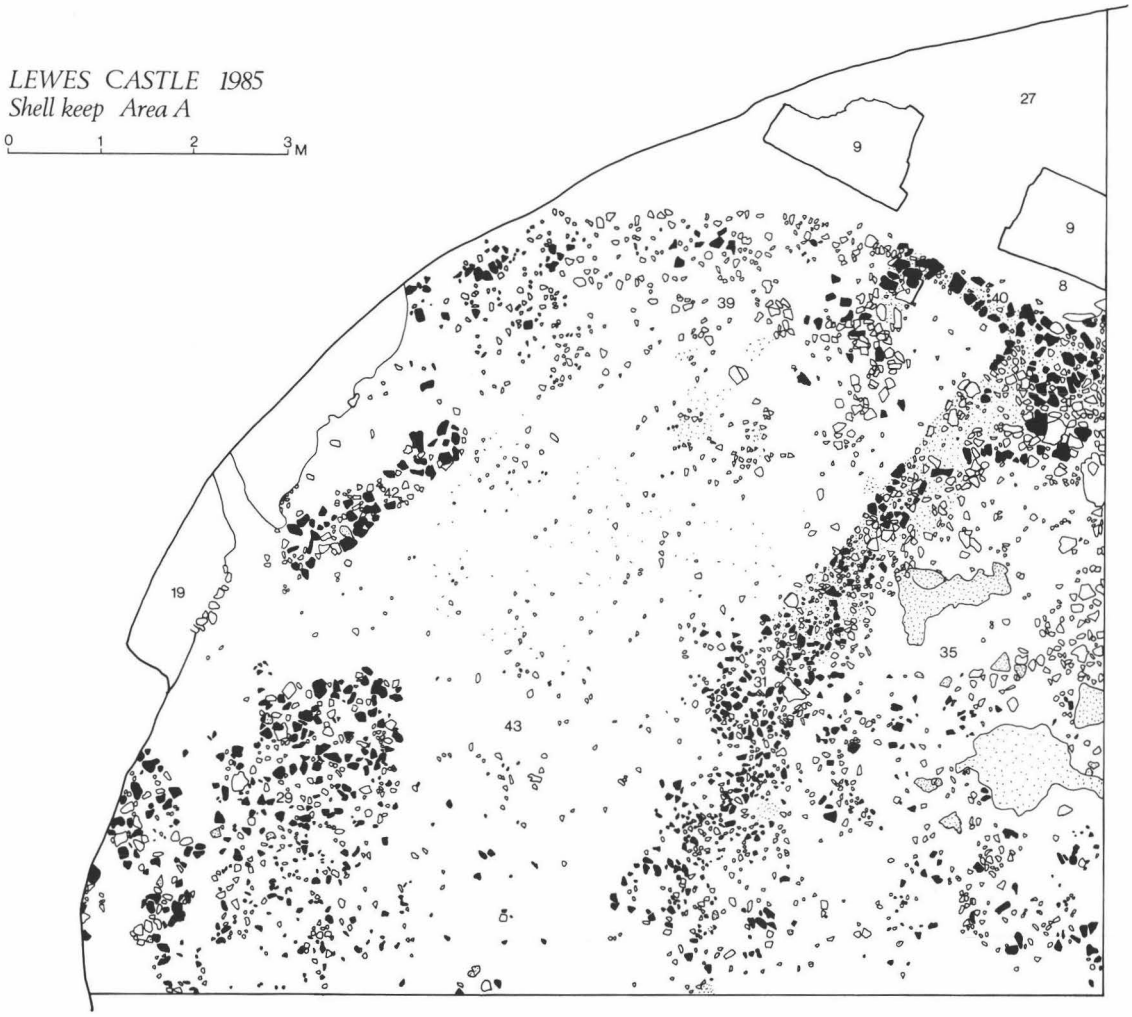

Fig. 5. Lewes Castle, 1985. Area A. Footings of Norman Hall. Scale: 1 m.

The courtyard may have been surfaced in some way, but the only trace of cobbling was against the 13th century hall and is likely to be of that date.

Period II: 13th century

In the 13th century, angle towers were cut through the shell keep wall (Fig. 3). This process would have disturbed the Norman hall and kitchen. The Norman hall was demolished (or collapsed) and a new hall was constructed south of it. The 13th-century hall butted against the Norman kitchen, which appears to have survived the reconstruction work (Fig. 8). The new hall had flint and chalk footings some 90 cm. wide. The hall was some 5 metres wide and probably at least 13 metres long. It is likely to have had direct access to its kitchen through the south-western end of its west wall. It is possible that the north-west tower served as a solar block. There was no trace of mortar flooring within the hall, suggesting that, like the Norman hall, it had a beaten earth floor. Constructed into the thickness of the curtain wall on the southern side of the hall was a substantial fireplace with a hearth and backing of thick, re-used green glazed floor tiles (Fig. 9).

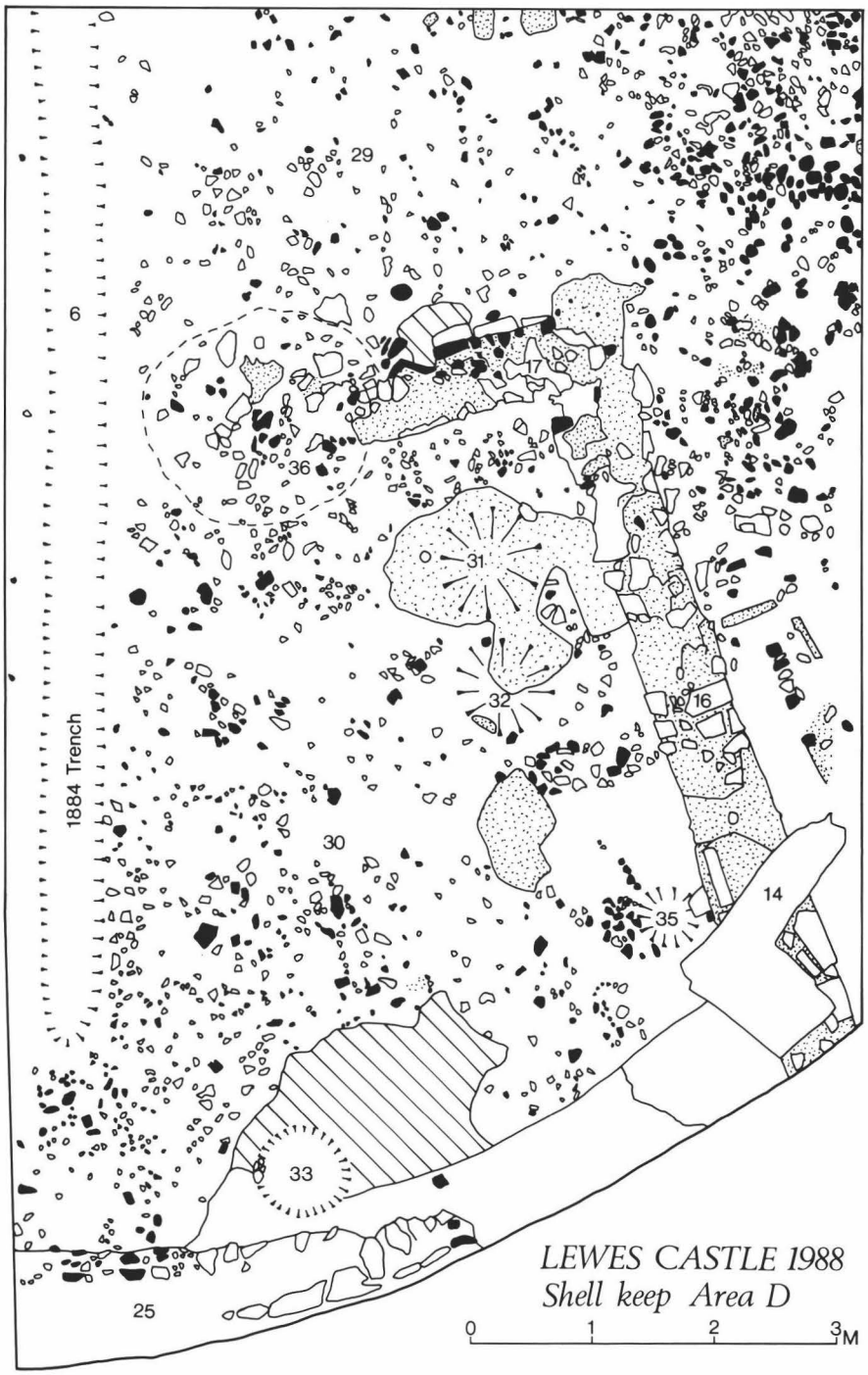

Fig. 6. Lewes Castle, 1988. Area D. Norman kitchen wall footings.

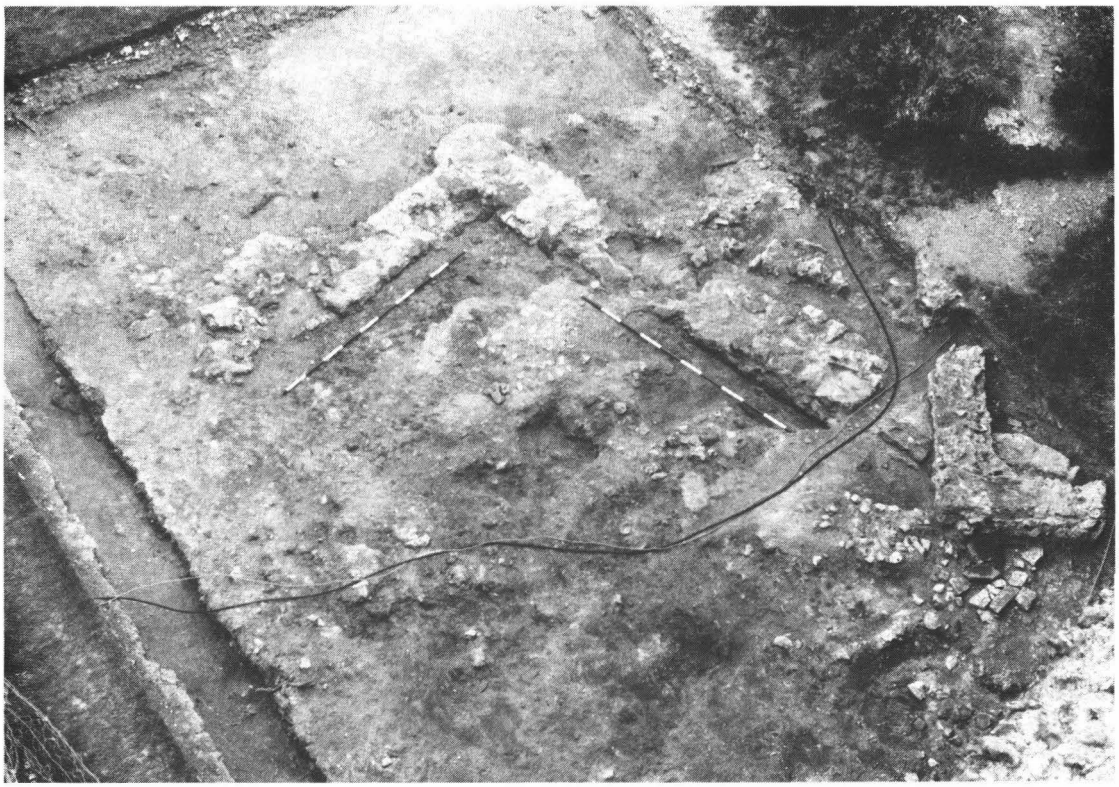

Fig. 7. Lewes Castle, 1988. Area D. Norman kitchen wall footings. (Crossed by flood lighting cable). Scale: 2 m.

The Norman kitchen remained standing in the 13th century and continued as a kitchen. A fireplace, lined with re-used pegged roof tiles, was constructed in the thickness of the curtain wall and traces of mortar flooring suggested that the kitchen was floored with flagstones or tiles.

During the 13th century a new range of buildings was constructed against the shell keep wall, on the northern side of the motte. The exact relationship of this range to a substantial, but undated, structure on the west of the motte, remains uncertain as a result of the 19th-century excavations (Fig. 10). The new range had well-constructed flint and chalk footings some 80 cm. wide (Fig. 11 and 12). These walls were excavated by Somers Clarke in 1884 and there was some evidence of 19th century consolidation and repair work to the footings. The range was 13 m. long and up to 6 m. wide. It was divided by a partition wall into two rooms, one considerably larger than the other (Figs 12 and 13). Both rooms had large patches of mortar flooring, suggesting a tiled floor. The exact function of this range is uncertain but a possible interpretation is as a chapel with antechamber. Alternatively these may have been simply private chambers of the de Warenne family.

Between the three 13th-century buildings was an open courtyard (Figs 4, 14 and 15). The centrally-placed well suggested for the Norman period presumably remained in use. The courtyard was almost certainly cobbled in the 13th century, if not before. Remains of flint cobblestones survived against the wall of the hall. Rounded beach pebbles of cobble size were also found in disturbed contexts across the site.

No evidence survives as to the nature of the Norman buildings above ground level. It may be assumed that they were stone-built with thatched roofs although the latter would seem

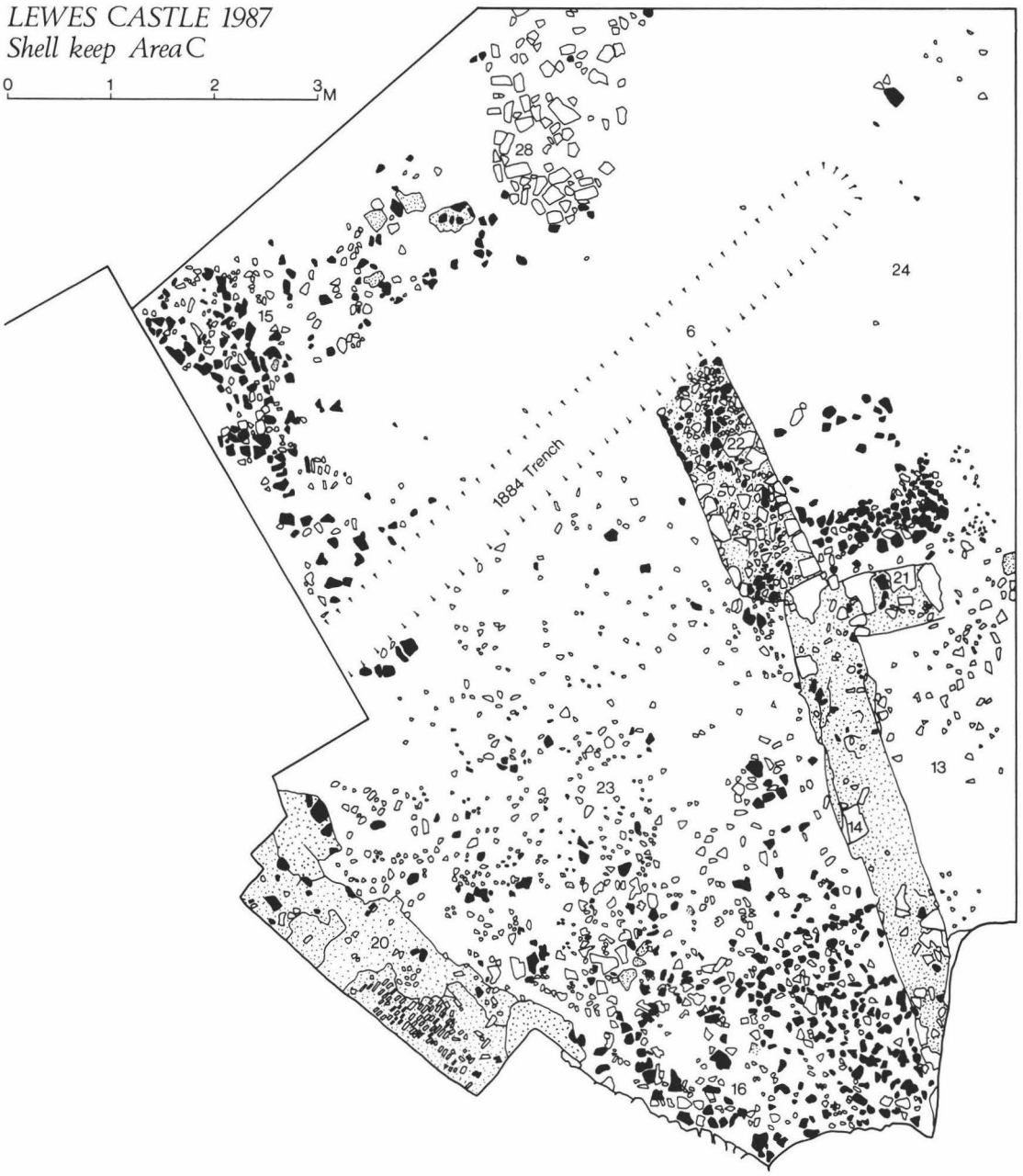

Fig. 8. Lewes Castle, 1987. Area C. 13th century hall footings.

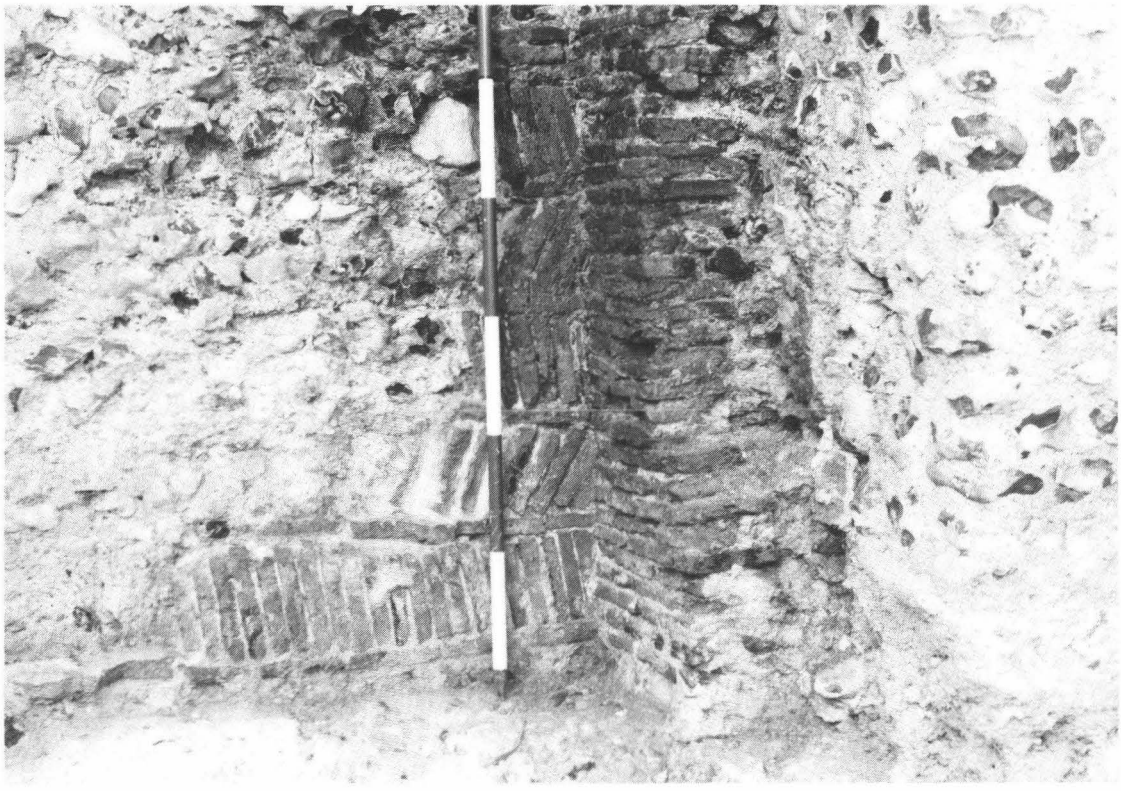

Fig. 9. Lewes Castle, 1987. Area C. Tile-backed fireplace in 13th century hall. Scale in 20 cm. intervals.

inappropriate for a 12th-century baronial hall and chamber. Any re-usable material may have been utilized in the 13th-century reconstruction. The 13th-century buildings may also have been constructed of plastered flint and chalk walls. Fragments of sandstone and Caen limestone recovered were used in windows and doors. Window glass found suggests that at least the main buildings were glazed. Substantial quantities of early round-pegged and nibbed tiles indicate tiled roofs with some glazed ridge tiles and chimney pots.

THE FINDS

(a) Pottery by Mark Gardiner (Fig. 16)
(b) Coins by David Rudling
(c) Late 10th Century Bronze Disc by Marian Archibald (Fig. 17)
(d) Glass
(e) Worked Bone by Rodney O'Shea (Fig. 18)
(f) Building Materials by Maureen Bennell (Figs 19–21) with a note on the Roman tile by David Rudling
(g) Metal Artefacts by Maureen Bennell (Figs 22–23)
(h) Slate Artefacts
(i) Clay Pipes
(j) Slag by Jon Wallis
(k) Animal Bones by Rodney O'Shea
(l) Human Bones by Rodney O'Shea
(m) Marine Mollusca by Caroline Cartwright
(n) Charcoal by Caroline Cartwright

All finds were given the same Museum Accession Number: 1986.1, regardless of year excavated. The four areas excavated were given area letters A–D. In each area contexts were numbered discretely from No. 1. Finds were then grouped into eight main groups (A–H) on the basis of

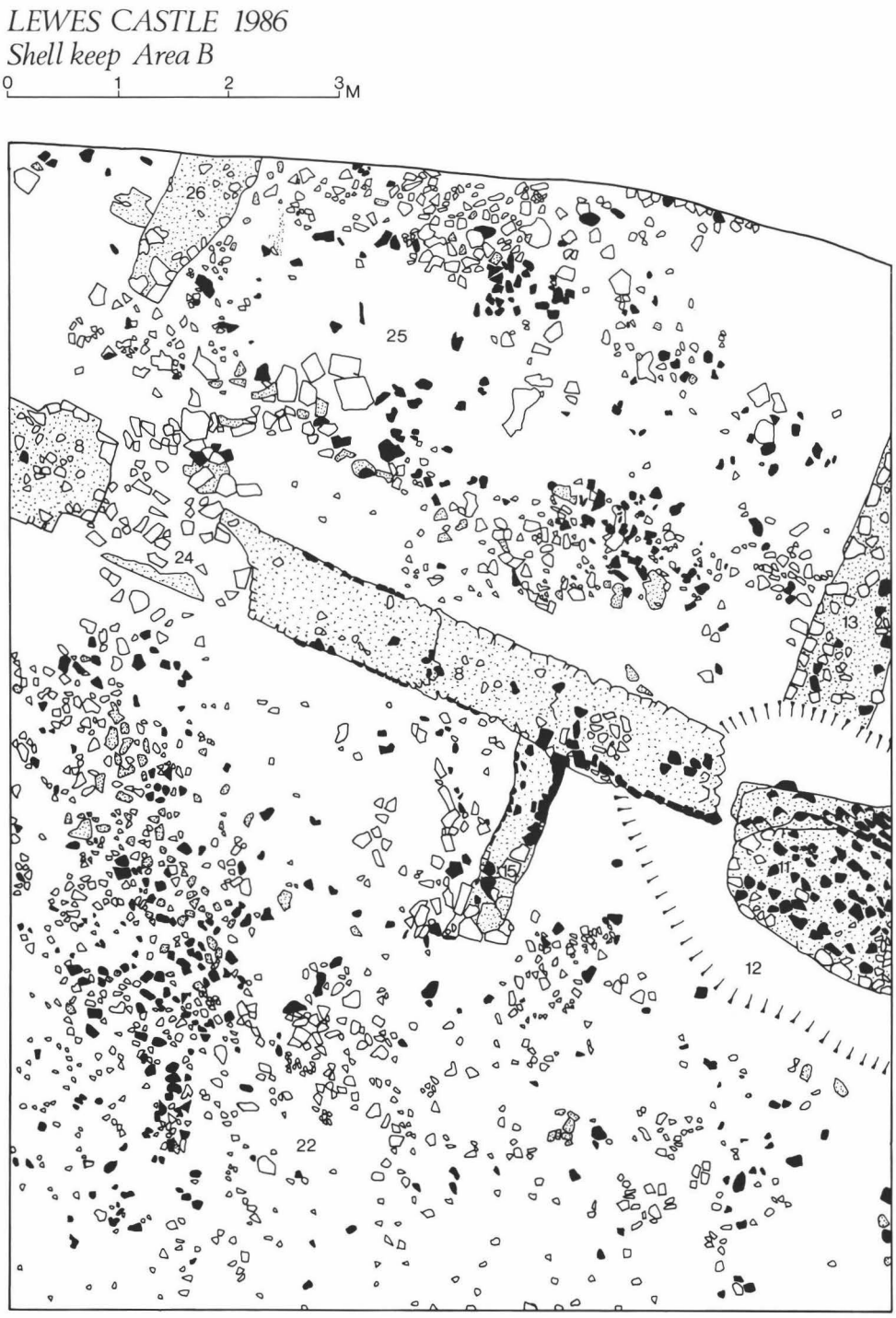

Fig. 10. Lewes Castle, 1986. Area B. Demolition phase of 13th century building.

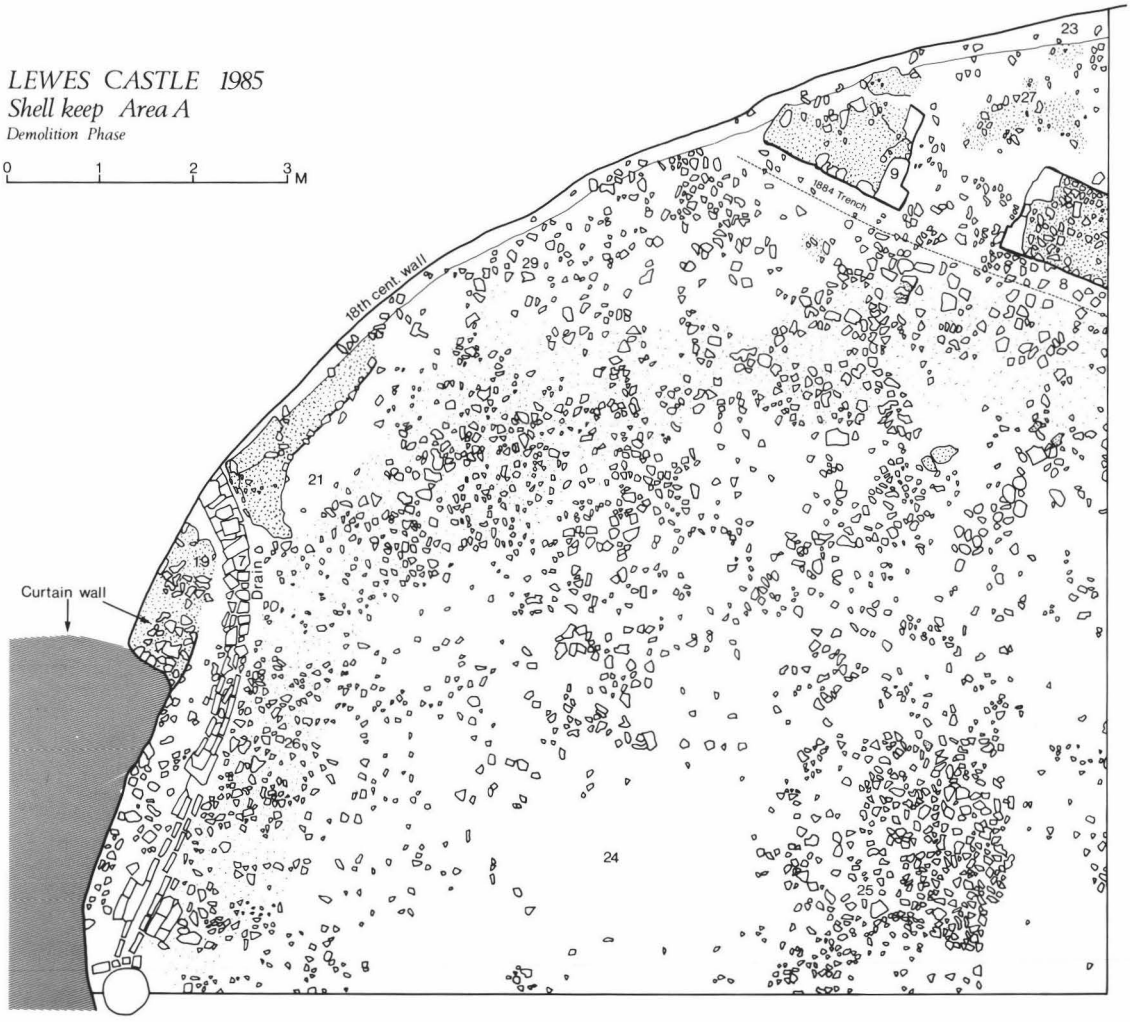

Fig. 11. Lewes Castle, 1985. Area A. Doorway to 13th century building and demolition phase.

stratigraphy and association with specific buildings. The finds were considered in these eight groups.

Lewes Castle Excavations 1985–1989: Context Associations
1986.1/A Contexts 1–45
1986.1/B Contexts 1–26
1986.1/C Contexts 1–28
1986.1/D Contexts 1–36

A. *18th Century and Later*
1986.1/A/ 1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16, 17, 19, 21, 22, 23, 25, 26, 28, 37.
1986.1/B/ 1, 2, 3, 4, 5, 6, 12, 19, 21, 24.
1986.1/C/ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 18.
1986.1/D/ 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 13, 14, 21, 22, 23, 28, 36.

B. *Medieval Demolition Layers*
1986.1/A/ 24, 29, 30, 34.
1986.1/B/ 9, 10, 11.
1986.1/C/ 7, 12, 13, 14, 15, 16, 17, 19.
1986.1/D/ 10, 11, 18, 19, 20, 24, 25, 26.

C. *Within Building (1) (Kitchen)*
1986.1/C/ 21.
1986.1/D/ 16, 17, 27, 30, 31, 32, 35.

D. *Within Building (2) (First Hall)*
1986.1/A/ 31, 38, 39, 40, 41, 42, 43, 44, 45.

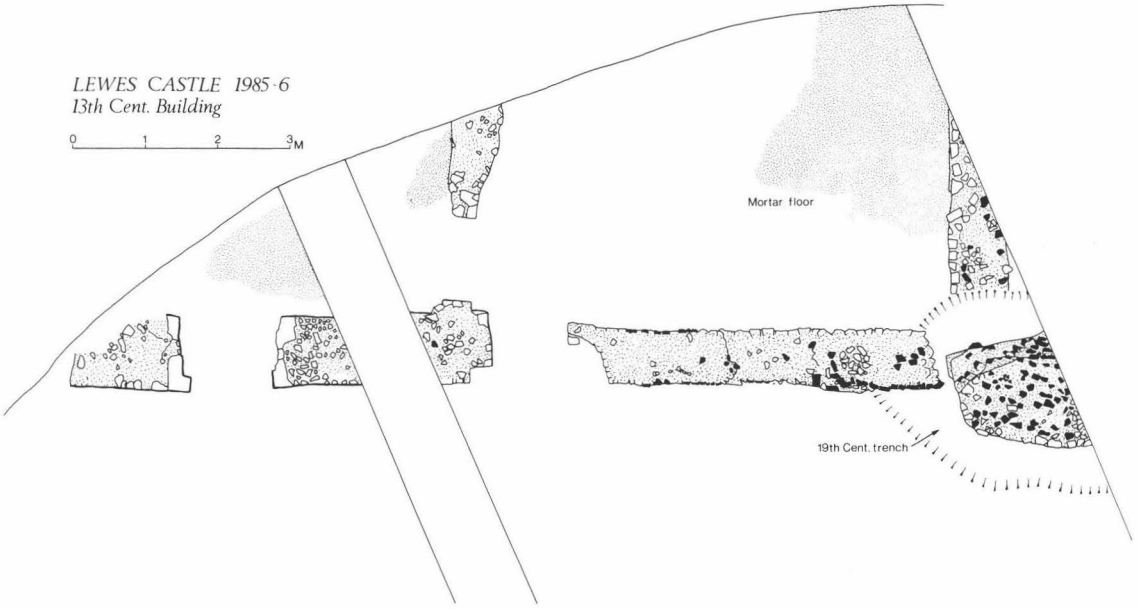

Fig. 12. Lewes Castle, 1985–86. 13th century building in areas A and B.

Fig. 13. Lewes Castle, 1985. Area A. Doorway to 13th century building. Scale: 1 m.

E. *Within Building (3) (Second Hall)*
1986.1/C/ 20, 22, 23, 25, 28.

F. *Within Building (4) (Chapel)*
1986.1/A/ 9, 18, 20, 27.
1986.1/B/ 7, 8, 13, 14, 15, 18, 25, 26.

G. *Courtyard*
1986.1/A/ 32, 33, 35, 36.
1986.1/B/ 16, 17, 20, 22, 23.
1986.1/C/ 24, 26, 27.
1986.1/D/ 15, 29.

H. *Other Discrete Contexts*
1986.1/D/ 33 shallow pit in Building (1) (kitchen).
1986.1/D/ 34 burnt clay base of fireplace in Building (1) (kitchen).

(a) *The Pottery* by Mark Gardiner

Excavation recovered 8,572 sherds of pottery weighing a total of 58.0 kg. These were divided into broad fabric groups based on visual examination and using a hand lens where necessary.

Fabric Group 1: Brown-red or light brown surfaces and grey core, rough feel, jagged sometimes slightly laminar fracture with a temper of fine, subangular multi-coloured flint grit 1 mm. and occasional shell or other calcareous inclusions.
Fabric Group 2: Generally oxidized brown-red on surface and core, rough texture with a temper of transparent or translucent rounded quartz grains of medium to coarse sand size.
Fabric Group 3: Similar to Fabric 2, but with calcareous inclusions which were not differentiated, but included in various sherds both comminuted shell and rounded fragments of chalk.
Fabric Group 4: Generally oxidized brown-red or reduced to dark red surfaces and core, fairly smooth with a temper of quartz grains similar to Fabric Groups 2 and 3, but of fine sand size.
Fabric Groups 5: As Fabric Group 4, but with calcareous inclusions.
Fabric Group 6: Reduced and oxidized sherds, with fine texture and smooth feel, often tempered with small fragments of iron ore.
Fabric Group 7: Fine, fairly smooth ware distinguished by its inclusions (about 0.5%) of sub-angular white or pink flint 0.5 mm.
Fabric Group 8: 'Winchelsea Black' or Black ware. This is described in detail in Orton (forthcoming).

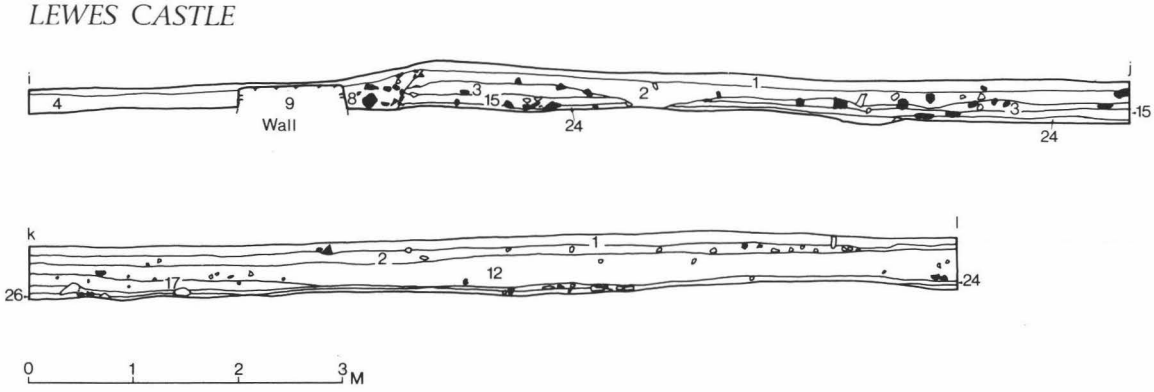

Fig. 14. Lewes Castle. Sections across top of south-western motte.

Key:
Top i–j
1. Turf and topsoil.
2. Dark brown friable loam and some gravel.
3. Dark brown friable loam with demolition material.
4. Black friable loam. Recent garden.
8. Grey-brown sandy loam with flint nodules. 19th century excavation trench.
9. Flint wall. 13th century with some 19th century consolidation.
15. Mid brown friable loam with chalk rubble and flint.
24. Mid brown friable loam with small flints, chalk fragments and pebbles.

Bottom k–l
1. Turf and topsoil.
2. Dark brown friable soil with flints, chalk and tile fragments.
12. Light brown friable soil with few pebbles and mortar fragments.
17. Light grey-brown friable loam with chalk lumps and flint nodules.
24. Light grey-brown friable loam with rounded chalk lumps and flecks. Some flint nodules.
26. Light brown friable loam with small rounded chalk lumps and flint pebbles.

LEWES CASTLE

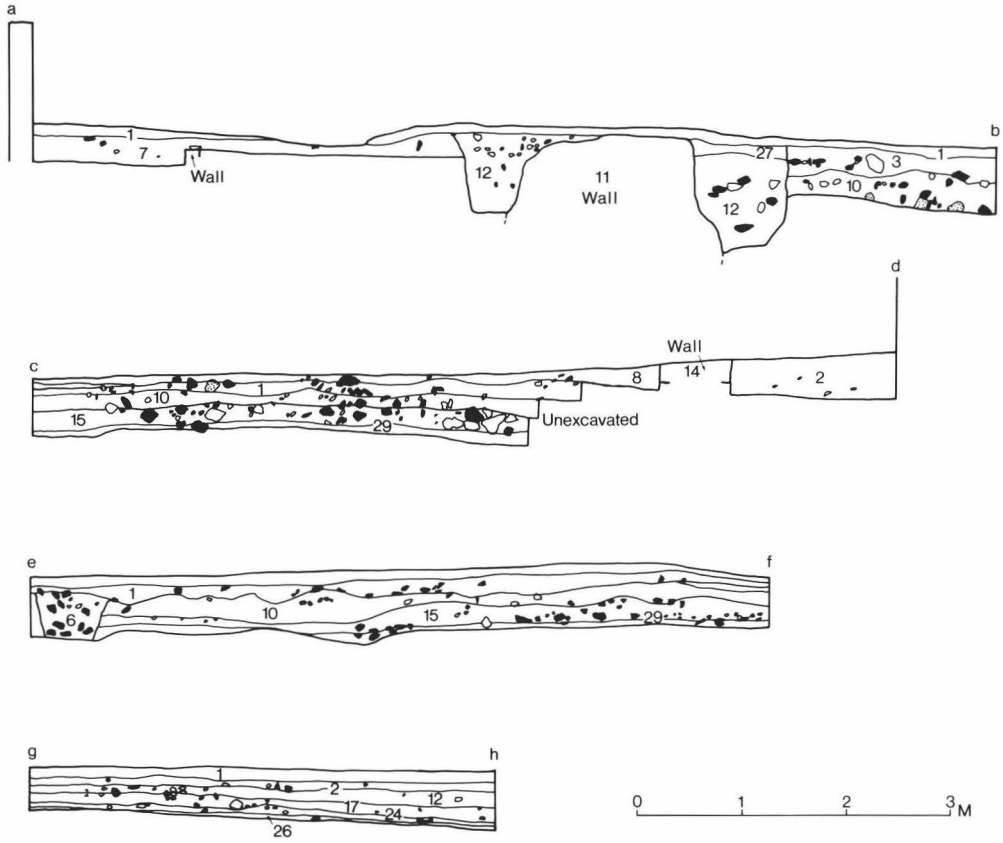

Fig. 15. Lewes Castle. Sections across top of south-western motte.

Key:

Top a–b and c–d

1. Turf and topsoil.
2. Dark brown friable loam with some gravel.
3. Dark brown friable loam with demolition material.
7. Light brown friable sandy soil with flint and chalk lumps.
10. Light brown sandy gravel with small chalk and flint lumps.
11. Flint and chalk wall set in compact mortar.
12. Light mid grey friable loamy soil with flint and chalk fragment. 19th century excavation trench.
14. Flint wall. 19th century garden feature.
15. Light brown friable loam with gravel, chalk and flint nodules.
27. Light brown friable soil. 19th century excavation trench.
29. Light grey friable loam with chalk lumps and flint nodules.

Bottom e–f and g–h

1. Turf and topsoil.
2. Dark brown friable loam with some gravel.
6. Light brown-grey friable soil. 19th century excavation trench.
10. Light brown sandy gravel with small chalk and flint lumps.
12. Light brown friable loam with pebbles and mortar.
15. Light brown friable loam with gravel and flint nodules.
17. Light grey-brown friable loam with chalk and flint nodules.
24. Light brown-grey friable loam with flint nodules, chalk lumps, and flecks.
26. Light brown loam with small rounded chalk and flint pebbles.
29. Grey to light brown friable soil with small chalk lumps and flint nodules.

Fabric Group 9: Coarse Borderware. This fabric is described by Pearce and Vince (1988).
Fabric Group 10: Medieval imports, discussed below.
Fabric Group 11: Tudor Green. This fabric is described by Pearce and Vince (1988) and dating considered by Holling (1977) and Moorhouse (1979).
Fabric Group 12: Hard-fired late medieval/post-medieval earthenwares. This category is also identified by Orton (forthcoming) and Streeten (1985, 11–18).
Fabric Group 13: Stonewares. Not further sub-divided.
Fabric Group 14: Sussex Ware. This has been described by Manwaring Baines (1980a, 1980b).
Fabric Group 15: White, coloured and transfer-printed china.
Fabric Group 16: Post-medieval wares, apart from those in Groups 11 to 15 above.
Fabric Group 17: Unidentified or miscellaneous. This category includes a sherd of East Sussex ware, one of Samian, and pieces of modern flower pot.

The details of the distribution of medieval pottery are given in Tables 1–3 (in microfiche).

The medieval pottery from Lewes has been little studied and is not well dated (Freke 1977, 23–5). Unfortunately, many of the fabrics found immediately to the west in the Adur Valley, for which a chronology has been proposed, do not appear to occur in Lewes. The assemblage from Lewes Castle is dominated by sandy fabrics with varying amounts of shell, chalk and flint temper, and these were divided according to the size and nature of inclusions (Fabric Groups 1–5). Such distinctions are, however, of only limited value in defining the date and source of manufacture. The kilns at Ringmer were producing pottery from at least the 12th to 16th centuries (Hadfield 1981, 105; Bleach 1982, 47). The kilns at Marchants Farm, Streat, ascribed by the excavator to the late-13th to early-14th century, were producing wares which are visually very similar (excavations unpublished).

The assemblage from the present excavations produced no closed groups and clearly had been subject to considerable disturbance. As an illustration, conjoining sherds from a *Bartmann* (Fig. 16, No. 9) came from Contexts A/2, A/11, A/35 and B/14, that is from both the courtyard and Building 4. The pottery, therefore, has to be used cautiously for dating specific contexts. The pottery from the whole site can, however, be treated collectively to examine the periods and nature of activity within the keep. It may be possible, though with less confidence, to treat the pottery from specific areas.

As might be expected, the medieval pottery assemblage is dominated by wares produced in the immediate vicinity. Black ware (Fabric Group 8), probably produced in the Winchelsea/Rye area, is uncommon here, though on sites at the east end of Sussex it forms a substantial proportion of the whole. There is very little pottery which might have been produced at the Abbots Wood kilns near Upper Dicker (Fabric Group 1) (Barton 1979, 182). Imported pottery (Fabric Group 10) is also not well represented.

For the local wares, the fabric alone provides a poor guide to date. It is therefore useful to consider forms as well. A number of vessels display Saxo-Norman decorative traits. 'Pie-crust' decoration occurs on a number of rims of vessels in Fabric Groups 2 to 5. The facets usually occur on the top or outside of the rim (Fig. 16, 2), but exceptionally, on one vessel are found on the inside edge (Fig. 16, 1). The other common type of decoration is horizontal lines of broad-spaced thumb-impressed dimples near to the shoulder of the pot (Fig. 16, 3). This has been found previously on pottery from Lewes and on vessels from Lancing and Hellingly (Freke 1976, Fig. 4, no. 40, Fig. 5, no. 46; Barton 1979, 45, 47). The dominant rim type on cooking and storage vessels is everted with a slight flange (Fig. 16, 4). Rims with this form have been recorded from the kiln at Barnetts Mead, Ringmer where they formed 10 per cent of the sample (Hadfield 1981, 95; Form 4).

The medieval part of the assemblage is dominated by cooking pots and storage vessels. Jugs formed only a small part of the ceramics recovered, though this may be a function of the date of the pottery. If a substantial proportion of the ceramics recovered pre-dated the 13th century, then it would be expected that jugs would be poorly represented. Fragments of an uncertain number of chimney pots were also recovered during excavation. The pieces, in coarse sandy fabrics with varying degrees of calcareous temper (Fabric Groups 2 and 3), came from 'Sussex type' chimneys and are similar to pots found previously in Lewes (Dunning 1961). No complete pot could be reconstructed, but fragments show they were of the normal pattern with a main vent at the top, and holes at the sides to promote an up-draught. The side holes in the

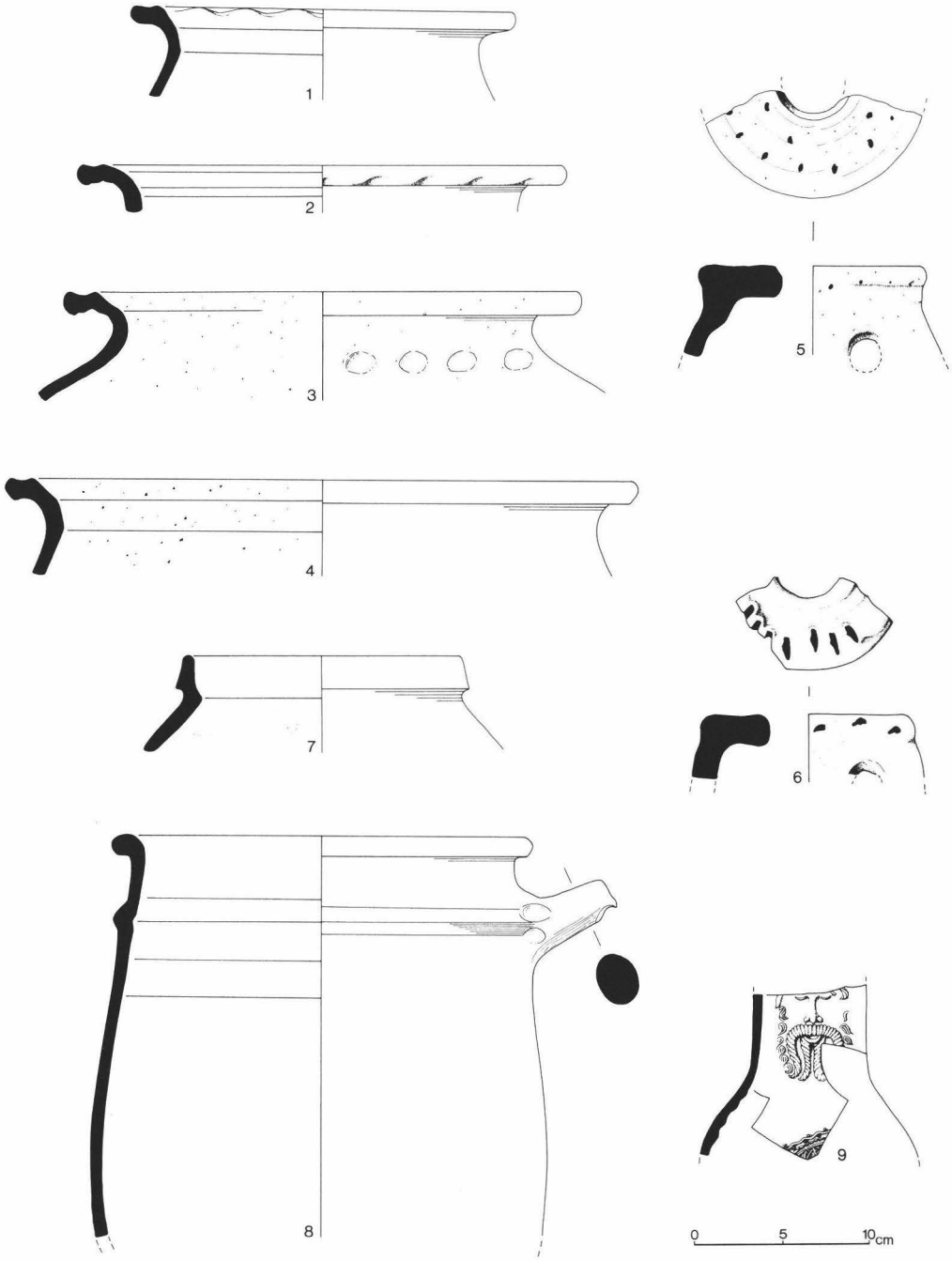

Fig. 16. Lewes Castle. Pottery. Scale: 1:4.

illustrated examples (Fig. 16, 5, 6) are nearer the top of the pot than is usual. The pots were coil-built and the exterior was then smoothed vertically, giving a slightly angular finish. The stabbing found on the tops of two pots was, as Barton (1979, 66) observes, more likely to be an aid to successful firing than for decoration. There is no evidence on any of the sherds for the applied strips sometimes found.

The chimney pot fragments were found concentrated on the courtyard, particularly in and around Buildings 1 and 3, and may be related to the hearths, traces of which survived in both rooms.

The sherds from other regions of England, though small in number, are of particular interest. These include 17 sherds of Coarse Border ware, at least two pieces of which are probably London-type ware and one fragment of St. Neots-type. At least two vessels of Coarse Border ware are represented, one jug and one cistern. The distribution of Coarse Border ware was mainly London and to the immediate south and west. It occurs in Hampshire, though does not seem to have reached the coast there in any quantity since it is rare or absent in Southampton (Pearce and Vince 1988, 11–12). London-type ware has a slightly wider distribution, and small quantities have been found in the Home Counties (Pearce *et al.* 1985, 6–12). The similarity of London-type ware to local fabrics makes identification difficult, and although only two sherds of this fabric were identified, a greater quantity may have been present. The single sherd of St. Neots-type lies considerably beyond its usual area of distribution in the south and east Midlands. Some sherds have, however, been found in some major centres beyond this, including at Southampton and York (Hunter 1979, 232).

No special explanation is required for the finds of such small amounts of non-local pottery. It may, however, be significant that these wares would have been available in other lands held by the Warenne family. They held extensive lands in Surrey, including their castle at Reigate, and in Norfolk. St. Neots-type pottery was found in excavations at the Warenne castle at Castle Acre (Norfolk), where it was discovered in the earlier phases but had largely been superseded by the 12th century (Milligan 1982, 202, 222). Excavations at a third Warenne castle, that of Sandal Castle (West Yorkshire) produced small quantities of non-local pottery, including two vessels of West Sussex ware. The presence of this material was explained by movement of people from one area of the estate to another, and it seems very likely that a similar argument can probably be applied to the Lewes finds (Moorhouse 1983, 61).

The pottery of foreign origin (Fabric Group 10) forms a small part of the medieval assemblage. The imported finds from Lewes Castle, therefore, reflect the pattern found more generally in Sussex, where foreign pottery does not seem to have circulated in any quantity very far beyond its port of entry (e.g. Freke 1978, 212; Orton forthcoming). Amongst the imported medieval wares are a number of pieces of either North French or Saintonge green-glazed, but the small sherd size prevents the differentiation of the two (Allen 1983; Hurst 1980, 121). Imports from Rouen are represented by at least three sherds (Barton 1965).

There are a few 16th/17th-century vessels, generally represented by large conjoining sherds with only slight abrasion (e.g. Fig. 16, 8). These, it must be inferred, were buried shortly after being broken, and are perhaps associated with demolition work on the keep. The imports of this period are represented by German stonewares (Fig. 16, 9) and a small sherd of Dutch maiolica. Sussex ware produced from the early 18th century forms a lesser part of the post-medieval ceramics, and the sherd size is significantly smaller. The final contribution to the pottery in the keep was made by picnic parties in the 19th and present centuries, whose broken china was found in the upper layers.

Taking the ceramics recovered from the excavations as a whole, it is likely that the pottery is predominantly from the first 150 years of the castle's occupation. There are smaller amounts of pottery which could be attributed to the end of the 13th and 14th centuries. If the pottery accurately reflects the level of activity, rather than, for example, changes in patterns of rubbish disposal, it appears that after the first century and a half there was a decline in activity in the castle. The small proportions of finer wares and

harder-fired later medieval wares imply that by the late 14th and 15th centuries the keep was not much used.

1. Cooking vessel with facetting on inside of rim. Fabric Group 4.
Context D 26.
2. Cooking vessel with facetting on lower side on exterior of rim. Fabric Group 4.
Context D 29.
3. Coil-built storage vessel with wheel-turned rim and decorated with slight dimples on shoulder. Fabric Group 5.
Context C 23.
4. Storage vessel, probably made in a similar manner to No. 3 above. Fabric Group 3.
Context D 30.
5. Top of chimney pot. Fabric Group 3.
Context D 15.
6. Top of chimney pot. Fabric Group 4.
Context C 12.
7. ?Cooking pot with splash of green glaze in interior. Fabric Group 12.
Context B 5.
8. Pipkin with short handle. Fabric Group 12.
Context B 7.
9. *Bartmann* jug from Frechen Cologne. Fabric Group 13.
Contexts A2, A11, A35, B14.

(b) *Coins and Tokens* by David Rudling

1. Edward III. Silver penny. York Episcopal Mint of Archbishop Thoresby. Treaty Period (1363–1369).
Obverse: EDWAR]DUS.REX.[AN]GL[I
Reverse: CIVI]TAS EBOR[RACI], quatrefoil in centre
Reference: North (1975) 1268.
Condition: very worn—this coin was probably lost *c.*1400–1410.
Area B, Context 22.
2. James I. Silver sixpence. Second coinage, fourth bust. Dated 1609.
Initial marks: coronet.
Obverse:
IACOBUS.D.G.MAG.BRIT.FRA.ET.HIB.REX
Reverse: Q[UAE D]EUS.CONIUM X[IT]
NEMO.SEPARET, 1609
Reference: North (1975) 2103.
Condition: worn and clipped.
Area A, unstratified.
3. William III. Copper halfpenny. Second issue. Dated 1698.
Reference: Peck (1960) 674.
Condition: much wear.
Area A, Context 24.
4. William III. Copper halfpenny. 1695–1701. Date illegible.
Condition: very worn.
Area D, Context 7.
5. Illegible copper halfpenny. Probable *c.* 1729–1775.
Condition: extremely worn.
Area C, Context 1.
6. Trade token of Thomas Lucas of Horsham. Copper farthing. Dated 1667. Die axis 180°.
Obverse: rosette THOMAS rosette LVCAS rosette rosette; in centre: large fleur-de-lys.
Reverse: rosette IN.HORSHAM.1667; in centre: HIS/HALF/PENY
Condition: signs of wear on raised surfaces.
Reference: Williamson (1967) Sussex Token 104.
Area D, Context 15.

(c) *A Late Tenth Century Repousse Bronze Disc* by Marian Archibald

Repousse bronze disc with outer inscription, apparently retrograde, in Roman and other psuedo-letters (some uncertain forms).
The inner inscription has been identified by Venetia Porter as a corruption of the Kufic inscription 'Muhammad is the Prophet of God', and in style close to coins of the end of the Samanid period, the 10th century. The edge is chipped where a mount may have been broken off (Fig. 17).

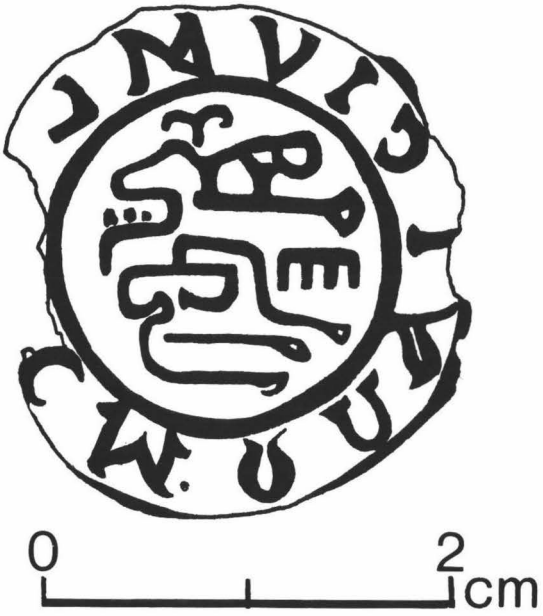

Fig. 17. Lewes Castle. Late 10th century repousse bronze disc. Area D, Context 7.

Brooches based on Kufic coins are known from English sites, eg. a solid-cast bronze piece was found in the summer of 1989 in the dump

from Thames Exchange, London (private hands). The repousse technique has been used for other English pseudo-coin brooches, but not, as far as I know, for a Kufic type. (This is, I am sure, just coincidental.) A group of repousse pseudo-Kufic pendants from Finland was published by Talvio (1978). Although these pendants are different in style and are clearly from a different workshop, they suggest that the Lewes piece was probably a pendant rather than a brooch-front. The mounts in the Finnish examples are not always at the top or square-on to the central inscription. If the break at the edge does represent the position of the original mount, then it would have been at about 90° to the line of the central inscription.

The suggested prototype would agree in date with the period when Kufic coins were entering Scandinavia *via* the Russian Viking trade routes in the 10th century, and to a lesser extent in the early 11th century. A few crossed the North Sea and were lost or hoarded here, e.g. the Cuerdale hoard, buried *c.* 905. The Finnish pieces have been dated to the 11th century, but all the English hoards with Kufic coins are in the 10th, so while not ruling out a later copying when Kufic coins had become even more 'exotic', a late 10th century date seems the most probable. Area D, Context 7.

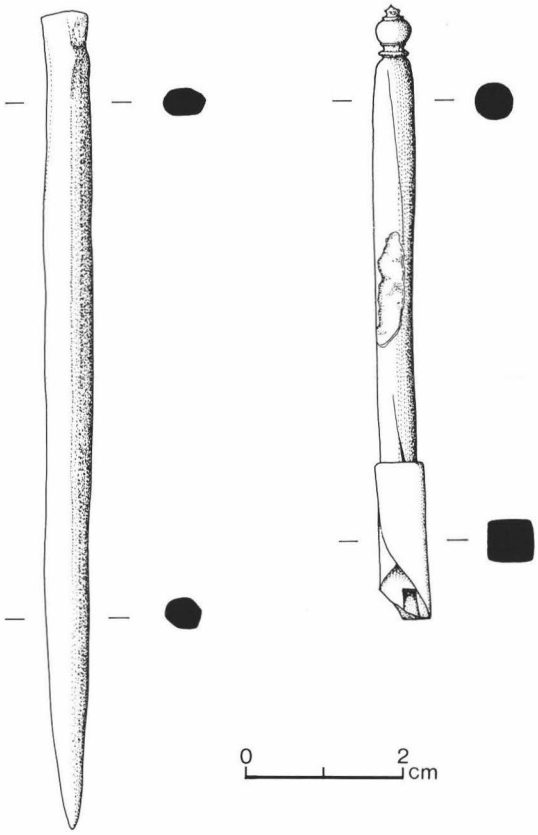

Fig. 18. Lewes Castle. Worked Bone.
Left: Area B, Context 12. *Right:* Area C, Context 1.

(d) *Glass*

Fragments of window glass were found in 29 contexts. All was totally devitrified and opaque. One fragment, from Context A17, had traces of a black painted line. Contexts with more than five fragments were A8 (six fragments), A11 (eight), A12 (15), and B19 (seven). Further details are archived.

A rim of a glass urinal or flask, diameter *c.* 11 cm., was found in Context A4. Probably English, 13th–14th century.

(e) *Worked Bone* by Rodney O'Shea

A. *18th Century and Later Contexts*

Context B/2

Bone point. Probably Medieval. (Fig. 18).

Context C/1

Bone lace-making bobbin. 19th Century. (Fig. 18).

Context C/4

A rather eroded and broken ankle bone (possibly a cow scaphoid) has a central hole drilled through it making, perhaps, an *ad hoc* spindle whorl.

Context D/23

Bone ring fragment.

B. *Medieval Demolition Layer*

Context C/12

The distal end of a sheep femur, lacking its epiphysis, has a hole drilled into the end and through to the marrow cavity.

Context D/20

A fragment of bone about 8 cm. long has been shaped and then sharpened at one end.

A piece of long bone about 7 cm. long (and probably from a sheep) has been deeply notched about 1 cm. from one end. The design looks rather like a whistle, but if so it no longer works.

C. *Within Building (1) (Kitchen)*

Context D/30

A distal piece of sheep femur drilled through, as is that from Context C/12. The drilling is neater than in that example.

D. *Courtyard*
Context D/15

A deer metatarsal fragment has a diagonal hole drilled from the proximal end.

Context D/29

Deer metatarsal worked in the same way as that from D/15.

A piece of bone has been neatly cut along two sides and one end. It is about 6 cm. long and 1 cm. square in section.

A thin piece of bone about 2½ cm. long by about 1 cm. wide has been shaped (roughly to the shape and size of a teaspoon handle) and has a hole of 5 mm. diameter drilled into it.

(f) *The Building Material* by Maureen Bennell

Brick

Brick was collected from 16 contexts (Table archived). Overall measurements could not be determined but a thickness of 58 mm. was general. Except for two fragments, the brick was of a similar, coarse, heterogeneous fabric with inclusions of large (up to 12 mm.) angular flint, chalk, grog and ash. The colour ranged from dull red to red-brown. Many fragments had pale grey vitrification along the stretchers and a high gloss pale blue glaze on the headers. The two fragments from B16 and C11 were a porous homogeneous sandy fabric with no visible inclusions. Both were very abraded and a pale orange colour, with a sanded pale brown margin. It is likely that most of the brick relates to the 18th-century building phase at the Castle, when it was the fashion to glaze headers. Clamp firing, necessitating the inclusion of ash, was becoming a more usual method at this time, as wood for kilns became scarce (Beswick, forthcoming).

Daub

A little partially fired daub was collected from four contexts (Table archived), one piece (C23) showing an impression of vegetation.

Mortar

Samples of mortar from floors were retained for comparison from two contexts. Samples from Context A44 had a pink-buff calcareous matrix containing sparse multi-coloured, water-rounded inclusions, ranging from 1 mm. to 5 mm. diameter, and tile or brick grog. It was compact and hard. Samples from Context B14 had a white calcareous matrix containing abundant medium-sized (4 mm.–8 mm.) brown and black water-rounded flint inclusions and chalk fragments. It had been poured as a loose mixture and engulfed two fragments of roof tile. There is a well-defined edge where the mortar abutted a wall. The average thickness of the samples is 50 mm. The mortar is firm where it has settled into the contours on the underside, but friable on the upper surface.

Plaster

Plaster was collected from ten contexts in Areas A and B only (Table archived). It was of two types, a thin (average 7 mm.) fine plaster of calcareous matrix with sparse, fine, rounded flint inclusions, and a heavier, thick (average 20 mm.) plaster with frequent medium and large (15 mm.) rounded flint inclusions. Both types were represented almost equally, not only between the contexts, but within them also. The external appearance was similar and it can only be presumed that the different types of plaster were suited to covering different building materials, one more irregular than the other.

Roof and Ridge Tiles

The tiles, collected from 80 contexts (Table archived) were fragmentary and only the thickness could be measured, which varied from 11 mm. to 16 mm. Both the hard red tiles and those of a softer, more sandy, red-brown fabric, had a reduced core. Early tiles (late 13th century to late 15th century) with nibs and/or large round peg-holes, were represented, as were the later (late 15th century onwards) slightly thinner tiles with small square peg-holes (Martin and Martin 1977–88). It was not possible to assess proportions of these types because of their fragmentary condition. Patches of mortar adhered to many tiles. The majority of the ridge tiles were of the same fabric as the roof tiles, but a few were of a coarser, sandy fabric, reduced, and with small quartz inclusions. Forty per cent of the ridge tiles were partially glazed, those from Areas A and B mainly dark green or dull amber, and those from Areas C and D a more exuberant bright green or sand-dashed clear yellow. Two

bright green fragments have a pinched decoration.

Geological Material

Geological material was collected from 39 contexts (Table archived). Apart from three fragments of basalt lava and a siltstone whetstone (Context B22), most of the material appears to have been used for building. Several of the sandstone and Caen limestone fragments have been chamfered or shaped architecturally (Fig. 19). Many of the other worked fragments are corners of ashlar blocks. Some of the softer sandstones have been severely eroded, but the presence of mortar indicates their use. The Horsham stone 'slates' also have mortar adhering to them. A large (1,520 gm.) piece of paludina limestone was part of a column or pilaster of 130 mm. diameter. The incomplete whetstone is 130 mm. × 60 mm. × 18 mm. There is a groove at the side and one edge is smoothed by wear. Four fragments of light, fine sandstone have boreholes made by the bivalve *Pholas dactylus*.

Slate

Slate was collected in quantity from 75 contexts (Table archived). It was in a fissile condition due to frost and burial, and laminated as it dried. The fragment count therefore is misleading, and the weight has been quoted also to balance this. Fragments of non-medieval slate were larger and are, therefore, not as insignificant as the numbers imply. However, on bulk alone, it was obvious that the major part of the slate assemblage was medieval. The colour is pale to dark grey with a few fragments of green and two 'lilac' fragments. It is possible for this range of colours to come from a single quarry and Holden (1965) suggests sea transport from a West Country source for this type of slate. Square and round peg-holes were found.

Floor Tiles

Glazed floor tiles were retrieved from 51 contexts, and unglazed tiles from only five (Table archived). The most frequent type was the green-glazed tile measuring 150 mm. × 150 mm. at the surface and 140 mm. × 140 mm. at the base, with a thickness of some 30 mm. It is made of homogeneous red clay, well-shaped and well-fired, with a partly reduced core. The underside is keyed. The glaze is a bright olive green with a high gloss where it remains intact at the edges, wearing to a matt blue-green in the centre. There are a few very dark green or near black tiles of the same type, but these could have been produced unintentionally by a more copper-rich glaze. There is, however, a group of black tiles of the same dimensions but a poorer quality, less well-shaped and badly fired, some almost to waster standard. The glaze is generally not as worn as on the green tiles. There is a small group of good quality brown glazed tiles. Some tiles have scoring lines, but no fragments of obvious mosaic work were found. Within the three colour groups there are fragments of well-glazed slimmer tiles (less than 20 mm.). A few fragments of decorated tiles were recovered which were 126 mm. × 126 mm. at the surface and 120 mm. × 120 mm. at the base, and 18 mm. thick. They have an inlaid design of white slip covered by brown glaze, and date from the 13th century (E. Eames, pers. comm.). There is only one design (Figs 20 and 21) which has been clumsily executed. The slip has been smudged and finger-marked and was, in some cases, missing before the glaze was applied. The pattern is not always central. The design, a rosette with eight petals, encircled, with a foliage motif in the corners, is found on a tile from Lewes Priory (Eames 1980, Cat. No. 11262, Design 2327). The pattern is not continuous. Although thickness of tile is not always signficant, it is possible that the slimmer tiles in black, green and brown were used with the decorated tiles to create a panel. The minimum number of decorated tiles represented by the fragments is eight. Details of unglazed tiles are archived.

Lead (Table archived)

Except for one piece (listed elsewhere), the lead collected from 34 contexts was structural. Of the seven identifiable objects, four are probably modern, but the three possible window fitments are medieval. The appearance of the patina suggests that some tin has been added. The rest of the assemblage divides into window cames, trimmings from lead sheet, and melted lead,

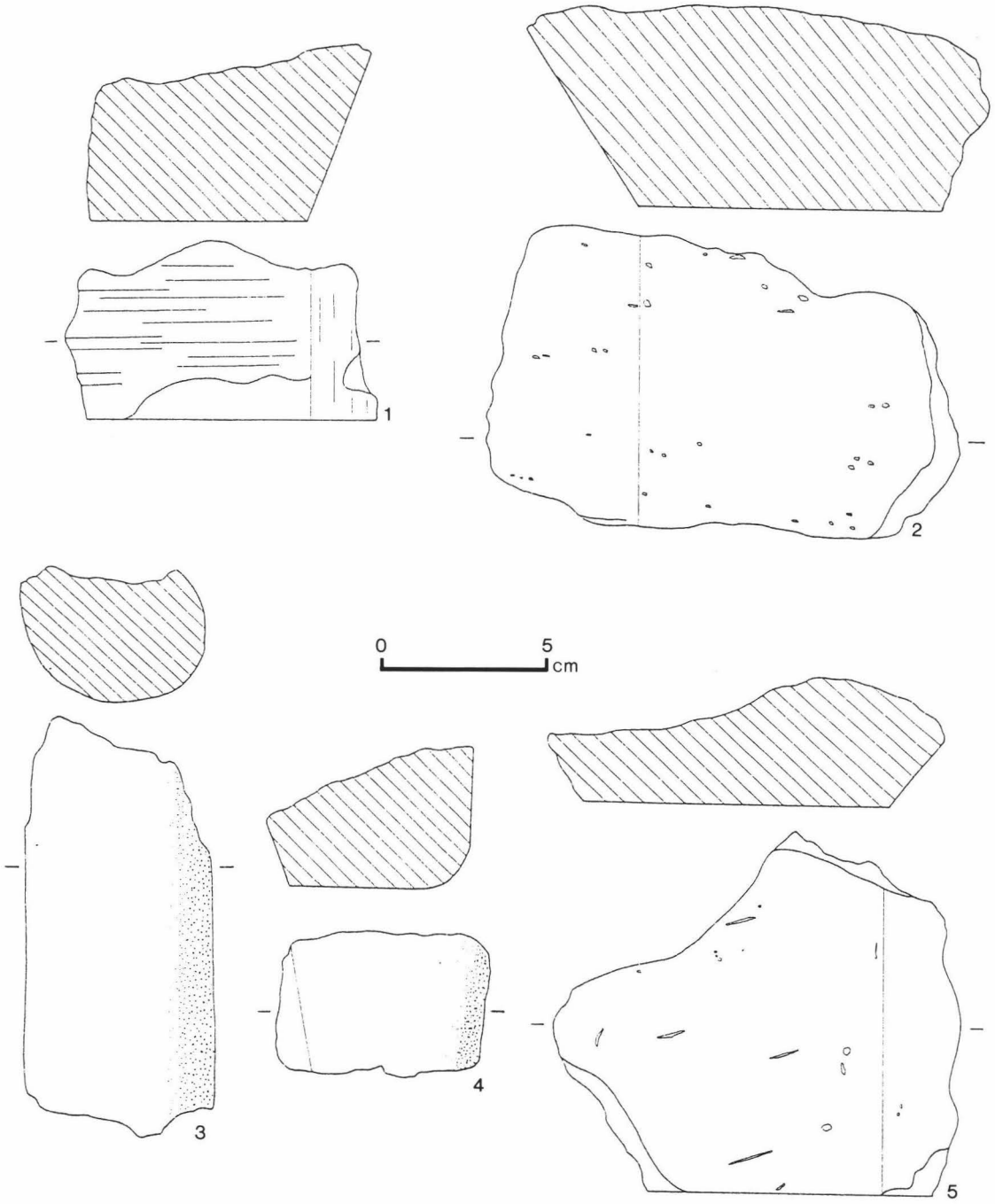

Fig. 19. Lewes Castle. Architectural fragments (1 and 2: Context B16; 3 and 4: Context B14; 5: Context B9).

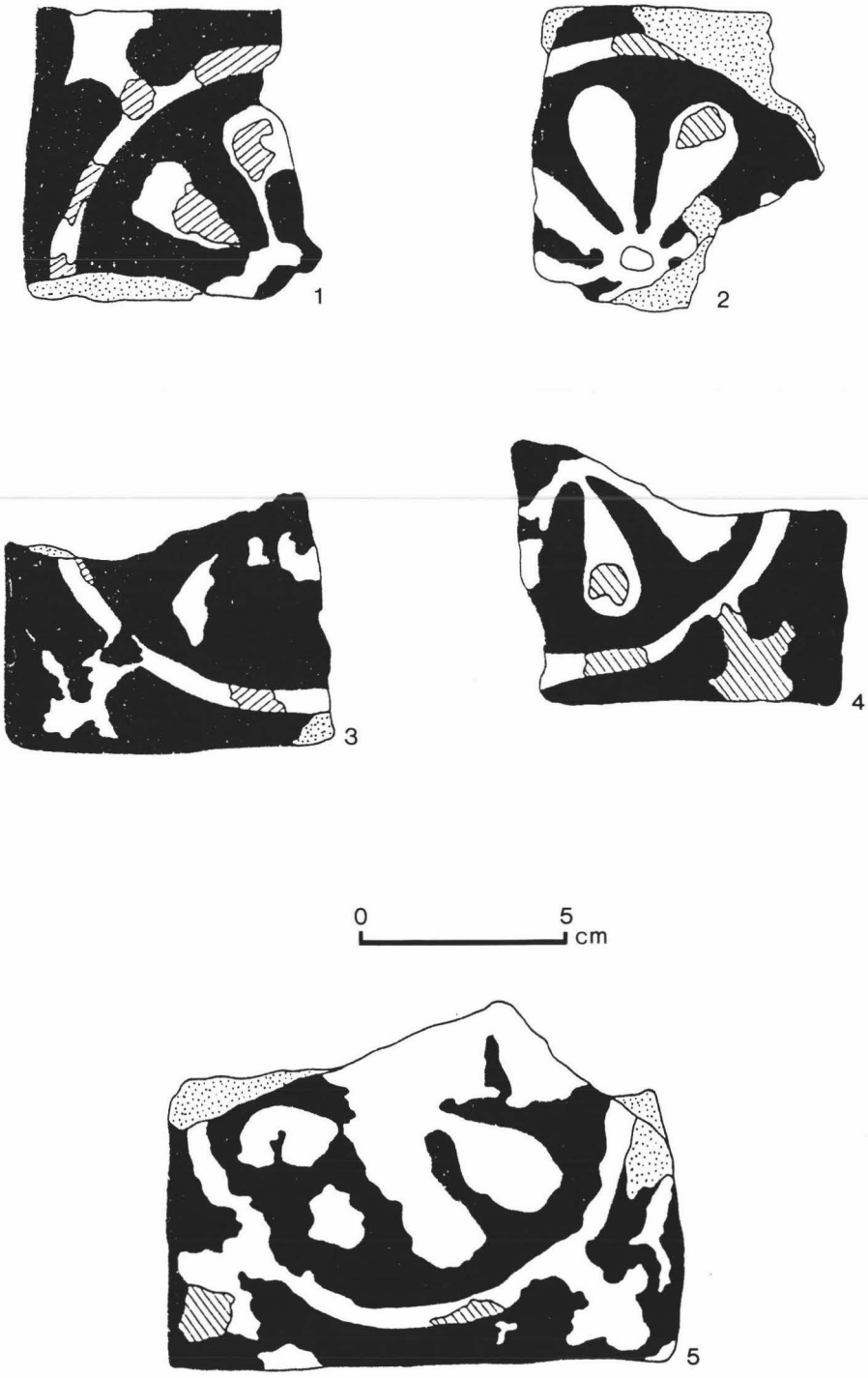

Fig. 20. Lewes Castle. Decorated floor tile. (1, 2 and 4: Context B14; 3: Context B2; and 5: Context B9).

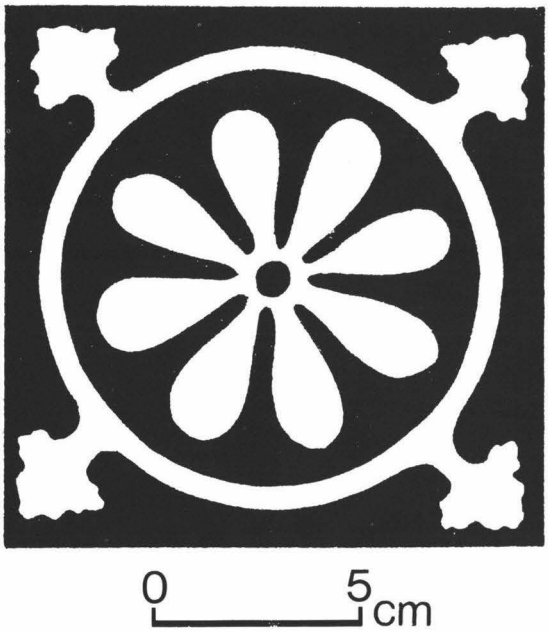

Fig. 21. Lewes Castle. Reconstructed floor tile.

produced either during a work process or from accidental fire. Most of the trimmings are from cast and beaten sheet rather than milled lead, and probably relate to the 18th-century building work at the castle. Many of the cames are twisted, but those from Contexts A3 and B9 are less contorted, and it is possible to determine that the glass quarries, in these cases, were about 800 mm. × 600 mm. with an acute angle at one end.

Iron Nails (Table archived)
Nearly 2,000 nails were collected from 79 contexts. They fell naturally in to five types which represented their function. Type 1 nails, with square or rectangular heads, and Type 2 nails with round heads, are general purpose nails. Type 3 nails, wedge-shaped with thickened heads, are for use where it is necessary to lose the head within the wood for safety or appearance, such as in flooring or joinery. Type 4 nails, short with large heads, are for holding materials securely, the size of the head giving extra purchase, or for decorative purposes. Type 5 nails, long with large heads, are also for general purpose work, but on a grander scale and for larger timbers. Types 1, 2 and 3 were, on average, 40 mm. long, Type 4 20 mm., and Type 5 60–80 mm. long. Nails which were obviously specialized or decorative have been listed individually with the structural metal.

The largest group of nails was Type 1, followed by Type 3. Over half the assemblage came from the Courtyard and the medieval demolition layers (380 and 999). Building 2 and Building 3 yielded only 32 and 48 respectively, but Building 1, the presumed kitchen, produced a surprising 147 nails, mainly Type 1 and 3. It was significant that Building 4, represented here by only two contexts, B8 and B14, produced 99 nails. The number of Type 5 nails (40), is almost a third of the total number in the assemblage, and there is only one other context, a medieval demolition layer, which has more nails of Type 4.

Another anomaly is the scarcity of the small wedge-shaped nails known as sprigs. These were used profusely in medieval buildings. Salzman (1952) quotes 25,000 purchased for Hadleigh Castle and more than 30,000 for Canterbury Cathedral in several successive years. Although Lewes Castle is not on the same scale as these, and the shell keep is one small portion of it, it is surprising to find only 60 sprigs in the assemblage. Thirty one of these are bent at right angles as if to hold glazing, or some other material, firmly against a rebate. The majority of them were from the medieval demolition areas.

Structural Ironwork
The structural ironwork, listed in the archive, was from disturbed medieval and later contexts. Much of it was in an advanced state of corrosion and difficult to identify. However, although little of it can be related with certainty to particular structures, it is a well-balanced collection suggesting general building activities, with studs, bands, fitments and hinge pivots indicating doors and windows, and walls represented by some of the larger hooks, staples and braces.

Roman Tile by David Rudling
Fragment from a 'flat' tile 30 mm. thick. In the absence of even one complete side, the other dimensions of the tile are unknown (the fragment measures 197 mm. × 137 mm.). The upper

surface of the tile bears two concentric finger-impressed semi-circular 'signature' marks. The sand-tempered fabric is very hard and highly fired, the surfaces are grey, and the core is dull red.

The discovery of this find of Roman date in Medieval demolition layers can probably be explained by *either* the medieval re-use of building materials recovered from the site of a local Romano-British building *or* as intrusive material relating to post-medieval times when the buildings on top of the motte were used as part of the museum store.

(g) *Non-Structural Metalwork* by Maureen Bennell

This has been grouped by period rather than by metal content. The medieval finds, which illuminate the personal life in the castle, have been sorted by decorative items, tools and household equipment, and horse or military accoutrements. The iron arrowheads have been discussed separately.

Most of the finds cannot be tied closely to a particular structure except for a blade from the kitchen and an eyelet plate and shoe fitment from Building 4. The courtyard yielded four pins, parts of two buckles, a tag end, and a small piece of chain mail. Old chain mail was sometimes used for polishing armour or scouring pots, and its position in the courtyard and the vicinity of the kitchen is apposite.

Spread over 12 contexts, mainly medieval and later demolition layers, is a group of 33 lengths of iron band with copper alloy rivets at one edge. Some are 10 mm. wide (total length 7 cms), the majority 13 mm. wide (total length 122 cms), and the rest 23 mm. wide (total length 24 cms). The 10 mm. and 13 mm. bands have rivets of 7 mm. diameter, whilst the 23 mm. bands have rivets of 9 mm. diameter. These are interpreted as part of one artefact, possibly a wooden bucket, with the bands becoming wider as they neared the rim.

The later finds of sewing equipment, penknives and stray buttons are mostly from the period of the Georgian pleasure gardens.

Catalogue of illustrated metalwork (Figs 22 and 23)

Medieval

1. Silvered copper alloy annular brooch. A common 13th–14th century style. Examples from Rye (*London Museum Medieval Catalogue*, 1954, A2450) and Bullock Down, Eastbourne (Drewett 1982).
   Context C2.
2. Silvered copper alloy square buckle with iron tongue.
   Context A3.
3. Small ogee fronted iron buckle, tongue missing.
   Context A14.
4. Copper alloy buckle with pronged front. Iron tongue and belt end. Context C2.
5. Iron 'spectacle' buckle.
   Context C24.
6. ?Pewter annular shoe buckle with iron tongue, similar to one from Hadleigh Castle (Drewett 1975).
   Context C2.
7. Gilded copper alloy D-shaped strap end buckle.
   Context C2.
8. Copper alloy pin with head of double twisted wire (cf. Hadleigh Castle).
   Context C7.
9. Copper alloy sword or dagger chape.
   Context C12.
10. Copper alloy band with two iron rivets and star decoration.
    ?Ferrule.
    Context B12.
11. Lead weight 150 gms.
    Context B19.
12. Iron key with kidney-shaped bow. 15th century (*London Museum Medieval Catalogue, 1954*).
    Context C4.
13. Square iron ?harness buckle.
    Context A30.
14. Copper alloy decorated leather ornament with copper alloy headed iron rivets.
    Context B19.

Iron Arrowheads

There were 48 socketed arrowheads from the excavation. 42 of these were Type 7 (*London Museum Medieval Catalogue* classification), and the other six were Type 1, Type 2, Type 8, Type 11, Type 13 and Type 16 (Fig. 23, 15–21).

The distribution was as follows:

Type 1:	Context B22
Type 2:	Context B16
Type 7:	Contexts A3, A11(7), A13, A14, A15, A17(2), A23(2), A24(9), A28(4), A29, A34(2), A35(3), B2, B8, B16(2), C6, C7, D15
Type 8:	D11
Type 11:	D7
Type 13:	A14
Type 16:	B24

Types 1 and 2 are bladed and shouldered forms. Examples of Type 2 have been found at

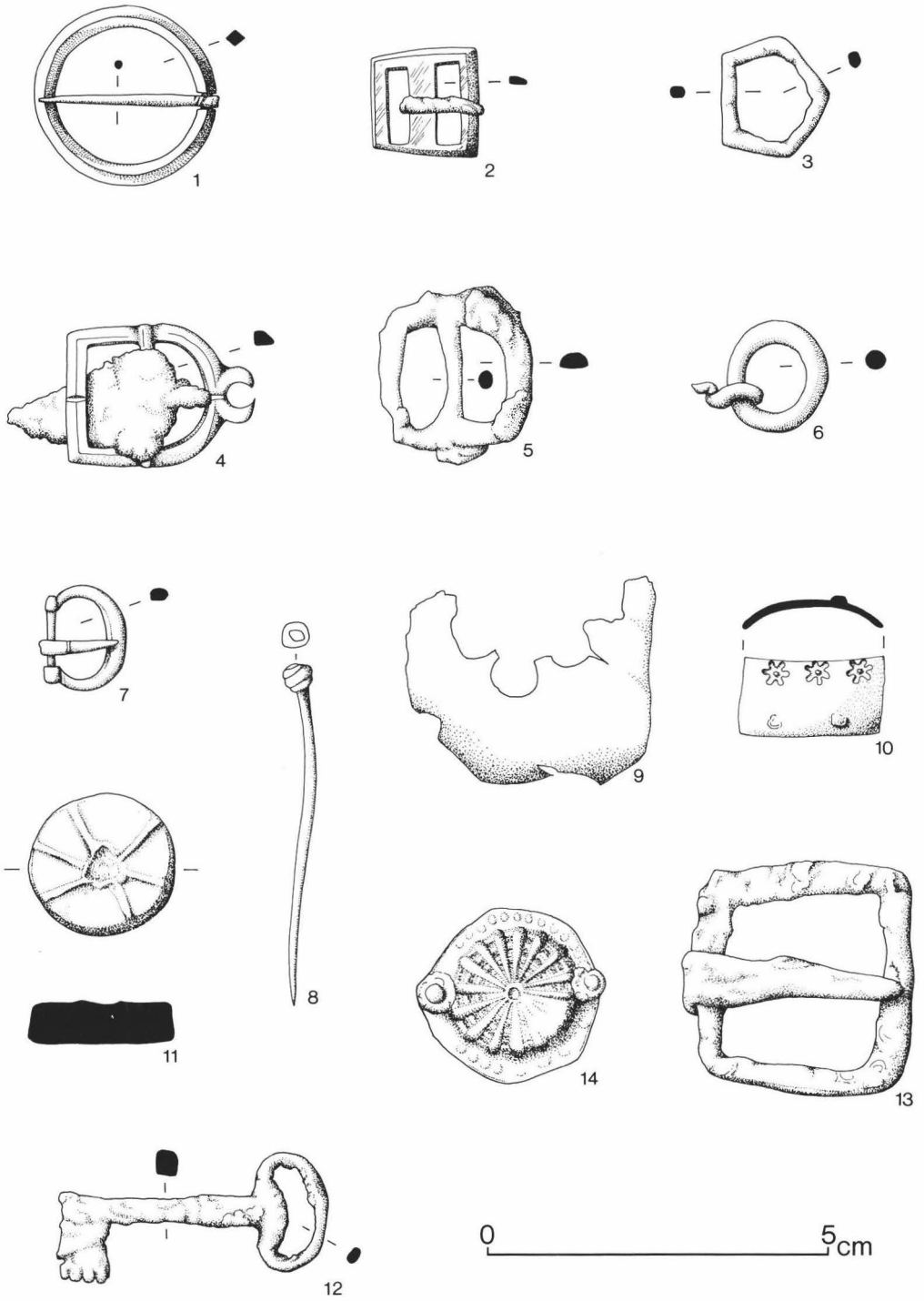

Fig. 22. Lewes Castle. Metalwork.

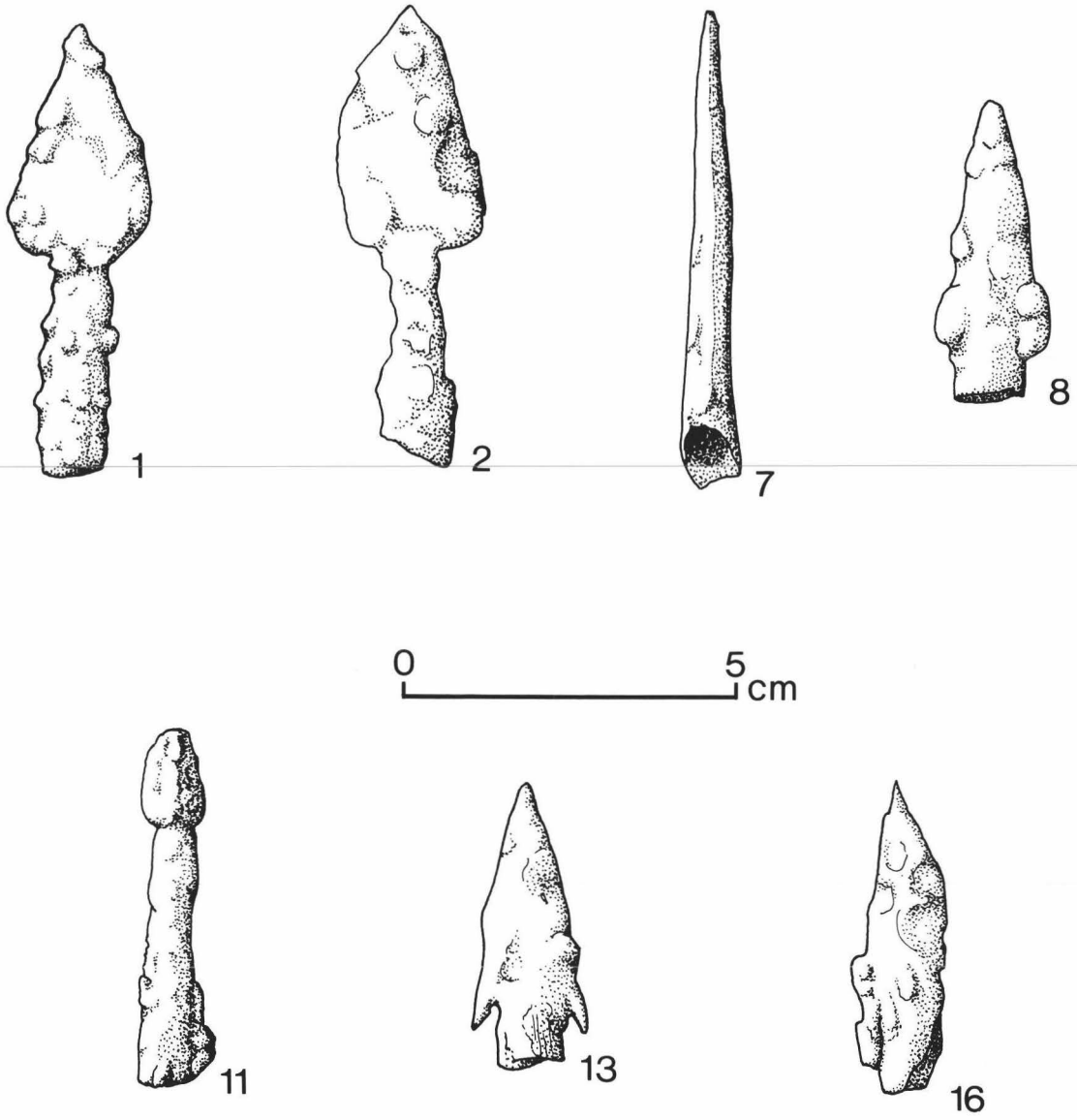

Fig. 23. Lewes Castle. Iron arrowheads.

the 12th-century Caesar's Camp, Folkestone (*Archaeologia* 1883), and a Type 1 arrowhead was found in a 12th-century context at Marlborough (*London Museum Medieval Catalogue*, 1954). Type 7 is a development from leaf or bullet-shaped arrowheads to counter the use of more defensive armour. They are slender enough to probe the cracks in armour, but sufficiently heavy and sharp to pierce leather or cloth. This transition appears to have taken place during the 13th century and on sites such as Rayleigh Castle, Essex (abandoned in 1270)

(*Trans. Essex Arch. Soc.* 1913) and Dyserth Castle, Flint (occupied 1241–63) (*Arch. Camb.* 1915), both the slender and the bladed forms are found. This is also the case at Lewes Castle. The form of the Lewes Castle Type 7 arrowhead, the bulk of the assemblage, is closest to one found in the Thames at Battersea (*London Museum Medieval Catalogue*, 1954, A9555).

Type 13 and Type 16 are 13th-century forms, one with short splayed barbs and the other with the barbs close to the shaft. The barbed arrowheads from A14 and B24 fall somewhere between these two forms. Barbed arrowheads are sometimes thought to be used only for hunting, which appears to be true from the 13th century onwards. During the 13th century they seem to have been used occasionally in battle, and at Dyserth and Rayleigh Castles, as at Lewes, they are a minor part of the assemblage.

Type 11 is a specialized later form from the 14th or 15th century and Type 8, from D11, is from the 14th century, still fairly slim but moving towards the style of Type 11.

Most of the arrowheads do not come from closely dateable contexts and could have been deposited at any time during the viable life-span of the form. It is interesting to speculate, however, whether some of these may have landed during the Battle of Lewes in 1264. Carpenter (1987), describing the end of the battle when King Henry and his son had taken refuge in the Priory but royalists still held the castle, says that Simon de Montfort attacked it with burning arrows and 'the garrison put up a vigorous defence'.

(h) *Slate Artefacts*

Three slate schoolroom pencils of 19th century date were found, one in each of Contexts C1, C2, and C7.

(i) *Clay Pipes*

Clay pipe fragments were found in 39 contexts (details archived). Most are of 18th–19th century date. Those with makers' marks are as follows:

1. Bowl fragment with worn initials, probably I.H. Possibly John Harman of Lewes, active in 1734.
   Context A3.
2. Bowl decorated with thistle on one face and flower with leaves on other. Oak leaves down joins. Illegible spur intials. 19th century.
   Context A11.
3. Bowl with I.H. Possibly John Harman.
   Context A24.
4. Long spur fragment with initials T.N. Thomas Neeve of Lewes, son of Richard and Ann Neeve, born 1775. Working 1802.
   Context B3.
5. Bowl with initials T.H. Possibly Thomas Harman, Lewes, 1697–1781(?) Four other bowl fragments with worn initials, all probably T.H.
   Context C2.

(j) *Slag* by Jon Wallis

Slag was collected from seven contexts. Slag from Contexts C25, D3, D11 and D20, totalling 185 gm., was produced by a low temperature process, whilst slag from B7 (250 gm.), B16 (75 gm.), and B19 (75 gm.) was produced by progressively advanced processes, at a high temperature which caused vitrification.

(k) *Animal Bones* by Rodney O'Shea

1. *Meat Bones*

The most striking feature of the larger mammal bones is their fragmentation. There are very few whole bones, and not very many which represent a substantial part of a bone. Throughout, the most common elements are distal humerus of sheep, and sheep vertebrae which are cut longitudinally, as though used in a mutton stew. Other than vertebrae there is no pattern of butchery marks and the cuts are usually rather small.

The degree of fragmentation of the bones meant that sheep and goat could not be differentiated, and that measurements were of little use. Similarly, evidence of disease and wear marks was not obtained. Just about every bone examined had root marks on it.

(a) *Contexts of the 18th Century and Later*

The identified bones from this set of modern contexts were 64 per cent sheep, 20 per cent pig, 11 per cent cow, 4 per cent deer and 1 per cent horse (N = 1033). All percentages in this report are to the nearest whole number, which means that they may add up to 99 or 101 rather than 100. The total number, N, of identified bones is also given as the percentages are based on number, not weight.

Each species except the horse had bones bearing butchery marks among the collection.

(b) *Medieval Demolition Layers*
This group of medieval contexts contained fragmented bones, often in poor condition. Of the identified bones (N = 777), 66 per cent are of sheep, 24 per cent of pig, 7 per cent of cow, and 4 per cent of deer. Butchery marks in the form mostly of small cuts were found on bones of each species, but on only about 5–10 per cent of each context.

Context C/19 also produced one burnt fragment of a large rib, probably of a cow.

(c) *Within Building (1) (Kitchen)*
Bones were produced only from two contexts (D27 and D30) of the eight in this area. The bones in D30 were even more fragmented than the rest of Lewes Castle bones. This context also contained bones of small mammals, birds and fish among the several hundred unidentified small fragments of larger mammal bones. All this is in keeping with a deposit of kitchen refuse, although only two bones had identifiable gnaw marks.

Overall the identified bones are 46 per cent sheep, 35 per cent pig, 8 per cent cow and 10 per cent deer (N = 970).

There are also four burnt fragments of deer metatarsus, and a burnt piece of unidentified long bone.

(d) *Within Building (2) (First Hall)*
These bones were 80 per cent sheep, 14 per cent pig, 4 per cent cow and 2 per cent deer (N = 49, so it should be remembered that 2 per cent of the bones means only one fragment).

A few of the sheep bones and one cow bone had butchery marks, so again there was no overall pattern. A right metacarpus of a sheep from Context A39 had evidence of proximal arthrosis. This was one of the few bones with any evidence of disease found at Lewes Castle.

(e) *Within Building (3) (Second Hall)*
The small number of identified bones from these contexts (N = 23) means that care must again be taken over percentages. There were 61 per cent sheep and 39 per cent pig, with other meat species unrepresented. Two of the five contexts in this group, C23 and C25, produced bones.

A few burnt bones were among the collection, including the epiphysis of a sheep metapodial bone, three probable sheep long bone fragments, and a fragment of small mammal bone.

(f) *Within Building (4) (Chapel)*
In this group of contexts 73 per cent of the identified bones were from sheep, 21 per cent from pig, 4 per cent from cow and 2 per cent from horse. There were some butchery marks, with a piece of sheep pelvis from Context B7 having seven clear cuts on it. A very few bones had evidence of gnawing.

(g) *Courtyard*
More than half of the Courtyard contexts produced bones. Of the total of 414 identified bones, 51 per cent were from sheep, 35 per cent from pig, 8 per cent from deer and 7 per cent from cow. There was also one horse bone. Many of the bones were in poor condition, but those from Context C29 were in better condition than other contexts, and a higher proportion of them were whole or nearly whole.

(h) *Shallow Pit in Building 1*
Context D33 yielded 28 unidentified fragments weighing 40 gms. and a worn pig molar.

General

Very generally, Lewes Castle contexts produced about two thirds sheep bones, and a quarter pig bones with the remainder divided between cow and deer, the former being more numerous. These proportions hold more or less good for the 18th century and later contexts, the medieval demolition layers and buildings (3) and (4).

The kitchen (Building 1) and the courtyard yielded more nearly even quantities of pig and sheep bones; approximately in the ratio 5 sheep:3 pig.

Building 2 had six times as many sheep bones as pig (no statistical significance tests were undertaken). It must be borne in mind that some groups of contexts did not yield enough bones to make the percentages very meaningful. As would be expected on or around the South Downs, sheep predominated in all areas.

2. *Small Mammals*

(a) *18th Century and Later*
Rabbit, dog and cat, and possibly vole and a mustellid.
(b) *Medieval Demolition Layers*
Rabbit, cat and rat, and possibly vole and mouse.
(c) *Within Building 1 (Kitchen)*
Rabbit, cat and dog.
(d) *Within Building 2 (First Hall)*
Rabbit.
(e) *Within Building 3 (Second Hall)*
Rabbit.
(f) *Within Building 4 (Chapel)*
Rabbit.
(g) *Courtyard*
Rabbit, cat, and possibly mustellid.

Rabbit bones were easily the most common type found. As with bird bones, there was a rough correlation between the number of contexts in a group and the number of species represented by bones.

3. *Bird Bones*

(a) *18th Century and Later*
Chicken, goose, pigeon and crow, and possibly duck.
(b) *Medieval Demolition Layers*
Chicken, goose, pigeon and crow.

(c) *Within Building 1 (Kitchen)*
Chicken.
(d) *Within Building 2 (First Hall)*
Chicken.
(f) *Within Building 4 (Chapel)*
Chicken and pigeon.
(g) *Courtyard*
Chicken, goose and duck, pigeon and crow.
(h) *Other Discrete Contexts*
Context D33: chicken.

4. *Fish Bones*

Nearly all the fish bones from the Lewes Castle excavations were vertebrae. This may be due to the methods of collecting bones, or might be because the fish were dried or smoked before being taken up to the castle. Trench A yielded five fish bones, B yielded eleven, C 96 and D 143 bones.

The identified vertebrae belonged to three families of fish: Gadidae (cod and its relatives); Salmonidae (salmon and trout), and Cyprinidae (carp and bream). This was the closest identification possible. Gadids would have been caught at sea; salmonids perhaps by estuarine netting, and cyprinids from fresh water such as rivers (bream) or fish ponds (carp).

(a) *18th Century and Later*
Gadids and cyprinid bones were found. A large piece of crab claw was also yielded, and although not a fish, is included here.
(b) *Medieval Demolition Layers*
Vertebrae from all three families (gadids, salmonids and cyprinids) were found from these layers.
(c) *Within Building 1 (Kitchen)*
Bones from all three identified fish families were found.
(e) *Within Building 3 (Second Hall)*
Only gadid bones were identified. A large number of small unidentified fish bones were also found.
(g) *Courtyard*
Vertebrae from the three families were found.
(h) *Other Discrete Contexts*
Context D33: Only gadid bones occurred.

(l) *Human Bones* by Rodney O'Shea
(a) *18th Century and Later*
Context C2 produced a piece of human femur shaft, and a piece of cranium.

(m) *Marine Molluscs* by Caroline Cartwright

Sixty-two contexts at Lewes Castle produced a minimum number of individuals (M.N.I.) total of 990 marine molluscs. Table 4 (in microfiche) has details of the molluscan species, sub-divided according to seven main chronological groupings. Most specimens were recovered through trowelling, but in some of the domestic contexts the mussel fragments were extremely friable, and wet sieving provided a more secure method of excavation.

Twenty four contexts of 18th century and later date produced 248 (M.N.I.) molluscs. The bulk is provided by oysters (*Ostrea edulis*) with 222 M.N.I. representing 89.52 per cent of the total. Mussel (*Mytilus edulis*) follows in frequency with 14 M.N.I. (5.6 per cent). Scallop (*Pecten maximus*) at 1.61 per cent, cockle (*Cerastoderma edule*) and whelk (*Buccinium undatum*) at 1.21 per cent each, and limpet (*Patella vulgata*) at 0.81 per cent make up the rest of the sample. One may assume that the oysters, being readily available and inexpensive, would have been an obvious major part of the marine dietary resources.

Fifteen contexts in the medieval demolition layer grouping produced 328 (M.N.I.) marine molluscs, of which oyster represents 303 (M.N.I.), i.e. 92.38 per cent of the total. Mussel at 6.1 per cent, whelk at 0.92 per cent and cockle and scallop at 0.3 per cent each make up the remainder. Once again the reliance on cheap, plentiful oysters is evident. In both the medieval demolition layers and in 18th-century and later contexts, some of the oyster upper and lower valves have pierced holes. There is some doubt whether these perforations may be reliably interpreted as peg-holes for temporary roof repairs, and alternative interpretations remain open.

One context in Building 1 (kitchen) contained a total of 41 M.N.I. of which 37 M.N.I. are oysters (90.24 per cent) and 4.88 per cent each are mussels and whelks.

Four contexts in Building 2 (first hall) yielded 47 M.N.I.—all oysters. Four contexts in Building 3 (second hall) contained 42 M.N.I. of which 38 M.N.I. are oysters (90.48 per cent), 7.14 per cent mussels and 2.38 per cent cockles. Four contexts in Building 4 (chapel) contained 391 M.N.I. marine molluscs. Oysters total 64.1 per cent, mussels 30.77 per cent, cockles and limpets 2.56 per cent each.

Ten courtyard contexts comprised 245 M.N.I. marine molluscs, of which 211 M.N.I. are oysters (86.12 per cent). Mussels form 8.57 per cent, whelks 3.27 per cent, cockles 1.22 per cent, periwinkles (*Littorina littorea*) and limpets, each 0.41 per cent.

Combined totals again reveal a predominance of oysters with 883 out of 990 M.N.I. marine molluscs. This represents 89.19 per cent of the total, and mussels with 72 M.N.I. (7.27 per cent) came a poor second. Whelks, cockles, scallops, limpets and one periwinkle, collectively only acount for 3.54 per cent.

When evaluating possible source areas we may define the types of habitat involved: the oysters utilized at Lewes Castle may derive from marine and estuarine locations. The native oyster favours comparatively firm, muddy, sandy or gravelly substrates, and frequently lives offshore from low water mark down to about 82 metres. From Lewes the nearest source, besides that of the River Ouse, is the estuary of the River Cuckmere at Cuckmere Haven near Seaford. Offshore from the Seven Sisters, there may have been oyster beds during the medieval period. At the present day, although dead shells are washed up on the beaches, there are no large-scale oyster colonies surviving. It is also possible that trade in marine commodities (during the medieval period and later) from larger ports such as Seaford and Winchelsea, would also include oysters as well as, for example, fish and other shellfish. Minimum length measurements for the Lewes Castle specimens are between 3.2 and 3.5 cms. and maximum lengths attain 10.5 cm.

The mussels from Lewes Castle are generally in fairly friable condition and are small in size, individually. Most measure less than 5 cm. in length. Mussels favour locations high in the intertidal zone down to depths of about 4 metres. They may form dense colonies where sufficient food sources and suitable attachment surfaces are present. Although there may be large populations at a high tidal level, if it is too high, the food supply will not be constant enough for individuals to attain a large size. The shoreline at the base of the Seven Sisters chalk cliffs, which extends from Rottingdean to Eastbourne, sustains a variable series of populations. During the last two years, for example, a sizeable mussel population has developed on the wave-cut platform of eroded chalk blocks and tabular flint below the Beachy Head cliffs near Eastbourne. At this location, for the ten years prior, only small groups of mussels occurred sporadically. Presumably the food supply of organic debris has become more constantly available in recent years. Of course the relative proportions of oysters and mussels excavated need not reflect relative quantities offered in molluscan populations locally—factors relating to cost, trade and supply may well account for the figures.

Common edible cockles may be found on clean or muddy sand and gravel, burrowing to depths of up to 5 cm. in banks and estuaries. Where abundant, cockles may form dense 'platforms' just below the surface of the sand. Sandy beaches are not the norm in the Seven Sisters area. Here, beach material consists principally of flint nodules eroded from the chalk cliffs and battered by the waves into rounded pebbles. Also on these beaches are shingle pebbles transported through longshore drift from more westerly locations, being moved eastwards. However, on such beaches where large variations of tidal range occur in high-energy environments, areas of sand may be present between mid and low water mark. Thus estuarine margins (for example at Cuckmere Haven) may provide more suitable locations for a more permanent population. No cockle populations are apparent in the Birling Gap area at present, although dead shells are found on the shorelines.

Scallops favour locations offshore from low water mark down to about 110 metres. Individual shells live in small recesses in clean firm sand in gravel. Present-day fishermen record retrieving scallops in small numbers in deep waters off Beachy Head. The medieval and later scallops present at Lewes Castle could have been the result of trade with the Winchelsea and Rye communities.

Limpets, periwinkles (and the occasional whelk) favour the eroded chalk blocks and tabular flint of the wave-cut platform inter-tidal zone. Populations are slowly decreasing at the present time (1989) on the Seven Sisters shoreline, but these species have been

consistently represented in the archaeological record of the Bullock Down sequence of sites (see Cartwright in Drewett, 1982). Numbers at Lewes Castle are low, presumably as a direct result of the constant supply of cheap oysters in the marketing network.

(n) *Charcoal* by Caroline Cartwright

A total of 2,387 gm. of charcoal was recovered from 65 contexts at Lewes Castle. Table 5 (in microfiche) has details of the charcoal according to seven main chronological groupings. The charcoal fragments were recovered through trowelling and flotation methods (for the domestic contexts).

Twenty-six contexts, belonging to the 18th century and later, produced 809 gm. of charcoal. Of these contexts, C/2 and C/10 produced the highest quantity—230 gm. and 221 gm. respectively. The highest proportion belongs to oak (*Quercus* sp.) with 352 gm. (43.51 per cent), followed by sweet chestnut (*Castanea sativa*) with 130 gm. (17.07 per cent) and hazel (*Corylus* sp.) with 119 gm. (14.71 per cent). Beech (*Fagus* sp.), willow/poplar (*Salix/Populus*), ash, (*Fraxinus* sp.), birch (*Betula* sp.), alder (*Alnus sp.), honeysuckle (Lonicera* sp.) and box (*Buxus* sp.) comprise the balance, ranging from 8.16 per cent to 0.37 per cent of the total.

The interpretation of charcoal from these contexts is somewhat constrained by the fact that many of the archaeological horizons have been disturbed. The carbonized material contained within them may therefore derive from a wide variety of sources. The timber represented may also be traced to a variety of habitats. The oak, ash, beech, honeysuckle, hazel, sweet chestnut component may be found in valley or woodland stands. These may be found in gardens also, either singly or in groups associated with one another. The alder and willow/poplar charcoal suggests a riverside source. Birch may be found as a coloniser on open ground or planted in gardens. Box seems almost certain to have been planted in the gardens, as does honeysuckle.

Seventeen contexts from the groupings of medieval demolition layers contained 669 gm. of charcoal with C/12 and C/15 yielding the highest quantities. Oak again predominates with 320 gm. (47.83 per cent of the total), followed by hazel with 139 gm. (20.77 per cent). Sweet chestnut, beech, birch, willow/poplar, ash and alder make up the balance. There may again be domestic and garden material represented here, although oak, beech, sweet chestnut and ash are very suitable for building timbers.

One context in Building 1 (kitchen) contained 92 gm. of charcoal, mostly oak and sweet chestnut (44.57 per cent and 30.43 per cent) with some beech (25 per cent). From the context location we may expect hearth and fuel material to be present.

Five contexts in Building 2 (first hall) contained 44 gm. of oak charcoal—possibly from constructional timbers. Two contexts in Building 3 (second hall) contained 217 gm. of charcoal, mostly oak (60.37 per cent), with some sweet chestnut (24.42 per cent), hazel (10.6 per cent) and willow/poplar (4.61 per cent)—again, presumably mostly from building timber.

Five contexts from Building 4 (chapel) contained 147 gm. of charcoal of which 82.31 per cent is oak, 15.65 per cent beech and 2.05 per cent honeysuckle. Building timber seems the most likely source, although an input from adjacent garden trees and shrubs may also be present. Nine contexts from the courtyard yielded 409 gm. charcoal with oak predominating at 40.1 per cent, followed by sweet chestnut at 29.58 per cent. Beech, ash, birch and willow/poplar are also present. Both garden shrubs and building timbers are possible sources.

When all charcoal totals for the seven groupings are combined, out of the overall quantity of 2,387 gm. the dominant timber is oak with 49.14 per cent. Sweet chestnut follows with 10.01 per cent, hazel 11.77 per cent and beech 9.47 per cent. Willow/poplar, birch, ash, alder, honeysuckle and box make up the balance of charcoal present. Sources and interpretation for these timbers have already been discussed (above) in the individual period groupings. As the chronological time span is broad there seems little advantage in interpreting the charcoal as a unified assemblage.

CONCLUSIONS: THE ORIGINS AND DEVELOPMENT OF THE CASTLE

Lewes was mentioned in the 10th century *Burghal Hideage* as one of the four Saxon *burghs* or fortified places in Sussex (Drewett, Rudling and Gardiner 1988). The exact extent of the burgh on the ground remains uncertain, but the first castle was almost certainly situated within it. The construction of the castle formed part of the establishment of the Norman Lord's power bases following the break up of Sussex's Saxon estates (Brandon and Short 1990). Sussex came under Norman rule as part of Duke William of Normandy's army travelled westward below the South Downs to join his main force marching south from London to Winchester. It is possible that the Sussex arm of the Norman force rapidly built a series of motte-and-bailey castles at key points along their route, perhaps at Hastings, Lewes, Bramber, Arundel and Chichester (Freke *in* Drewett, 1978). These castles became the 'defended residences of a Lord' (Clarke 1984) and as such can be seen as representing seigneurial consolidation, of feudalism. However, the first rapidly constructed mottes may be seen as having essentially a military rather than feudal role. If so, it is likely, although by no means proven, that Brack Mount represents the early Norman military motte. It is carefully sited on the end of a chalk spur to provide maximum height with minimum effort. Viewed from the north it appears to be a massive mound. It is, however, not as large as it appears. The lower two thirds or so of the mound consist of a natural spur, with the mound created by truncating the spur to the south. Brack Mount has excellent views inland up the River Ouse, emphasising its role in a primary conquest situation (Fig. 24). It is uncertain what type of structure(s) originally topped the Mount, but excavations at Abinger, Surrey, suggest one possibility (Brandon and Short, 1990, 47; Hope-Taylor, 1950). At Abinger a timber palisade encircled the top of the motte, enclosing a square watch tower.

The later development of Lewes Castle can only be presented in sketchy outline. Castles are by their nature extremely complex structures, and their surviving earthworks deceptively simple (Saunders 1977). With virtually no documentary evidence and very limited archaeology we can at present suggest only a deceptively simple development of the castle. Clearly there were major periods of redevelopment, but repair, consolidation and modification were continuous processes from the 11th century to the late 14th century.

If Brack Mount was an early Norman 'military' castle, then soon the castle was modified to become a fit residence for the new feudal lord, William de Warenne. It is likely that during the 11th century the much larger south-western motte was constructed. If so, the shell keep, which now partly encircles its top, may have been built up from ground level at the same time as the mound. Such a structurally sound method was used at Farnham Castle (Thompson 1960). It is likely that at the same time Brack Mount was given a masonry shell keep. The reason that this shell keep has now completely collapsed may be due to the possibility that it was added onto an existing motte, a far less structurally sound process. The two mottes would certainly have been connected in some way to create a bailey area between them. A gatehouse, partly surviving, on the southern side of the bailey was constructed of masonry, suggesting a masonry curtain wall, at least on the southern side of the bailey. The northern curtain wall may have been constructed of masonry or timber, by about 1100 A.D. (Fig. 24).

Within the new bailey area a range of domestic buildings would have been constructed; a hall, chapel, kitchens, and the like. None of these has yet been located. However, by the 12th century such buildings were also constructed within the shell keep on the south-western motte. This would have served the same function as the newly-constructed rectangular stone keeps being built elsewhere in the country. These were totally defensive structures, built to withstand a siege (Clarke 1984). The first structures built on the motte were a great hall and a kitchen block (Fig. 4).

Developments in military thinking during the late 12th and early 13th centuries led to a total reconsideration of castle design. The single stronghold keep was considered vulnerable. Projecting angle towers from a curtain wall enabled protective crossfire. New castles built in

LEWES CASTLE

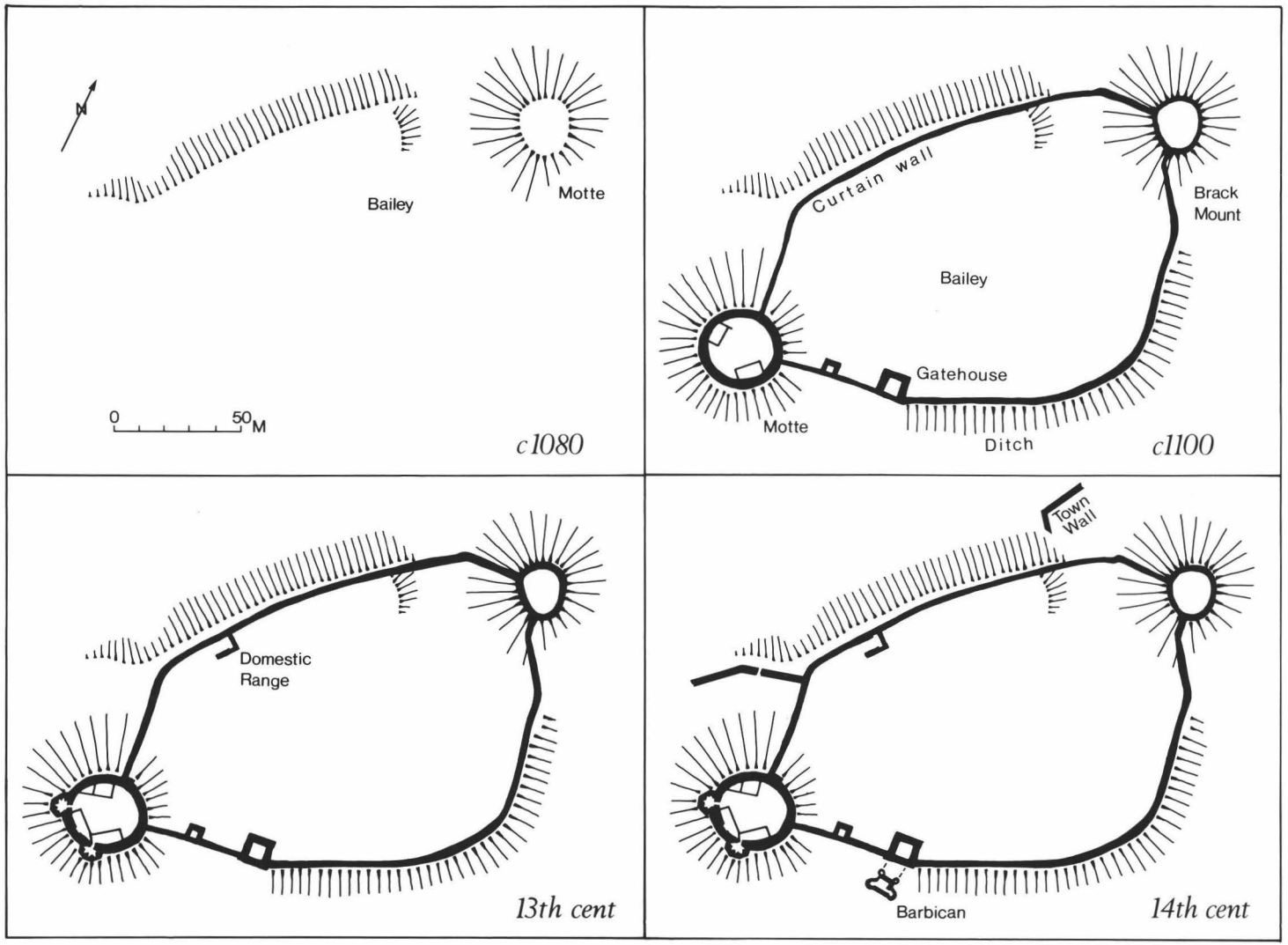

Fig. 24. Lewes Castle. Development of the Castle's fortifications.

the first half of the 13th century were simply an enclosure with angle towers but no keep, as at Bolingbroke Castle, Lincolnshire (Drewett 1976, Fig. 1). Old castles were frequently modernised. This certainly happened at Lewes Castle with great cuttings made through the Norman shell keep wall on the south-western motte, and polygonal angle towers inserted (Figs 24 and 3). This development required modification of the domestic buildings on the motte. A new hall was built attached, as was now the fashion, to the formerly free-standing kitchen. A new range, perhaps a chapel, was constructed against the northern side of the shell keep.

By the late 13th to early 14th centuries, the purpose of English castles was changing. Fourteenth- and 15th-century castles were essentially demonstrations of success, wealth and power, rather than military installations. New castles, like Bodiam and Herstmonceux in Sussex and Scotney in Kent (Drewett 1987) were prestige living places, not really designed to withstand direct attack. To update Lewes, a fancy barbican gatehouse was added onto the earlier, solid Norman gatehouse (Fig. 24). Thin walled, it was built more for show than defence. By 1382, however, the castle was falling into disrepair and had begun its gradual decline into the ruin we see today.

Contents of Microfiche

Lewes Castle Pottery (p. 45 to 47)
Lewes Castle Marine Molluscs (p. 48 to 50)
Charcoal from Lewes Castle (p. 51 to 55)

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References

Allen, J. 1983 'The Importation of Pottery to Southern England, *c.* 1200–1500'. *In* P. Davey and R. Hodges (eds) *Ceramics and Trade: The Production and Distribution of Later Medieval Pottery in North-West Europe*, 193–207. Sheffield.

Archaeologia XLVII, 1883, Pl. 18, I.

Archaeologia Cambrensis 15, 1915.

Barton, K. J. 1965 'Medieval Pottery at Rouen', *Arch. Jnl.* **122**, 73–85.

Barton, K. J. 1979 *Medieval Sussex Pottery*. Chichester.

Beswick, M. (forthcoming) *The History of Brickmaking in Sussex*.

Bleach, J. 1982 'The Medieval Potters of Ringmer', *Ringmer Hist.* 1, 43–54.

Brandon, P. and Short, B. 1990 *The South East from A.D. 1000*. Longman.

Carpenter, D. 1987 *The Battles of Lewes and Evesham 1264/5*. Mercia Publications, University of Keele, Staffordshire.

Clarke, S. 1886 'Some Supplementary Notes on the Castle of Lewes'. *Suss. Arch. Coll.* **34**, 69–70.

Clarke, H. 1984 *The Archaeology of Medieval England*. Colonnade Books.

Clay, C. T. (ed.) 1949 'The Honour of Warenne', *Early Yorkshire Charters* 8, Yorks. Arch. Soc. Record Series, Extra Series 6.

Coad, J. G. and Streeten, A. D. F. 1982 'Excavations at Castle Acre Castle, Norfolk 1972–77'. Arch. Jnl. **139**, 138–301.
Coates, R. 1990 *Some Place Names of the Downland Fringe.* Younsmere Press; 12–26.
Drewett, P. L. 1975 'Excavations at Hadleigh Castle, Essex, 1971–72', *Jnl. B. Arch. Ass.* XXXVIII. 90–154
Drewett, P. L. 1976 'The Excavations of the Great Hall at Bolingbroke Castle, Lincolnshire, 1973'. *Post-Medieval Arch.* 10, 1–33.
Drewett, P. L. (ed.) 1978 *Archaeology In Sussex to A.D. 1500.* C.B.A. Research Report No. 29.
Drewett, P. L. 1982 *The Archaeology of Bullock Down, Eastbourne, East Sussex: The Development of a Landscape.* Sussex Archaeological Society Monograph 1, Lewes.
Drewett, P. L. 1987 *Scotney Castle, Kent. An Archaeological Survey of the Castle and its Environs.* Typescript report held by the National Trust, Cirencester.
Drewett, P. L., Rudling, D. and Gardiner, M. 1988 *The South East to A.D. 1000.* Longman.
Dunning, G. C. 1961 'Medieval Chimney Pots'. *In* E. M. Jope (ed.) *Studies in Building History*, 78–93.
Eames, E. 1980. *Catalogue of Medieval and Lead-Glazed Earthenware Tiles in the Department of Medieval and Later Antiquities.* British Museum.
Freke, D. J. 1976 'Further Excavations in Lewes, 1975', *Suss. Arch. Coll.* **114**, 176–93.
Freke, D. J. 1977 'The Origins of Sussex Towns', *Bulletin of the Inst. of Arch. (London).* **14**, 23–25.
Freke, D. J. 1978 'Excavations in Church Street, Seaford, 1976'. *Suss. Arch. Coll.* **116**, 199–224.
Godfrey, W. H. 1949 *Lewes Castle.* Sussex Archaeological Society, Lewes.
Hadfield, J. I. 1981 'The Excavation of a Medieval Kiln at Barnett's Mead, Ringmer, East Sussex', *Suss. Arch. Coll.* **119**, 89–106.
Holden, E. W. 1965 'Slate Roofing in Medieval Sussex', *Suss. Arch. Coll.* **103**, 67–78.
Holling, F. W. 1977 'Reflections on Tudor Green', *Post-Medieval Arch.* **11**, 61–66.
Hope-Taylor, B. 1950 'The Excavation of a Motte at Abinger, Surrey'. *Arch. Jnl.* **107**, 15–43.
Hunter, R. 1979 'St. Neots-Type Ware'. In J. H. Williams, *St. Peter's Street, Northampton, Excavations 1973–1976*, 230–40. Northampton.
Hurst, J. G. 1980 'Medieval Pottery Imports in Sussex', *Suss. Arch. Coll.* **118**, 119–24.
London Museum Catalogue 1954, 65–73. H.M.S.O.
Manwaring Baines, J. 1980a *Sussex Pottery.* Brighton.
Manwaring Baines, J. 1980b 'Eighteenth and Nineteenth Century Sussex Ware', *Suss. Arch. Coll.* **118**, 125–8.
Martin, D. and Martin B. 1977–80 *Historic Buildings in Eastern Sussex* Vol. I. R.O.H.A.S.
Milligan, B. 1982 'Pottery', in J. G. Coad and A. D. F. Streeten, 'Excavations at Castle Acre Castle, Norfolk, 1972–77; Country House and Castle of the Norman Earls of Surrey'. *Arch. Jnl.* **139**, 199–227.
Moorhouse, S. 1979 'Tudor Green: Some Further Thoughts', *Medieval Ceramics* **3**, 53–61.
Moorhouse, S. 1983 'Documentary Evidence and its Potential for Understanding the Inland Movement of Medieval Pottery', *Medieval Ceramics* **7**, 45–87.
North, J. J. 1975 *English Hammered Coinage* Vol. II. London.
Orton, C. (forthcoming). 'The Pottery', in D. R. Rudling, 'Excavations at Winchelsea'.
Pearce, J. E. , Vince, A. G. and Jenner, M. A. 1985 *A Dated Type-Series of London Medieval Pottery Part. 2: London Type Ware.* (London and Middx. Arch Soc. Special Paper 6).
Pearce, J. E. and Vince, A. G. 1988 *A Dated Type-Series of London Medieval Pottery, Part 4: Surrey Whitewares.* London.
Peck, C. W. 1960 *English Copper, Tin and Bronze Coins in the British Museum 1558–1958.* London.
Raby, F. and Baillie Reynolds, P. K. 1936 *Castle Acre Priory.* London: H.M.S.O.
Rudling, D. R. 1983 'The Archaeology of Lewes: Some Recent Research', *Suss. Arch. Coll.* **121**, 45–77.
Salzman, L. F. 1934 *The Chartulary of the Priory of St. Pancras of Lewes.* Sussex Record Society, 30 and 40.
Salzman, L. F. 1952 *Buildings in England down to 1540*, 304 and 313. Oxford.
Saunders, A. D. 1977 'Five Castle Excavations: Introduction'. *Arch. Jnl.* **134**, 1–10.
Streeten, A. D. F. 1985 'The Pottery' in J. N. Hare *Battle Abbey; The Eastern Range, and the Excavations 1978–80.* (H.B.M.C. Arch. Rep. 2), 103–126.
Sutton-Goold, P.M. 1990 *Decorative Leadwork.*
Talvio, T. 1978 Coin Imitations as Jewellery in 11th Century Finland. *Finskt Museum 1978*, 26–38.
Thompson, M. W. 1960 'Recent Excavations in the Keep of Farnham Castle, Surrey'. *Med. Arch.* **4**, 81–94.
Thompson, M. W. 1971 *Conisborough Castle.* London: H.M.S.O.
Transactions of the Essex Archaeological Society n.s. XII, 1913.
Williamson, G. C. 1967 *Trade Tokens Issued in the Seventeenth Century* Vol. III. London (reprint).

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'UXOR MEA': THE FIRST WIFE OF THE FIRST WILLIAM OF WARENNE

by Freda Anderson

Gundrada, the wife referred to in the title, is one of those historical characters, whose death conferred on them an importance they did not have in life. Romanticism turned her into a princess who set out with her husband across the snowy Alps towards the shrine of the Apostle Peter in Rome. She was certainly no royal figure and probably no pilgrim either. Her real identity and its significance are discussed in this paper.

But it was her untimely death, burial and re-burial that set in train a series of remarkable events that gave her a place of permanent importance in the art of medieval Europe. These events are unravelled and analysed. The story is brought up to date, but 1992 is not the end of the journey, merely a resting-place on the way.

References will be made throughout to details that will be found in the Appendix. These include the Warenne tombslab and inscription, plus the Gundrada tombslab, its inscription and decoration; the latter is assisted by a scale diagram. Figs 4 to 12 must be studied in relation to this diagram.

HER IDENTITY

The social importance of Gundrada the first wife of William of Warenne I, has suffered a spectacular decline since the heady days when she was believed to be the daughter of King William I or of his wife Matilda by an earlier husband. This romantic genealogy has long since been discredited. Modern historians present an unprecedently united front in rejecting both possibilities.[1] Nor was she even a Countess; her husband was not made Earl of Surrey in her lifetime.[2] In the foundation charter of Lewes Priory she is merely 'uxor mea' and she signs herself 'Gundrede uxoris W[illelmi] de Warenna'.[3] Yet her husband showed some recognition, at least, of her independent personality when he made her co-donor to Cluny of the church of St Pancras, Lewes, that was to be the foundation of the Priory; he could, after all, have done this on his own. She bore him three children, William of Warenne II, Reginald or Rainald and Edith; there might have been a fourth, as she is thought to have died in childbirth at Castle Acre in 1085. The widower then re-married a sister of Richard Guet, a landowner in Essex; there were no more children.

Warenne was one of those young Norman knights who attached themselves to Duke William of Normandy in the latter's difficult minority years. He fought at Hastings and was rewarded with the grant of extensive holdings in England, including the Rape of Lewes. He was unlikely to have married a woman without lands and titles to bestow. Gundrada had both. She was Flemish, sister to Gerbodon, who was Earl of Chester in 1070 and to Frederick, a tenant-in-chief in East Anglia about the same time. Clearly, they were both members of the Flemish contingent who came with the Conqueror and were rewarded in the same way as Warenne. The flight of Tostig to Flanders from England in 1065 and his assumption of the military governorship of St Bertin may have left these Gerbodon with time on their hands.[4] Indeed the common participation of both families in the events of 1066 provides a putative date for the marriage, which was likely to have been post-1067 and part of the process of consolidation of new families in the new kingdom. Gundrada's family was noble, lords of Oosterzele and Scheldewindeke; they also had the overlordship of Arques at the time of the marriage and territorial rights in St Omer.[5] How much was given to Gundrada and her husband is not known but is likely to have been considerable. On his death-bed Warenne is alleged to have divided his possessions between his sons, William receiving the English estates and Reginald those in Flanders: the occasion may be suspect but the donations are not.[6] Reginald's subsequent part in the political events of the period suggest he was a territorial magnate whose allegiance was worth having.[7] If

Gundrada was not a member of the English royal family, royal connections of a different kind are likely. Warenne was a trusted follower of a king who trusted few men; he made Warenne guardian of the vitally important south coast regions when he returned to Normandy in 1067. He was also devoted to his wife, Matilda of Flanders. It is reasonable to guess that a marriage with another Flemish lady would not have been frowned on at court.

Gundrada's family connections brought to the Warennes another powerful title; they were advocates of the abbey of St Bertin in St Omer.[8] Lay advocates had originated during the Carolingian period to provide important churches and abbeys with the secular authority needed for their existence, but forbidden by canon law; for instance, military protection, legal transactions and the collection of dues and taxes of various types. It was the powerful families that were given these responsibilities.[9] St Bertin was one of the most substantial Flemish abbeys and in the 11th century the Gerbodon family supplied them with advocates. But advocates by this date had gained a reputation for rapacity, terror and cruelty that were notable in an age accustomed to all three. The Gerbodon were no exception; indeed, they were some of the worst. They acted as cruel tyrants, causing monks to tremble in their monasteries and peasants in their hovels. Their position gave them the opportunity of financial and territorial exploitation and they used it. The most that one commentator could find to say about them is that the Gerbodon were not the most cruel of all the advocates; the Aubigny of Marchiennes were worse.[10]

So Gundrada did not come from a family that used its power for the good of the people it controlled. She would have been accustomed to acts of violence and oppression. These are unlikely to have deterred her Norman husband-to-be; William I could be savagely cruel when he needed to be and Warenne belonged to the same race.

It is not, therefore, surprising to find that abbeys struggled to divest themselves of the protection of advocates and by the mid-12th century this met with some success. Lay advocates continued to call themselves by the title while abandoning their authority. The situation of the Warennes is intriguing. In 1182 William of Warenne V called himself by this title. How did this come about?

Gundrada had three brothers; two have been mentioned already. The third, Arnulf or Arnold who appears not to have taken part in the invasion, died suddenly *c.* 1067. Frederic was killed, perhaps by Hereward the Wake. The fate of Gerbodon is mysterious. The simplest scenario is as follows. He gave up the earldom of Chester after no more than a year, returning to Flanders to join the civil war there raging, was defeated in battle and became a monk. Thus the male line of possession seems to have been extinguished by 1079. But as the title of advocate was hereditary, Gundrada transmitted it to her husband and his descendants. As far as we know, no Warenne used the title until 1182; the circumstances in which it was resurrected are discussed later. In the interim a new type of advocate was installed at St Bertin to replace the absentee Warennes. This may be the implication of the ambiguous entry in the charters of St Bertin for 1096, '. . . S.Williami qui tunc in loco advocati fuit . . ..'[11]

Gundrada, therefore, was well-born and able to bestow on her husband the territorial consequence he would have wanted. But her character and activities are hidden from us.

Only line 2 of the tombslab inscription is specific, although puzzling. No English church other than St Pancras is connected with her name; the statement would be more appropriate if applied to Flemish churches, in view of the behaviour of her family. There is, however, this consideration. The name of Gundrada was used by generations of her descendants; the popular use of a Christian name in relation to notable events, past and present, is a well known phenomenon. It may be that the historical Gundrada was worthy of emulation, but that no one thought to inform posterity.

One act only can be substantiated by documentary evidence; the foundation of Lewes Priory, between 1078 and 1082 and probably in 1081.[12] The reasons for the foundation and especially for the settlement of Cluniac monks have become part of the Gundrada legend. Together with her husband, she is alleged to have embarked on a pilgrimage to Rome, when wars

in north Italy forced them to take refuge in Cluny, where they were so impressed by the sanctity of the brethren that they decided to found a Cluniac priory on their return. It is a pleasant tale and not out of keeping with the pious behaviour of the age. But it should not be accepted uncritically. Firstly the story first appears in a 15th century document once thought to be the foundation charter of the Priory.[13] Secondly, the facts cannot be independently verified; the writer has tried to do this but failed. Thirdly, it is possible Gundrada already had commitments to Cluny; two early references state that Gerbodon became a monk at Cluny under St Hugh.[14]

Thus Gundrada might have remained an elusive personality. It was her death and its artistic consequences that have made her name immortal. What follows will seek to justify the use of such a strong adjective.

HER DEATH AND BURIAL

We know that the tombs of Warenne and Gundrada were in the Priory chapterhouse, shortly before the Dissolution because their monuments were seen there by Benolt, Clarenceux Herald from 1516 to 1534.[15] Some 300 years later in 1845, a cutting for the Lewes/Brighton railway was laid across the Priory site and within days of the start of work, two cists were found below the floor of the chapterhouse site; on the lids were the names 'Wilhelmus' and 'Gundrada'. This dramatic discovery showed it was the second interment of the founders, because the cists contained an assortment of bones, obviously collected together. It also seems likely that the bodies had been buried directly in the ground without coffins (Fig. 1).

The site of the original interments remains unidentified and it is clear from the earliest documents that no one has ever known for certain. The 15th-century charter states that Gundrada and subsequently Warenne who died in 1088 were buried in the church by Warenne's orders.[16] The 12th-century Hyde Chronicler describes how Warenne was buried in the cloister beside his wife with all appropriate honours.[17] The usually reliable Orderic Vitalis states that Warenne was buried by the Priory monks in the chapterhouse with an inscription placed above his tomb.[18] Although he was mistaken in believing that Warenne was succeeded by Gundrada and his two sons, he may still be right about the interment.

Thus all possible sites are canvassed by the chroniclers; chapterhouse, church and cloister. But there are difficulties about each of them. The chapterhouse visited by Benolt was a 12th-century building and not the one in which the founders would have been interred. This was an 11th-century building whose site has not been identified, but it was very probably to the east of the later one.[19] There were two 11th-century churches, the first of which was that given to Cluny by the founders and its site is uncertain. The second, once called the Infirmary Chapel, has survived, but it was not under construction before 1088 and is unlikely to have been completed before the death of Warenne and clearly not for Gundrada. The 11th-century cloister has also not survived, but it, like the chapterhouse, lay to the east of the 12th-century replacement. The discovery of two graves, side by side, in the 12th-century cloister cautions against dismissing too lightly the possibility of a double founders' interment. It seems, on the whole, improbable, because there is some evidence that the width of the 11th-century cloister alleys was no more than 9 ft.[2.74 m.]. Finally to every other interpretative problem must be added this; the Hyde Chronicler's phrase 'infra claustro monasterii' is often used unspecifically simply to mean 'within the monastery'. These words sum up the present state of our knowledge admirably; they were buried within the precincts, but we do not know where.

Both tombslabs disappeared at the Dissolution in 1538. That of Warenne has not been found. But Gundrada's tombslab was discovered in 1775 (Figs 2 and 3); it was seen by Dr Clarke, rector of Buxted, on the table tomb of Edward Shirley in the Shirley chapel in Isfield church, cut down to make it fit. William Burrell paid for its removal to the church of St John the Baptist in Southover and an etching was made by Basire.[20] The slab was placed in the rectory pew until the present south chapel was erected by J. L. Parsons, advised by Ferrey, in 1847. The two

Fig. 1. Gundrada Cist.

cists, their contents long since removed, were also installed there. Thus Gundrada's tombslab and cist are reunited, even if no longer in vertical alignment above and below the pavement.

It is an extraordinary story and much remains unexplained. For instance, there is no reference in the sources to a second tombslab for Warenne at his reinterment. Benolt, unfortunately, does not describe the monument he saw. Orderic, however, says the memorial set up by the monks was in 'white stone' and the inscription, which he gives in full, was in leonine verse.[21] He does not tell us how the lines were arranged and we shall return to this problem. The stone is more likely to have been Caen limestone than igneous marble; its creamy colour would have looked impressive against the grey Quarr limestone buildings surrounding it. Gundrada, on the other hand, cannot conceivably have been buried without some sort of monument, but there is no evidence for one and the existing tombslab is not an 11th-century artefact, as will be demonstrated. When completed it was a splendid object in Tournai marble, which would have eclipsed artistically the simpler slab of her husband, lying beside it. It is difficult to accept such a conclusion. We are left, therefore, with this intriguing hypothesis; a

Fig. 2. Gundrada Tombslab.

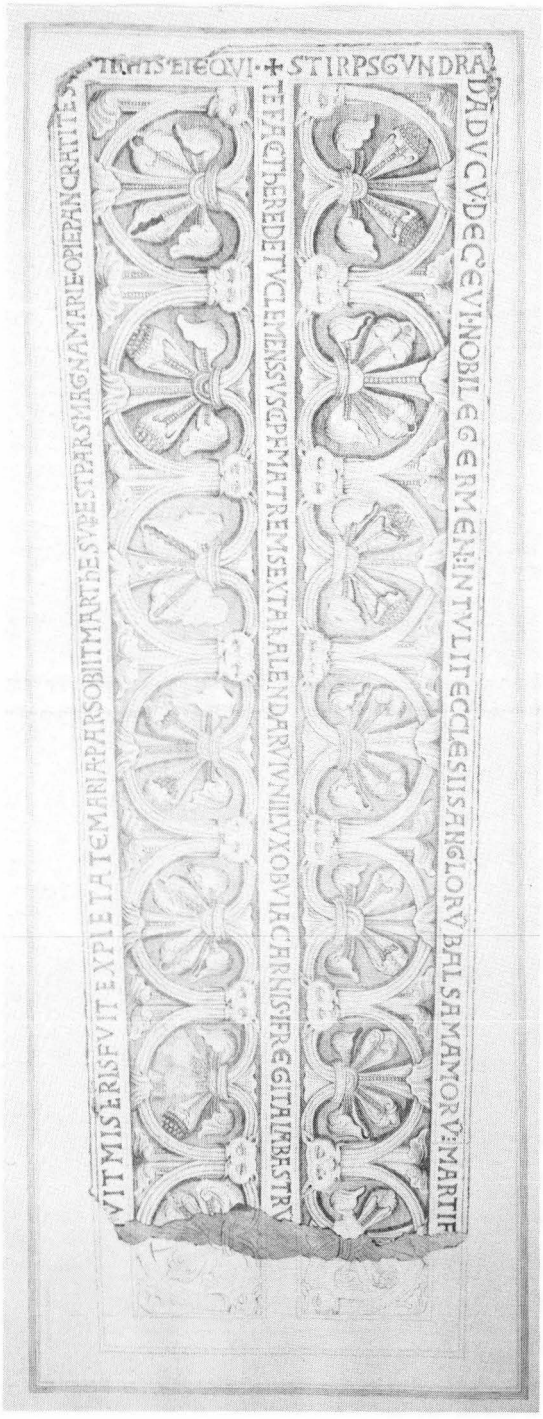

Fig. 3. Basire etching.

second Tournai tombslab has disappeared and awaits another rector of Buxted. It is also possible that certainly one and probably two 11th-century tombslabs remain to be found, in fragments no doubt but identifiable by their inscriptions. This means a total of three missing tombslabs; a treasure trove, indeed. As the Shirley family was involved in some way in the removal of the Gundrada slab, it would seem possible that the fate of the Warenne slab may also be their responsibility. So far a search of the Shirley properties has proved negative.

In the meanwhile, we must consider when and why the Gundrada tombslab was carved.

THE GUNDRADA SLAB; TIMING AND MATERIAL

Romanesque sculpture is overwhelmingly architectural sculpture and a tombslab is one of the rare exceptions to this statement. But the slabs of Gundrada and her husband are linked inextricably with the architectural history of the 12th-century chapterhouse. We know that work on the extension and transformation of the Priory buildings began with the great Cluniac church, Lewes C, so called because it was the third monastic church; work began on it *c.*1145 and was still in progress at the end of the century.

The chapterhouse was part of the new cloister on the south side of this church. Work could not have begun on it earlier than the 1150s and we can only estimate how long it took. The reinterment of the founders is unlikely to have been done hugger-mugger; a degree of ceremony and occasion is involved. The building was finished or nearly finished before the cists and their monuments were put into place. A date in the 1160s seems appropriate.

Such a massive redevelopment of the site could not have taken place without, at least, the consent of the then Earl of Warenne, William of Warenne III. His interest in the work was more than desultory. He was at pains in his charter of 1147 to provide for its continuation in the event of his death on the Second Crusade.[22] It was as well he did so. He was killed in the army of the King of France, Louis VII, in 1148.

He left a daughter, Isabella, to inherit his lands and titles. She married twice. Her first husband, in 1148–9, was William of Blois, a younger son of King Stephen. He became fourth Earl of Warenne by virtue of this marriage and on the death of his elder brother Eustace in 1153, Count of Boulogne as well. He died in 1159 and for five years, Isabella was Countess of Warenne in her own right, the first female to hold this position. In 1164 she married her second husband, Hamelin, an illegitimate son of Geoffrey of Anjou, who then became the fifth Earl of Warenne. He died in 1202.

Isabella is the key figure in what follows. Her father's body as far as we know, was never returned to England. The responsibility of continuing his policy of rebuilding the Priory fell on her shoulders. Line 6 of the Gundrada inscription supports the suggestion of a massive and recent contribution to the Priory. The words 'She makes you[St Pancras] her heir' are in the present tense and this is epigraphically very unusual. That some exceptional donation in Gundrada's name had taken place is the implication. Indeed the missing section at the beginning of the line, TES may relate to TESTATIO, a bequest. The provision of splendid new tombs for the founders fits easily into this analysis.

Gundrada was only Isabella's great-grandmother but Isabella was in no danger of forgetting her. The use of Gundrada's name has been commented upon earlier and the details are impressive.

Gundrada's daughter, Edith, had married Gerard de Cournay; they called their daughter, Gundrada, after her grandmother. She was Isabella's great-aunt and was still alive in 1142/3; Isabella could have known her as a child.

Isabella also had an aunt called Gundrada, a daughter of William of Warenne II, who was still alive in 1166. This Gundrada married as her first husband, Roger of Beaumont, Earl of Warwick at some date after 1119. She, in her turn had a daughter called Gundrada, Isabella's first cousin, who married Hugh Bigod, Earl of Norfolk. They were close contemporaries; Gundrada of Warwick died between 1200 and 1208 and Isabella herself in 1203.

This is not all. Isabella's uncle, Reginald (Rainald) married Adeliza (Alice) heiress of William of Wormegay. One of his daughters was

also called Gundrada; she was another first cousin of Isabella who did not die until *c.*1224. Geographical contacts between Isabella and this branch of the family are also very probable. Reginald was appointed by Isabella's father to administer his estates while he was on Crusade. In 1179 he entered Lewes Priory as a monk and Wormegay is only 9 km from Kings Lynn and thus not far from the Warenne estates at Castle Acre. So both in a domestic and a monastic capacity he was close to the comital family.[23]

Thus, Isabella had a great-aunt, an aunt and two first cousins called Gundrada. The last three were contemporaries and most were near at hand geographically. She could not have lost touch with her distaff origins on her father's side.

Why Tournai marble was chosen is part of the wider problem of the use of this material in the Priory generally. In the 1160s Priory masons were working in this material and a Tournai lavatorium, unique in England, was being erected in the south-west of the cloister. Somebody knew about the properties of this stone as an architectural asset and its current usage in Flanders; this person also had the financial and organisational resources for its import. Isabella fulfils all these conditions. Her maternal grandmother, Isabella of Vermandois, was sister of Simon of Vermandois, bishop of Tournai, who accompanied her father on the Crusade and was also killed.[24] So Isabella had the closest possible links with Tournai, the town in Hainault, where the stone was, and still is, quarried and at a time when large buildings in the material were being put up and decorated in the valley of the Scheldt. The greatest of these was the cathedral at Tournai itself. Her father's acquaintance with its bishop makes it likely that he was planning to use the material in the Priory when he returned from the Crusade.

Through her first marriage Isabella gained practical assistance, for Wissant lay in the territory of Boulogne and this port had taken over from Quentovic by the mid-12th century as the exit port for England. The royal family was interested in the Tournai trade. Henry, bishop of Winchester provided his cathedral with a Tournai font; Gervase, abbot of Westminster, an illegitimate son of King Stephen, lies in Westminster Abbey under a Tournai tombslab, wrongly attributed to Gilbert Crispin.[25]

It was stated earlier that it was Isabella's second husband, William of Warenne V, who referred to himself as advocate of St Bertin, the first Warenne to do so. We do not know why this was, but it requires investigation. It may well be that commercial circumstances had developed that made the assertion of a strongly Flemish authority necessary. The position of London is crucial to the development of the Tournai trade and it is likely to have been here that problems arose.

Lewes acquired its Caen limestone for the 12th-century rebuilding via Seaford; it was shipped directly from Normandy and then proceeded up the Ouse to Lewes Bridge. But nautical geography makes it improbable that Seaford was the Tournai marble port. London is much more likely. Foreign merchants including Flemings had been given facilities there since the reign of Ethelred II, and the Confessor had granted a district in London called Warmansacre, where there were wharves, to St Peter's Ghent.[26] Politically, too, Londoners were supporters of Stephen during the civil wars.

The largest item in the Flemish trade was wool. We know this was regulated by the powerful combination of the Hanse of London and the Charity of St Christopher. But the export of Flemish stones was included in their mandate and Tournai was a member of this league.[27] The Tournai workshops were under expansion from the 1150s onwards, so trade in their stone was flourishing. A frequent conflict of interests between the Hanse and substantial importers of Tournai marble such as Lewes, seems only too probable.

Whether or not this hypothesis is acceptable, there is no doubt that Flemish influences were very significant. An examination of the artistic layout of the Gundrada slab makes this equally apparent.

THE INSCRIPTION[28]

The arrangement of the inscription with its dividing strip has been compared with that of the slab of Queen Matilda in La Trinité, Caen, also in Tournai marble. This had a long inscription

that ran down two strips and was in gold lettering. Matilda died in 1083, some 80 years before the putative date of the Gundrada slab. This does not necessarily rule out a direct link but it makes it more unlikely. Much more probable is a link indirectly through the 11th-century Warenne slab. This long inscription might well have followed the Matilda model and we know that this slab was still in existence when the Gundrada slab was being carved. If the hypothesis is plausible it would help to explain why in the late 1160s, an out-moded method of arranging strips on a slab was employed.

The arrangement of the Gundrada inscription may have an interesting consequence. We return to Isabella's family. Her mother, Ela or Ala, remarried, probably *c*.1152. Her second husband was Patrick, Earl of Salisbury and they had four sons. She died *c*. 1174.[29] Thus during the vital years for the architectural development of the Priory, the late 1150s and 1160s, a close family link existed between Lewes and Salisbury; this would have made is possible for the Salisbury family to have visited the new chapterhouse and to have seen the Gundrada slab.

The implications of this are very important. In 1226 the tombs of three bishops were conveyed from Old Sarum to the new cathedral. One carved in Purbeck marble was that of 'Josceline', who died in 1184.[30] The tombslab has three inscriptions, the most prominent of which runs down the orphrey from top to bottom; 'Whosoever you are, assist me with your prayers; you will be like me'.[31] It is a sophisticated development of the Gundrada strip.

The Gundrada calligraphy is inferior to the decoration. Two craftsmen may have been at work. The first line is regularly spaced, in an almost classical manner. But there is a noticeable deterioration as the inscription proceeds. The lettering is badly spaced, the letters often joined together and slanting, not upright. Epigraphical niceties are allowed to slip; 'Herede' for instance, has no indication of its missing terminal M. The calligraphy of the Matilda slab is no better but would have been masked by the use of gold leaf. The addition of red to the Gundrada lettering would have improved its appearance considerably, as in classical Roman inscriptions. One wonders whether it would be possible to test the lettering for traces of pigment.

The most important lines are 1,2 and 6, the last two of which have been discussed. In line 1 is the description of Gundrada as 'STIRPS DUCUM'. It was this that encouraged the idea of her royal origins; who else but Duke William of Normandy could be meant? There is, however, another possiblity. Isabella was a direct descendant on her mother's side from Hugh the Great who bore the title Duke of the French; he died in 956. Perhaps Isabella was showing her pride in her maternal descent from a prestigious ancestor.

Finally, the inscription when complete may have been in leonine verse throughout; lines 2, 6 and 7 are certainly in this form.

THE DECORATION; THE LEWES WORKSHOP

The chief artefacts of the Tournai workshops in the 12th century were fonts and tombslabs. They were exported from the 1140s onwards and England was the recipient of, at any rate, some examples of both. Lewes has no font but the tombslab under discussion was not an export, but was carved in the Priory workshop, together with other pieces in the same material. This means that the stone was imported en bloc. The reasons for this statement can be demonstrated.

Recent finds have indicated that the workshop was in the cloister and it is reasonable to expect cross references between work in Tournai stone and that in other material, especially Caen limestone; this was the basic material used in the 12th-century rebuilding programme. The most striking feature of the Gundrada decoration is the series of palmettes. This heart-shaped motif was one of those used most often by Priory masons. But it is also found frequently elsewhere. Its employment on the slab, however, is characterised by two motifs that are not found commonly, or at all, outside Lewes.

The first is multi-stranded banding. Banding is a common Romanesque motif, but the Lewes variety has proved to be unique in England. It is thickly stranded and in high relief; it resembles a torque. A splendid example may be

Fig. 4. Cistern Slab (with detail).

seen on the Lewes impost currently on display in the British Museum. The second is nailhead. This is not found very often elsewhere and certainly not dated to the 1160s, which is the date of all the Lewes pieces. The Gundrada palmettes combine these two motifs in a striking and unprecedented manner.

There is a similarly important stylistic comparison with the cistern slab carved in the workshop for the Tournai lavatorium. There is an obvious comparison with the palmettes, in the vertical cistern leaf with its nailhead. There is also a comparison with the second and third groups of middle leaves on the palmettes; these show either 'island' leaves with nailhead or clusters of hanging berries.[32] The motifs are combined on the cistern slab as a single motif; there is a heavy band of 'island' leaves edged with nailhead above and hanging berries below. The Gundrada motifs were derived from the closely formulated motif on the cistern slab; they were elaborated into two separate and distinct motifs (Fig. 4).

THE DECORATION; NON-LEWES SOURCES

The foregoing examples provide strong support for a Priory origin for the Gundrada slab. But two Gundrada motifs are not found amongst other Priory sculptures; the animal heads and the minute chevron.

There is one possible site that might have been the source for the first of these, namely Reading Abbey. Two of its cloister capitals show animal masks and a third capital with its overhanging angle leaves has its parallel in a Lewes impost.[33] Reading was a Lewes

foundation, although it drew apart from its Cluniac origins very quickly.

Edward, abbot of Reading was a witness to the 1147 charter, but this may have no significance in the present context. There is a much more likely source for these heads and we shall return to this point.

The minute chevron has two possible sources. The first is oliphants. A remarkable number of these have survived: about 75 are recorded. Winchester alone had nine; William II gave one to Rochester and Lewes was rich enough to have had its own. Two show the use of minute chevron: the Boston oliphant and that in the British Museum.[34] The latter was bequeathed to the Museum by a member of the Sussex Archaeological Society, who lived in Brighton, Charles Borradaile; it is just possible that this oliphant had a provenance near the Priory.

The alternative possibility is both more clearly demonstrable and more significant; St Denis. The rebuilding of the west front of this famous Paris abbey was the greatest architectural event of the mid-12th century, comparable with the building of the church of St Francis at Assisi in the 13th century. Craftsmen flocked there and Suger records how he employed men of many nationalities although he refers only to the Lotharingian goldsmiths by name.[35] Amongst those were very probably men who worked subsequently at Lewes. This challenging statement derives from a study of the two surviving colonettes from the west portal, now in the Cluny Museum. On them is not only the minute chevron, but also the multi-stranded banding and the inward-turning leaves that are key motifs of the first group of leaves on the palmettes.

Damage makes it impossible to be confident, but there are indications of nailhead as well. Therefore, three of the Gundrada motifs and possibly four, are to be found at St Denis.

The multi-stranding may thus have its source in Paris, but in view of the fact that it is unique in English sculpture, a more exciting suggestion may be made. It was the future craftsmen of Lewes who gave the colonettes their motif; they were the creators, not merely copyists. It should be borne in mind that the man appointed by Suger to supervise the opening ceremony in 1140 was Hugh of Amiens, archbishop of Paris; he had been prior of Lewes between 1120 and 1123, when he became the first prior of Reading. One wonders whether he played any part in promoting Lewes when work at St Denis declined. Be that as it may, some of the craftsmen of St Denis found their way to Lewes, where there was work in plenty in the 1150s and beyond.

These masons may even have had experience in carving Tournai marble as there is some evidence for a Tournai cloister at St Denis.[36]

THE DECORATION; ENGLISH MANUSCRIPT INFLUENCES

Between them, and they are not mutually exclusive, the sculptural sources cover all the major Gundrada motifs. But their arrangement on the slab and thus the design is another matter and manuscript motifs can assist us here.

Two English manuscripts in particular, must be considered; the Lambeth Bible *c.*1150 and the Winchester Bible *c.*1155–60. The former (Fig. 5) has several examples of initials with animal heads and sprays containing minute chevron infilling. The initial A of the opening to the Book of Daniel is probably more like the Gundrada motifs than the sculptural examples discussed previously.[37] The Winchester Bible in the initial Q of the Opening to Psalm 51 (Fig. 6) shows a remarkable resemblance to the motif in the spandrel of the cistern slab.[38] The 'island' leaf, a recurrent feature of the Gundrada palmettes, has its origins in English manuscripts. Both the above Bibles use it, but there are earlier examples. For instance, the St Albans Psalter *c.*1120–30 has an illumination of the two Marys at the Sepulchre that shows a tree with unberried 'island' leaves; the Bury Bible *c.*1135, on the other hand, shows trees with berried 'island' leaves.[39] The Gundrada motifs follow the Bury pattern but this is not significant.

It is easier to spot cross references than to explain how they came about. We know that Canterbury and Winchester had scriptoria where illuminators operated; artists and sculptors could, therefore, meet in the cloister. But Lewes is a problem. The Priory had a scriptorium at an

Fig. 5. Lambeth Bible; initial A, Book of Daniel.

early date as Lewes was a signatory to two obituary rolls; that of Matilda, abbess of La Trinité, Caen in 1114 and of Vitalis of Savigny in 1122. The wording is identical, but the latter contains a scribal omission filled in with an omission mark. It is in black ink, without rubrication other than two dots below the cross-bar of the opening initial T. This does not qualify as illumination.[40]

Nor are there any other illuminated manuscripts from Lewes, either in the Romanesque or later periods. This may be a casualty of the Dissolution, but it is also likely that Lewes in common with most other monastic houses had no illuminators at any time in its history.

Once artists are removed from the scriptorium, it becomes mere speculation to decide how motifs in Bibles remote from Lewes reached the sculptors. The best guess lies in the nature of the occupation itself. The sculptors were secular craftsmen employed to do a job of work; they then moved on. As itinerants they would have obtained access to the cloister of the next monastery on their travels and then everything concerned with motival transference becomes possible.

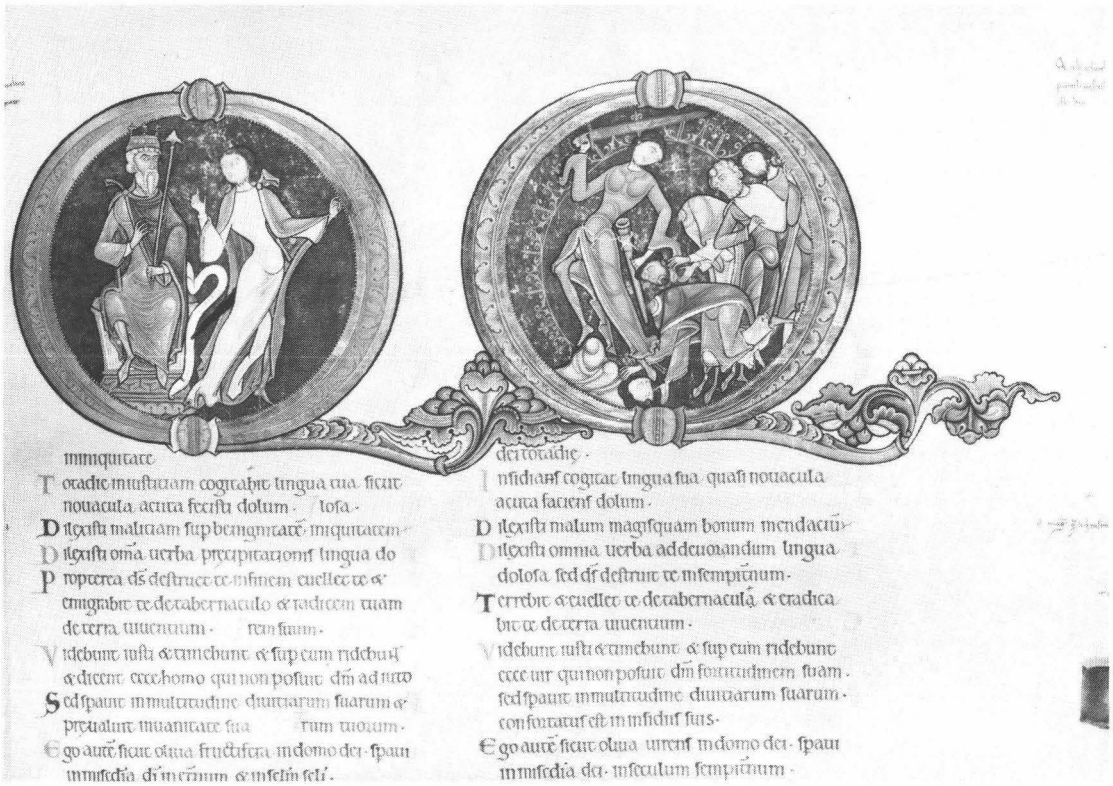

Fig. 6. Winchester Bible; initial Q, Psalm 51.

THE DECORATION; FLEMISH INFLUENCES

English influences in all their various forms have seemed overwhelming in the foregoing analysis. But Flemish influences were also very strong.

Nothing has been said so far about technical competence. Tournai marble is notoriously difficult to carve. The composition of the material consists of a crust that is relatively soft and a very hard inner core. For this reason most Tournai artefacts are in low relief; the capitals in Tournai cathedral are good examples of the surface quality of much of this carving. Indeed, it is no exaggeration to say that the technical ability of a sculptor can be assessed by the depth of the undercutting. Accomplished sculptors learnt to spread out the decoration to give it a more three-dimensional effect. The surviving Psychomachia panels on the cathedral's Porte Mantile show the delicate use of hatching to add folds to the draperies, feathers to the wings and plating to the armour; very skilful chiselling was, of course, the fundamental requirement.

Whoever carved the Gundrada slab had a superb technique. The depth of the undercutting and the clever hatching of the animal's ears show this clearly. This is in striking contrast to the sculptor of the cistern slab; technically this is very inferior. Could the same mason have done both? Yes, under a master and with practice. Is it likely? Not very. One thing only may be stated with confidence. The expertise of the Gundrada sculptor was brought, or taught by a Flemish craftsman of the highest competence. So we are left with alternatives. A Lewes craftsman could have visited Flanders, or a Flemish craftsman could have been commissioned to work at Lewes.

The first option has some circumstantial support. The workshop needed help in the use of the new material, anyway. The links that Isabella

had with Tournai could have brought this about. Another possible link is with St Bavon's abbey in Ghent, constructed almost entirely in Tournai marble. The buildings included a lavatorium, that still survives. It resembles the lavatorium in Lewes in a number of respects. Although octagonal and not circular as at Lewes, it has the same internal measurement of 19 ft[5.79 m.]. Both were under construction at the same time, the 1160s; the Ghent building was completed *c*.1171. English interest in the abbey went back further, however.

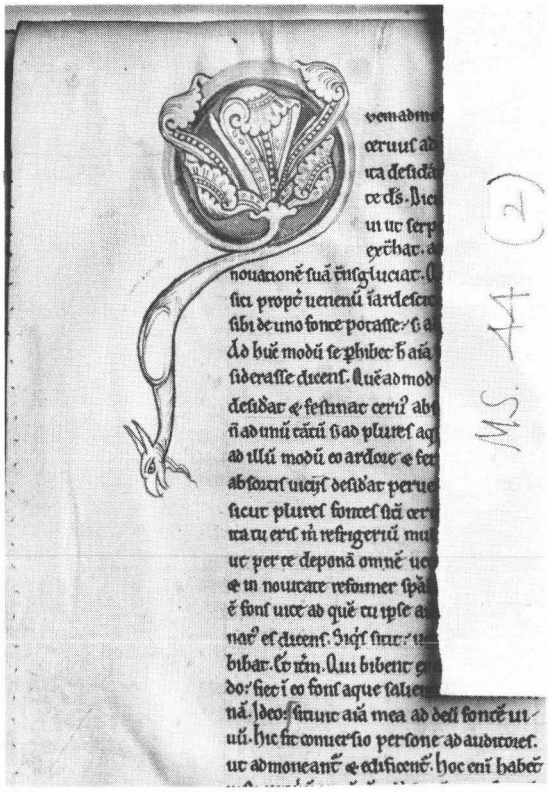

Fig. 7. Douai MS 44(2) fol. 3v. Commentaria super Psalmos.

In *c*. 940 and in 980, an English nun called Teta persuaded the abbot of San Pancrazio in Rome to send St Bavon relics of St Pancras.[41] When the great new church of Lewes C was consecrated the ceremony would have taken place on an altar with relics beneath to fulfil canonical requirements. The relics of St Pancras

Fig. 8. Douai MS 250 fol. 85r. Augustini enarrationes in omnes Psalmos.

were obviously the most desirable. Therefore, contacts between the two abbeys are very probable. Nothing in the surviving sculpture, however, suggests such a skilled craftsman as the Gundrada carver.

Or perhaps we should say, craftsmen. There are indications that an atelier was at work. Analysis shows that there are remarkable differences between the palmettes with an overall alternating pattern. Some could be interpreted as mistakes. Nos. 9 and 10 show nailhead used on all three leaves; but it is odd to make the same mistake twice in consecutive palmettes. No. 11 is totally on its own with its strange chevron motif. In the third group each deployment of pellets is different. No. 7, again, could be a mistake, but equally it might be the sole example of a fourth group, that continued to the missing No. 8. In short, more than one mind seems to be at work

Fig. 9. Douai MS 250, fol. 40v. Augustini enarrationes in omnes Psalmos.

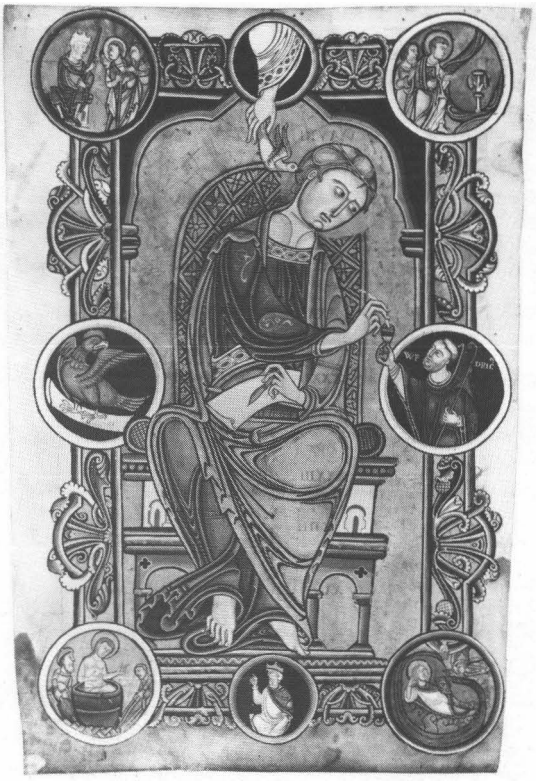

Fig. 10. Avesnes Leaf.

without any diminution of technical skill. The total effect does not mar the whole layout; it gives an added vitality in its diversity. We seem to be confronted with a master sculptor and his assistants.

In the writer's opinion, the second option is preferable. The master mason and his assistants were Flemish, commissioned to work in the Lewes workshop.

It is not the technical skill alone that compels this judgement. It is the panache and liveliness of the motifs and the massive creative competence. None of these gifts is likely in a trainee mason trying to learn a new and difficult technique.

The influence of Flanders may also be seen in Flemish manuscripts. From the abbey of Marchiennes, some 25 kilometres south-west of Tournai, have come manuscripts some of whose initials show the closest possible resemblance to the palmettes, closer indeed than in any English manuscripts (Figs 7–9).[42] The border motifs of the Avesnes Leaf, in the figure of St John, also contain parallels; this manuscript was part of a Gospel book, commissioned for the abbey of Liessies (Fig. 10).[43] These manuscripts are all derived from the Lambeth Bible, so the ultimate source is English. But a Flemish sculptor might find these his most direct contact. The dates of all the manuscripts, English as well as Flemish concur, in the 1160s.

'HIS WIFE'; CONCLUSION

Thus, historical, architectural, stylistic and manuscript evidence converges on a date in the 1160s for the tombslab, later in the decade rather than earlier; 1165–70 is suggested.

The work of art in which Gundrada's memory is encased will make her name immortal, in the sense that it is inconceivable that future generations will not appreciate it. Perhaps, by historical accident only, it is a work of Romanesque art uniquely admirable in its quality. Not even in Belgium can such an artefact be found. The possibility of a missing Tournai slab carved for her husband remains; it is an exciting thought.

Curiosity about the woman whose memory prompted the sculptors is also likely to continue. This is not an age that finds domestic details of the famous uninteresting. Indeed, while this paper was in preparation, a third Tournai slab emerged from recent finds. It seems too small for an adult; it is crudely carved; it cannot be that of Warenne. We are wondering about the child responsible for Gundrada's death in 1085. If the baby had been delivered, it might have received separate burial . . . but for the moment, this must remain a musing postscript.

Acknowledgements
I am most grateful to all the following for permission to use their material: The Sussex Archaeological Society for the Basire etching. The Warburg Institute for prints from the Lambeth and Winchester Bibles. In the first case, I should also like to thank the Lambeth Palace Library and in the second, the Dean and Chapter of Winchester Cathedral and the Courtauld Institute for the print of the Avesnes Leaf and the 3 prints of the Marchiennes illuminations. In the latter case, I should like to thank Professor Dodwell for permission to use his photographs. Miss Patricia Knight for her diagram of the Gundrada decoration. Mr Thomas Reeves of Reeves Studio, Lewes, for the excellent photographs of the Gundrada cist and slab.

Author: Dr Freda Anderson, 135 Russell Road, Wimbledon, SW19 1LN

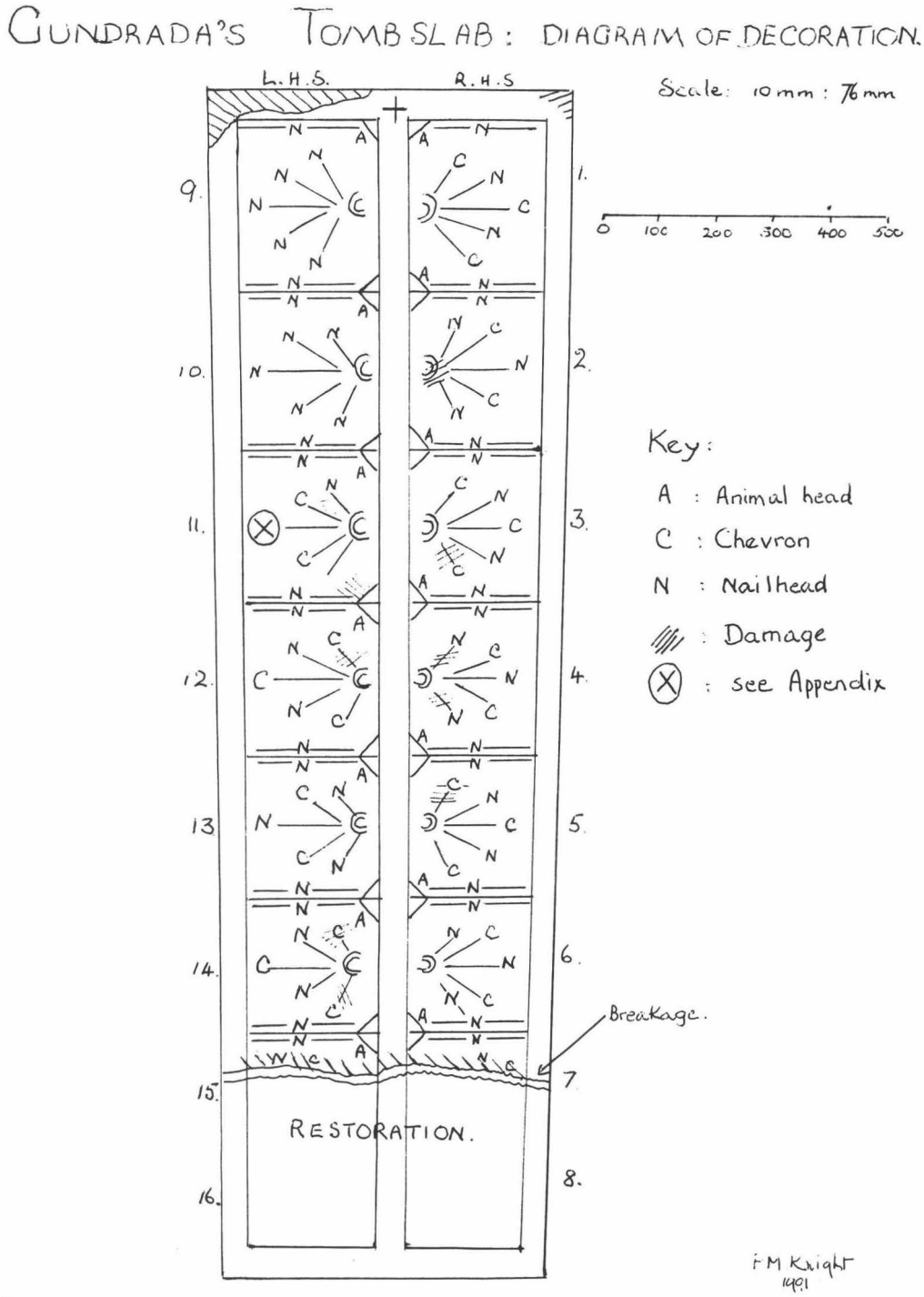

Fig. 11. Gundrada's Tombslab: diagram of decoration.

Fig. 12.

Fig. 13.

Fig. 14.

Fig. 15.

Fig. 12. Tombslab Detail; Diagram No. 1.
Fig. 13. Tombslab Detail; Diagram No. 2.
Fig. 14. Tombslab Detail; Diagram No. 10.
Fig. 15. Tombslab Detail; Diagram No. 11.
Fig. 16. Tombslab Detail; Diagram No. 5.
Fig. 17. Tombslab Detail; Diagram No. 12.
Fig. 18. Tombslab Detail; Diagram No. 7.
Fig. 19. Tombslab Detail; Animal mask, full face.
Fig. 20. Tombslab Detail; Animal mask, side face.

Fig. 16.

Fig. 17.

Fig. 18.

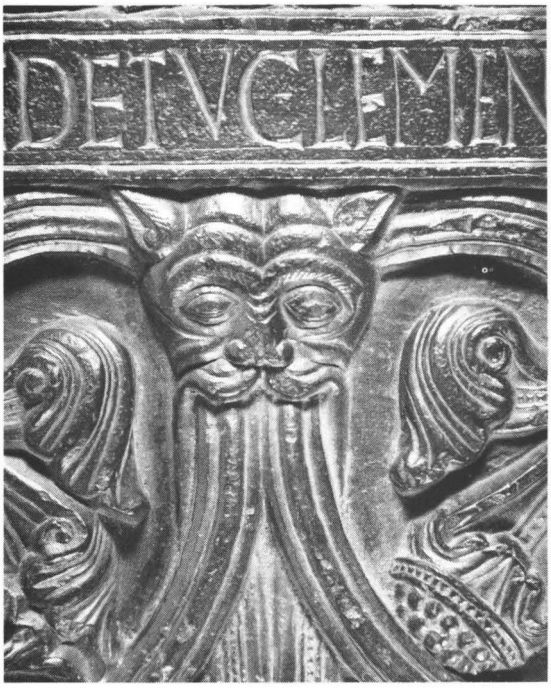

Fig. 19.

Fig. 20.

APPENDIX

1) *Inscription, William of Warenne*

HIC VILLELME COMES LOCUS EST LAUDIS TIBI FOMES
HUIUS FUNDATOR ET LARGUS SEDIS AMATOR
ISTE TUUM FUNUS DECORATE PLACUIT QUIA MUNUS
PAUPERIBUS CHRISTI QUOD PROMPTA MENTE DEDISTI
ILLE TUOS CINERES SERVAT PANCRATIUS HAERES
SANCTORUM CASTRIS QUI TE SOCIABIT IN ASTRIS
OPTIME PANCRATI FER OPEM TE GLORIFICANTI
DAQUE POLI SEDEM TALEM TIBIQUI DEDIT AEDEM

(Ordericus Vitalis, *Historia ecclesiastica*, ed. M. Chibnall Vol. 4, 180–3)

Translation by M. Chibnall:

Earl William in this place your fame is kindled
You built this house and were its generous friend
This was a gift freely and gladly given
To the poor of Christ; it honours now your urn.
The saint himself, Pancras, who guards your ashes
Will raise you to the mansions of the blessed,
Saint Pancras give, we pray, a seat in heaven
To him who for your glory gave this house.

2) *Gundrada slab*

(A) *Catalogue details, not in text.*

L. 1.93 m.; W. top, 62 cm., bottom 48.5 cm.

General condition very good. Broken, lower end where it was cut to fit Shirley tomb; nos. 7, 8, 15, 16 modern repairs. These probably done 1847. See Basire etching. Mantell records still broken 1846; *A Day's Ramble* etc, 39. Slight damage no. 2; more serious damage nos. 11, 12; only no. 14 severely damaged.

For Basire etching; J. Watson, *Memoirs of Ancient Earls of Warren* etc (1782), 59–61.

(B) *Inscription*

Lines numbered for reference.

1. STIRPS GUNDRADA DUCU[M] . DEC[US] EVI . NOBILE GERMEN:
2. INTULIT ECCLESIIS ANGLORU[M] BALSAMA MORU[M]:
3. MARTIR [ ]
4. [F]UIT MISERIS FUIT EX PIETATE MARIA.
5. PARS OBIIT MARTHE SUP[ER]EST PARS MAGNA MARIE.
6. O PIE PANCRATI TES[ ]IS ET EQUI.
7. TE FACIT HEREDE TU CLEMENS SUSCIPF* MATREM (*sic)
8. SEXTA KALENDARU[M] JUNII LUX OBVIA CARNIS.
9. IFFREGIT ALA*BASTR[ ] (*sic).

All the bottom half is missing.

The surviving lines may be translated:

1. Gundrada, of ducal stock, the ornament of her age, an [offshoot of the nobility,
2. Brought to the English churches the soothing ointment [of her goodness
3. Martyr_____
4. Was]. to the poor she was a Mary in her tender [ways
5. The part of her that was like Martha died; the [finer part that was like Mary survives
6. O holy Pancras ___ and justice.
7. She makes you her heir; you, in your mercy [acknowledge your mother
8. On the 27th of May, the light, after a hostile [encounter with the flesh
9. Shattered the alabaster _____

(C) *The decoration. See attached diagram*

In 1992, slab divided into 16 compartments; Basire, earliest representation shows 14. Break across nos. 7 and 15. Viewed vertically;

2 rows outward facing palmettes, connected by animal heads; these are full-faced except top ends both rows at nos. 1 and 9 where they are neither full-faced nor profile but cut to fit space. Presumably, bottom ends finished likewise.

Palmettes become flatter and smaller as width decreases. Nos. 1 and 9, large, rounded and in high relief. Each palmette composed of 5 leaves, bonded with central loop. Central leaf laid back, flat and outward-spreading, wrapping over frame. Outer pair of leaves ends in curling acanthus in every case. Middle pair has variations within palmettes;

1st group: leaves curve inwards to form projecting centre, nos. 2, 4, 6, 9, 11, 13.
2nd group: 'island' leaves edged with nailhead, nos. 1, 3, 10, 14.
3rd group: inward-turning leaves and dangling berries nos. 5, 12.
4th group: although only half no. 7 survives it seems to be different arrangement; inward-turning leaves, no berries, 3/4 pellets L. See (*) to follow)

Within palmettes, with the sole exception of no. 11, only motifs are minute chevron and nailhead; latter usually mistaken for beading. With exceptions of nos. 9, 10, 11, motifs arranged in one of two ways; if central leaf has chevron, middle leaves have nailhead, outer leaves chevron and vice versa. On RHS, motifs alternate in downward sequence; on LHS nos. 9, 10, 11 break sequence. Nos. 9, 10 all nailhead. No. 11, totally different motif; central leaf, small inter-locking leaves, like chevron.

Other variations between RHS and LHS:

a) No. 1 shows nailhead of 'island' leaves continuing down leaf below; No. 3 shows minute chevron continuing down leaf below.
b) 3rd group has different arrangements for curling top of leaves subtending berries. No. 5 has 3 circular pellets placed vertically on R and 4 on L. No. 12 has 1 pellet. (*) 4th group fits in here.

Animal heads have delicate hatching on ears and eyebrows. Moustaches descend to border, becoming acanthus coils. Both outside edges nailhead. Nos. 1 and 9 have single line nailhead.

Basire etching shows nailhead as beading.

3) *Cistern slab*

W 53 cm.; H 69 cm.; thickness 8 cm.

Tournai marble.

Some flaking and breakage; overall condition good. Found 1845 blocking hole in roof of underground passage from cloister, known as the Lantern.

Catalogue nos. (a) Anne of Cleves House Museum, Lewes . . . 1980.48.36.
(b) F. Anderson. PhD thesis (1987), C-K166.

From lavatorium. Arcading with respond scallop capital. Spandrel with motif, including acanthus, berries, nailhead. Central leaf, nailhead stem.

Notes

[1] The arguments are not rehearsed here. A convenient summary may be found in: C. T. Clay, *Early Yorkshire Charters, VIII; Honour of Warenne*, 1949 (Yorkshire Record Society, Extra Series, **VI**), 40–46.

[2] The author of *Liber Hydae* ascribes the gift of the earldom to William Rufus as a reward for Warenne's support during the rebellion of Odo of Bayeux in 1087. Orderic Vitalis also identifies the gift with Rufus, but gives no reasons.
Liber Monasterii de Hyda, ed. E. Edwards (Rolls series **45**, 1886), 298.
Orderic Vitalis, *Historia Ecclesiastica*, ed. M. Chibnall, **IV** (1973), 181.

[3] Clay, *Early Yorkshire Charters*, n. 1, 54.

[4] I am grateful to Dr Heather Tanner for this information.

[5] P. Feuchère, 'Les Avoués de Saint-Bertin', *Société Académique des Antiquaires de la Morinie*, **XVII**(1948), 193–207; E. Warlop, *The Flemish Nobility before 1300* (Kortrijk 1975) **I**, 51–2; **II**, (1976), 1024–26. I should like to thank Dr Koos Wynia and Dr Paul Dalton for their help with these problems.

[6] *Lib. Hyd.*, n.2, 299. 'Duos filios suos . . . haeredes fecit, Wilelmum videlicet in Anglia et Reginaldum in Flandria . . .'

[7] In 1190 he supported Rufus against Duke Robert of Normandy and led the attack on Rouen. In 1105 he is found on the side of the latter against Henry I. Clay, *Early Yorkshire Charters*, n.1, 6.

[8] Feuchère, *St Bertin* n.5.

[9] I should like to thank Dr Julia Barrow very warmly indeed for her help over advocacy.

[10] Feuchère, *St Bertin* n.5.

[11] *Les Chartes de Saint-Bertin etc*, ed. D. Haignere (Société des Antiquaires de la Morinie, **I**, 1886), no. 94; C. P. Lewis, 'The Formation of the Honor of Chester, 1066–1100' *Journal of the Chester Archaeological Society*, **71** (1991), 38–40, n.14, 15, 16. I am grateful to Dr Lewis for his assistance over the problem of the Gerbodon and Cluny.

[12] Clay, *Early Yorkshire Charters*, n.1, 55.

[13] *The Chartulary of the Priory of St Pancras at Lewes*, ed. L. F. Salzman, Vol. I (Sussex Record Society 1932), 1–7.

[14] Lewis, 'Honor of Chester', n.11. *La Chronique de SAINT-HUBERT Dite CANTATORIUM* ed. K. Hanquet (Commission Royale D'Histoire, Brussels, 1906), 66–7; *La Chronique de Gislebertus de Mons*, ed. Vanderkindere, (Commission Royale D'Histoire, Brussels, 1904), 8.

[15] MS College of Arms D.13 f.456; *Benolt's Visitation of Sussex:*
'. . . William the first Earl Warren and Surrey, first founder of the House of St Pancras, situate within the town of Lewes in the county of Sussex, which William and Gundrada his wife lieth buried in the Chapter of the same house . . .' [Spelling modernised]

[16] Salzman, *Lewes Chartulary*, n.13.

[17] *Lib. Hyd.*, n.6, 299.

[18] Orderic Vitalis, n.2, 181–2. I am most grateful to Dr Chibnall for permission to use her translation of the inscription.

[19] All architectural details of the site may be found in full in the appropriate chapter in my unpublished thesis, 'The Romanesque Sculptures of Lewes Priory', Unpublished PhD Thesis, University of London (1987), Vol. II. A shorter version appears as 'St Pancras Priory Lewes; its architectural development to 1200', *Anglo-Norman Studies XI*, ed. R. Allen Brown (1989), 1–35.

[20] Basire etching shows the tombslab to be shorter by one group of palmettes, nos. 8 and 16.

[21] The characteristic of this verse form is that the last syllable rhymes with that of the syllable before the caesura.

[22] Clay, *Early Yorkshire Charters*, n.1, 84–85.

[23] Clay, *Early Yorkshire Charters*, n.1, 1–31, for all these genealogical references.

[24] I am grateful to Mr J-C. Ghislain for this information.

[25] F. Anderson, 'Three Westminster Abbots; a problem of identity', *Church Monuments* **IV** (1989), 3–15.

[26] P. Grierson, 'The Relations between England and Flanders before the Norman Conquest', *Trans. Royal Historical Society*, Series 4, **23** (1941), 104–5.

[27] P. Rolland, 'Les origines de la commune de Tournai', *Académie Royale de Belgique* (Brussels 1931).

[28] I asked two epigraphers for a possible dating for the inscription and I should like to thank them for their help. Dr R. Fuchs, of the Department of Epigraphy at the Academy of Sciences in Mainz, thought the palaeographic margins were 1150–1175. Mr J. Higgitt of the Department of Fine Art in the University of Edinburgh would date the lettering to some time in the second or third quarter of the 12th century. I should also like to thank Professor Brooke and Mr C. Whittick for their help in translating the inscription.

[29] Clay, *Early Yorkshire Charters*, n.23.

[30] The identification of the three slabs is under review. I use the name by which the effigy is still most commonly known.

[31] 'Quisquis es, affer opem, devenies in idem'. Pevsner, *Wiltshire* (1985), 417.

[32] G. Zarnecki first identified this motif; the top of the leaf is separated from the lower area by a band.

[33] Catalogue nos: Anne of Cleves House Museum, 1980.48.175. F. Anderson PhD catalogue C-B37. The angle leaf has been broken, but an earlier photograph shows it.
For Reading capital, see catalogue, *Exhibition of English Romanesque Art 1066–1200* (1984), 169, no. 127k.

[34] H. Swarzenski, 'Two Oliphants in the Museum', *Bulletin of the Museum of Fine Arts*, Boston **60** (1962), 27–45. I am grateful to Mr Neil Stratford for showing me the BM oliphant.

[35] Suger, *De Administratione*, XIII.

[36] L. Préssouyre, 'Did Suger build the cloister at St-Denis?' *Abbot Suger and St-Denis* (ed. Gerson) (Metropolitan Museum, New York 1986), 243, no. 12.
I am grateful to Mr J-C. Ghislain for this reference.

[37] Lambeth Palace Library MS 3, fol. 286r.
[38] Winchester Cathedral Library Vol. III, fol. 232.
[39] St Albans Psalter: fol. 50. Bury Bible: MS 2 f. 5v.
[40] The initial was copied for me by Dr Kauffmann in 1984 when the MS was shown at the Exhibition of English Romanesque Art, 1066–1200. I am most grateful to him for his help.
[41] Grierson, 'England and Flanders' n.26, 94.
[42] Douai MS 250, fol. 85r. 'Augustini enarrationes in omnes Psalmos'; Douai MS 250, fol. 40v; Augustini enarrationes in omnes Psalmos; Douai MS 44 (2) fol. 3v (Commentaria super Psalmos). My attention was drawn to these MSS by Mr R. Lockett's unpublished MA Thesis, *The Romanesque sculpture of the Cluniac Houses in England.* (Courtauld Institute of Art, 1968).
[43] Musée de la Société Archéologique, Avésnes-sur-Helpe.

Sussex Archaeological Collections **130** (1992), 130–139

A MEDIEVAL GATE IN THE EARTHWORKS SURROUNDING THE 'LITTLE PARK', ARUNDEL, WEST SUSSEX

by Christopher Place

Limited excavations were undertaken by the Field Archaeology Unit after storm damage to the earthworks on the north side of the Arundel Cricket Club revealed a masonry structure. This proved to be the remains of a gateway through the town defences. The gate consisted of two walls, either side of a 'roadway'. Made of mortared chalk rubble they are about 2.40 metres wide, 10 metres long and have stepped reveals of dressed Caen stone at both ends. The overall width of the gate is 10 metres. On stylistic grounds a late 11th- to early 12th-century date is suggested. The majority of parallels are from castles, for example Sherbourne, Tickhill and Castle Acre. Few medieval town gates still survive in the southeast and Arundel, although ruinous, is a welcome addition. It is possible that the gate was arched, though this is only suggested by analogy. Likewise, the presence of guard chambers can only be postulated. It is suggested that the gate was inserted into existing burh defences, itself replacing another defended burh in the Arun valley at Burpham. It is suggested that the gate went out of use in the late 13th century with the building of new defences and a change in the alignment of the High Street.

INTRODUCTION

As with many other archaeological sites in Sussex, the earthworks at Arundel suffered serious damage from the storms in October 1987. The then County Archaeologist, Mr F. G. Aldsworth, drew the Field Archaeology Unit's attention to the presence of *in situ* masonry revealed by the ripping-out of tree roots in the earthwork at the entrance to the cricket ground. An application was then made to the Historic Buildings and Monuments Commission (England) for scheduled monument consent, and funds to investigate this masonry. With both being granted, a small excavation was organized for September 1988.

This limited excavation was undertaken to assess the nature of the revealed masonry and its relationship to the adjacent earthworks. It was also hoped that evidence might be forthcoming as to the date of the masonry and earthworks.

THE SITE

Arundel is situated on the west bank of the River Arun (Fig. 1), on a narrow promontory of land that rises from about 4.00 metres O.D. at the river to about 50.00 metres O.D. at the northernmost edge of the town. The natural topography, and the presence of marshy ground to the east and south, would appear to have been important defensive factors, influencing the siting of Arundel (Eustace 1922, 17–18).

A consideration of the dating of Arundel's town defences will be left to a later stage. However, it is sufficient to note here that the area excavated formed an entrance through the outer defences which now surround the present cricket ground (Fig. 2, A). Eustace has ascribed a prehistoric date to these earthworks (without any evidence, Aldsworth and Freke 1976, 11), and a Norman date to the entrance (Eustace 1922, 18, 27; also presumably without evidence).

THE EXCAVATION

The earthworks to the east and west of this entrance are by far the best preserved of those which have collectively been termed the town defences. At one point immediately to the east of the entrance the bank measures 21.8 metres wide and about 4 metres high. The ditch was 14 metres wide and about 4–5 metres deep. It should be noted that the ditch may contain considerable primary and secondary silting. All measurements were taken from present-day ground surface.

Prior to excavation there was little trace of masonry, and the entrance through the earthworks was 'U' shaped in profile due to the accumulation of weathering deposits.

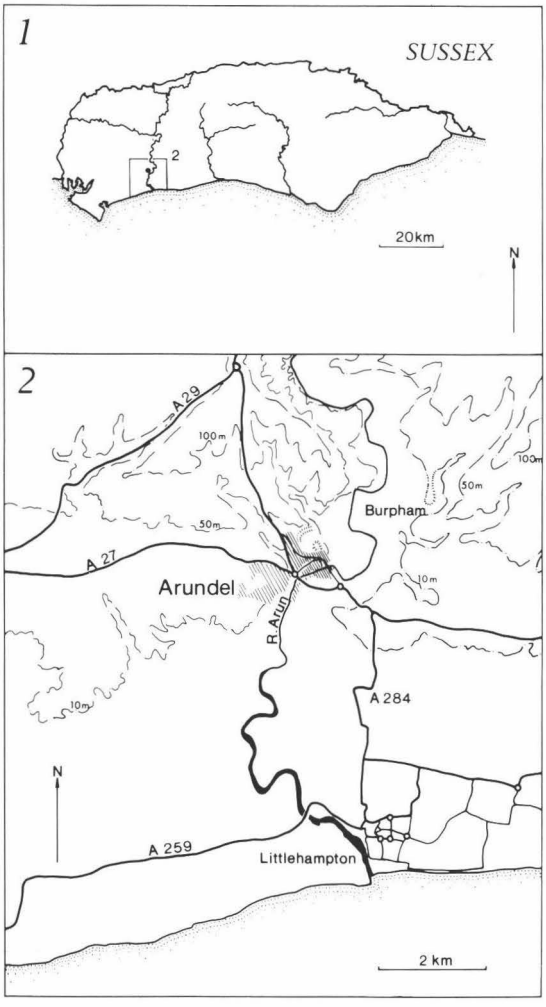

Fig. 1. Arundel, location and topographic setting.

Due to the presence of fallen trees and thick undergrowth, a rather irregular trench had to be laid out (Fig. 3). Although this was by no means ideal, it still allowed for a complete plan of the gateway to be constructed.

Excavation consisted for the most part of the removal of surface vegetation and the topmost humic contexts from the banks on either side of the entrance. In addition to this, weathering deposits within the entrance were removed down to masonry and existing gravel surfaces. All the contexts removed (1, 3, 4, 10) can be considered a phase, in that they are associated with the degeneration of the earthwork and masonry. Finds associated with these deposits include two 0.65 calibre carbine rounds (*c.* 16th century–early 19th century), an Edward VII penny, and a clay tobacco pipe bowl which probably dates from 1890–1910. This suggests activity in the area during ongoing weathering rather than a *terminus post quem* for the phase. These contexts also contained residual Saxo-Norman pottery and two sherds of Binsted-type ware. There seems no firm date, as such, for when the masonry started to deteriorate through neglect or deliberate dismantling.

The removal of these latest contexts revealed the remains of a masonry gateway on either side of the entrance way. From the plan (Fig. 3), elevation (with archive; A–B on Fig. 3), and levels taken, a generalized isometric drawing (Fig. 4) has been attempted to help clarify its construction.

The gateway consists of two parallel walls, identical in plan, 2.40 metres wide and 10.60 metres long (Fig. 3). At each end, on the inner face, is a stepped reveal, 2.50 metres long and 0.70 metre wide at the base. The evidence suggests that these reveals of the entrance gaps/arches probably consisted of two, but possibly three steps. The overall width of the gateway is 10.00 metres; 0.60 metre short of being square in plan. As it remains, the masonry stands to a maximum height of 2.69 metres above its shallow foundations. The dotted line in Fig. 4 shows the actual extent of the west wall of the gate within the reconstructed limits up to 2.70 metres. The extent of weathering and robbing is immediately evident, with the masonry sloping away in all directions from the high point; the eastern wall mirrors this situation. It is this angle of slope that only allowed for the outlines of the walls to be planned.

In building technique, both walls are identical and show no evidence for rebuilding. The wall consists of a chalk rubble core set in a medium orange-brown, sandy mortar. This mortar was very friable and was suffering greatly from root penetration and physical weathering. The outer faces of each wall could not be examined fully due to the earthwork. However, the top few courses were of roughly faced and coursed chalk blocks, larger in size than the

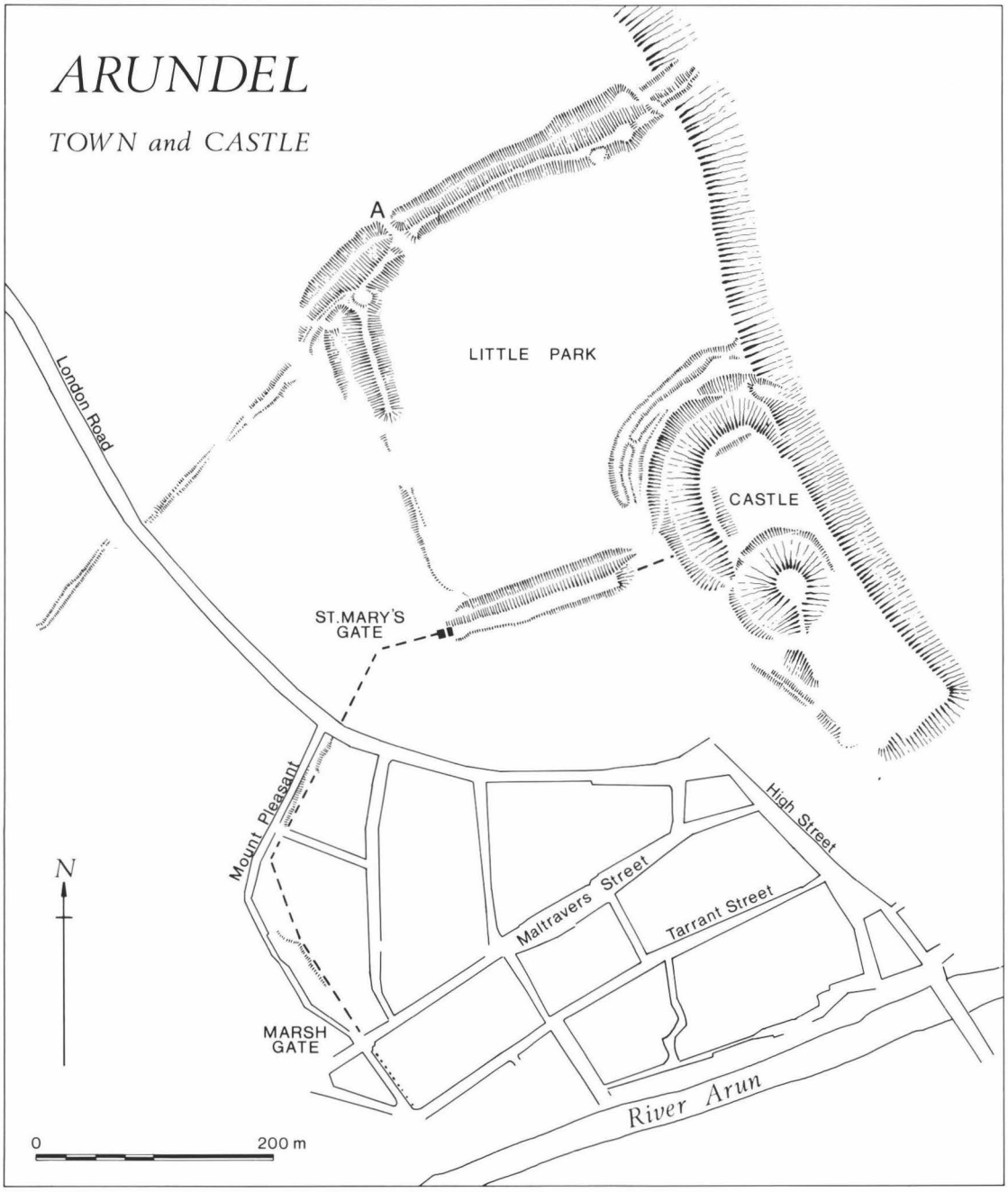

Fig. 2. Arundel, town and castle earthworks.

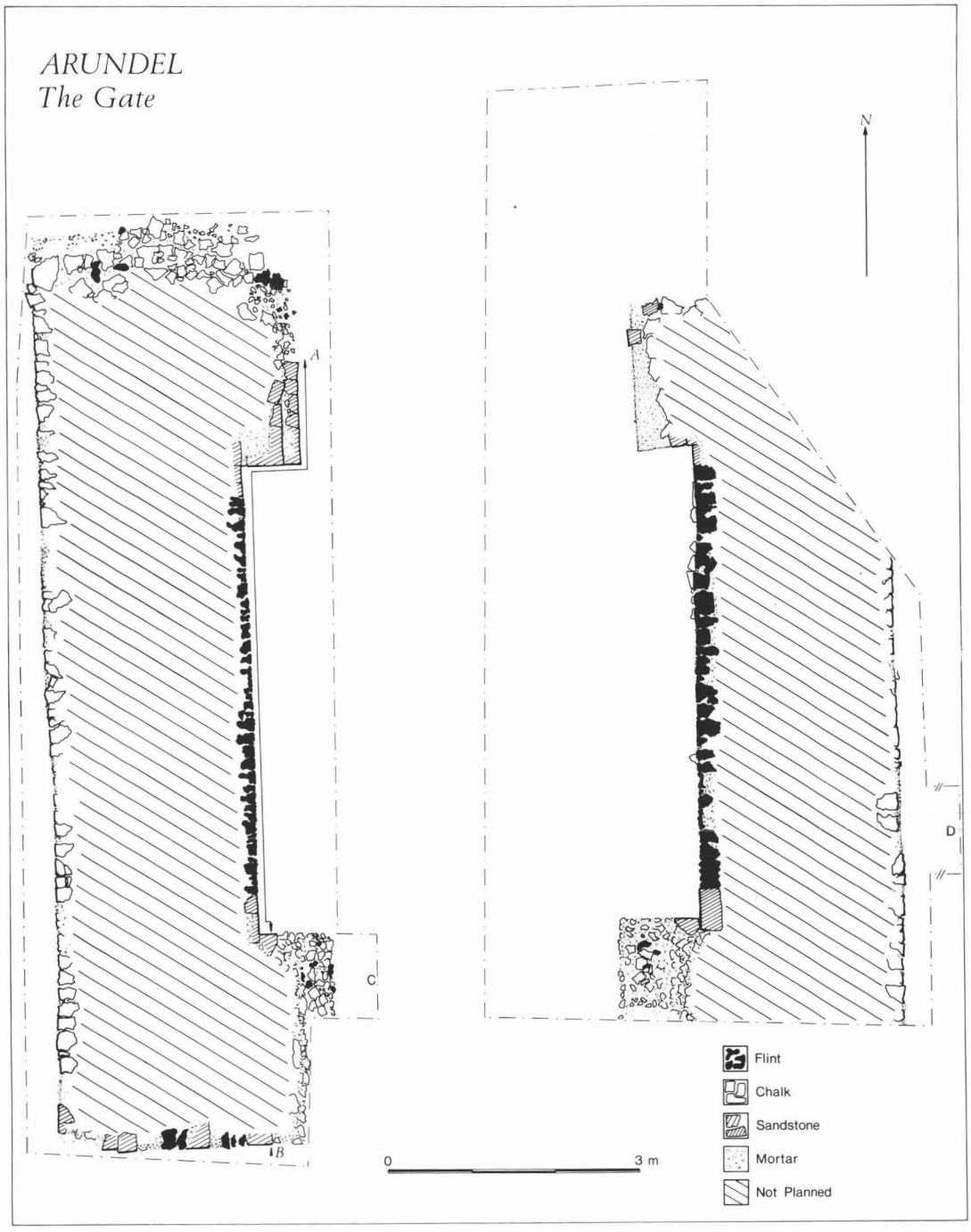

Fig. 3. Plan of Arundel gate as excavated.

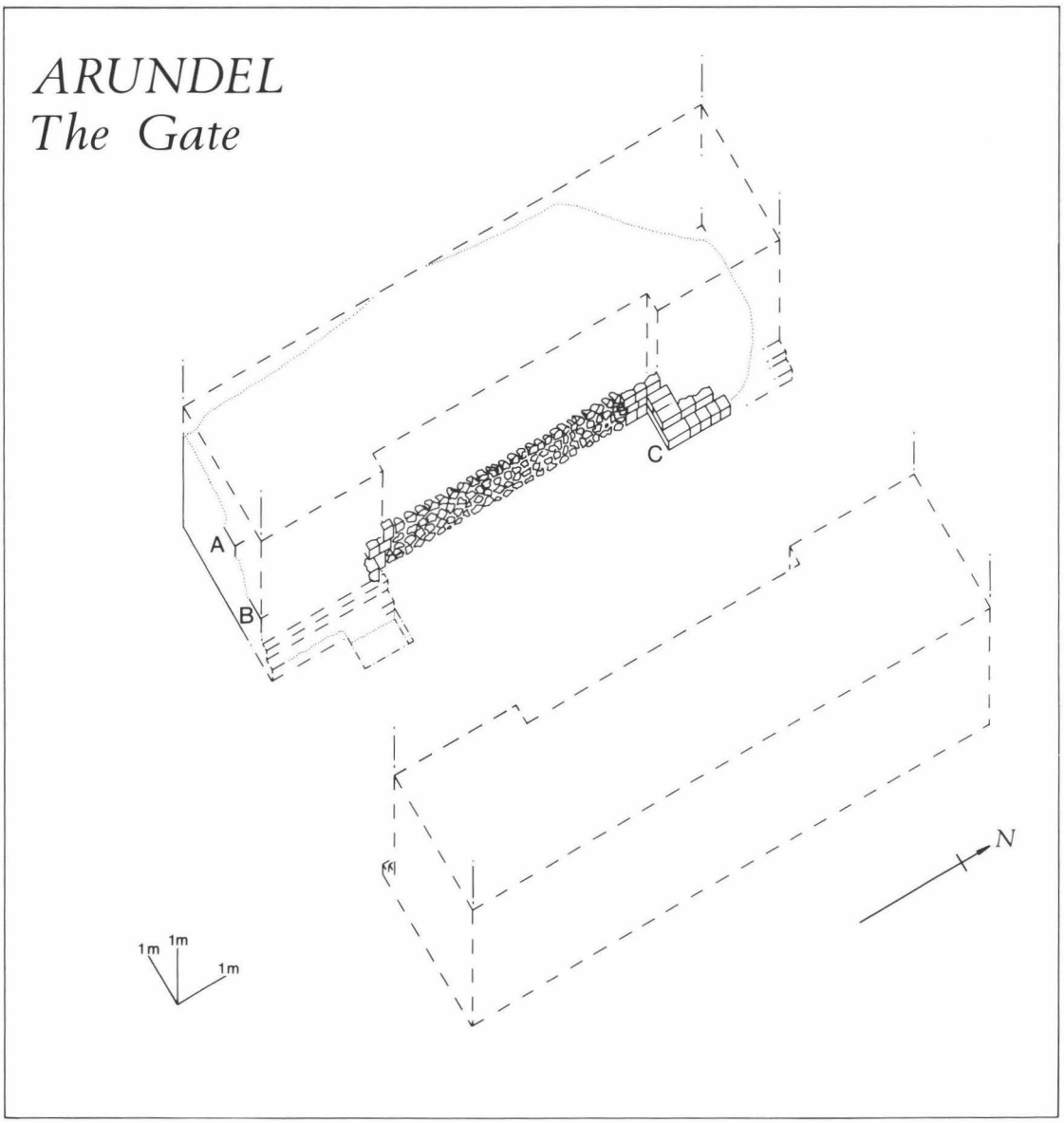

Fig. 4. An isometric view of the gate as excavated.

rubble in the wall core. The southern face of the west wall was quite different though, perhaps because it was never meant to be obscured by the earthwork. Where visible it was seen to consist of roughly faced and roughly coursed flint nodules with several Caen stone 'string courses', (Fig. 4; A and B). The Caen stone was well coursed and appeared to be cut and dressed.

The inward facing offsets (Fig. 4; C) are likewise made of cut and dressed Caen stone set in an orange sandy mortar; all four offsets have been extensively robbed. The central portion of

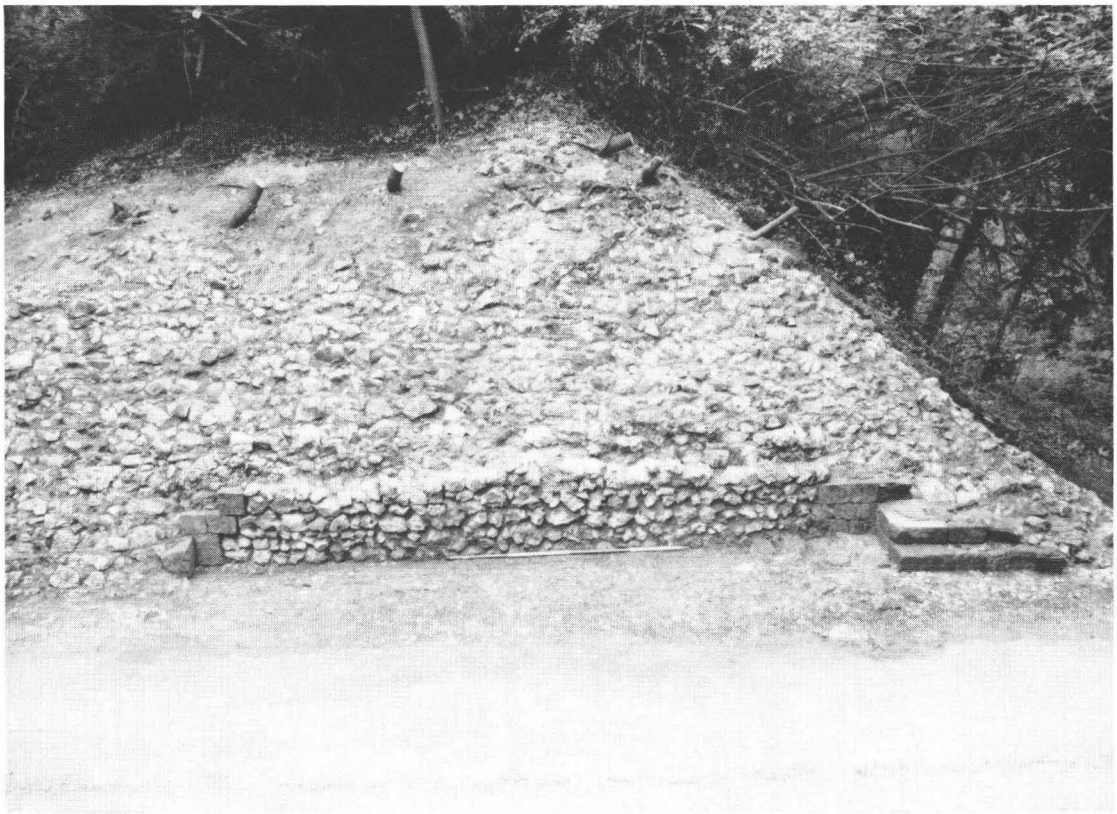

Fig. 5. The west wall of the gate. Scale 2m.

both faces is made of roughly coursed and poorly faced flint nodules, set in a similar sandy mortar (Fig 5).

With the gateway uncovered, it was decided to investigate the roadway (Fig. 3; C), and the earthwork where it lay against the eastern edge of the east wall (Fig. 3; D), to try to gain dating evidence for the gate. The trench across the entrance could not be continuous due to the constant need for access to the cricket ground. It should also be noted that the trench at D (Fig. 3) was 2 metres long, but has been foreshortened in the plan to facilitate the publication of Fig. 3.

This trench was excavated into the bank to a depth of 1 metre to examine the nature of the earthwork and also to look for evidence for the relative dating of the gate and bank. Within the trench, excluding the topmost humic layer, only one context was present (5). For the most part this was unsorted chalk rubble in a sparse clay loam matrix. Poorly preserved tip lines indicated that the bank material in the trench at least was thrown against the wall. There was no evidence for a construction cut. The bank material investigated must therefore postdate, or be contemporary with, the gateway. The pottery recovered from the bank includes one sherd of Iron Age Saucepan Pottery (Fig. 6) and one later medieval glazed sherd, for which a date bracket of 950–1300 has been given. Evidence from such a small sample should not be stressed too highly. As the material came from the top of the mound it might well represent residual deposits placed there during the cleaning out of the ditch, perhaps during the Civil War siege. It is possible therefore that the gateway is cut into the earthwork, but at a late stage further contexts have been superimposed upon this relationship.

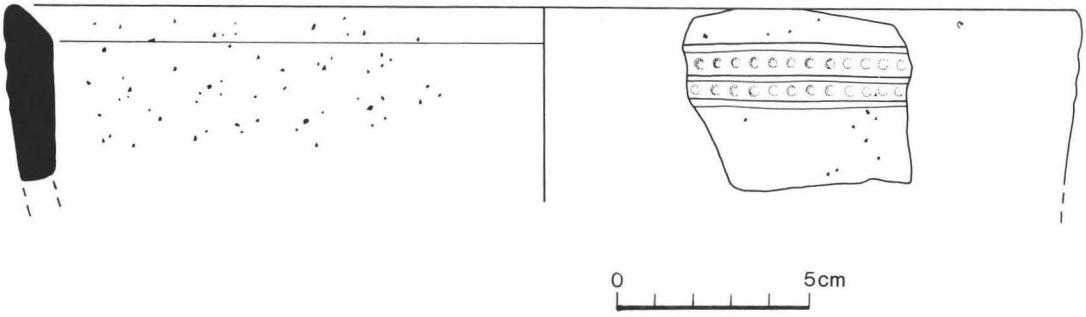

Fig. 6. Iron age pottery from the excavation.

As with the previous trench, the one across the 'roadway' did little more than give an idea of the nature of the deposits. A modern surface (2) was present at the top of the trench, consisting of compacted hoggin. This contained quantities of modern tile and brick. Below this was a context ((8)/(9)) consisting of flint nodules compacted into orange clay that also appeared to be a road surface. Unglazed orange earthenware pottery suggests an 18th- or 19th-century date for this level. Three more contexts ((13), (14), (15)) were present in this trench which may represent earlier surfaces. These contexts were differentiated by varying percentages of flint or chalk in clay-like matrices. The upper two layers were without finds, while the lowest (15) contained several sherds of medieval pottery.

CHRONOLOGY

The gate cannot safely be given a *terminus ante quem* by the pottery from the bank material because of the reservations already mentioned, and the presence of Caen stone merely suggests a post Norman Conquest date.

However, castle and town gates do appear to have undergone distinct changes in building style (Turner 1971, 67–68), which suggests that Arundel is at the beginning of the sequence. Indeed, there are some very close parallels to Arundel from the hundred years succeeding the Norman Conquest. The closest parallels to Arundel in fact come from castles rather than towns, though an exception to this is the late 11th-century and early 12th-century components of the Bootham Bar at York (R.C.H.M. 1972, 118) which shows certain similarities.

The west gate at Norham Castle (*c.* 1170) in Northumberland is a very close parallel (Hunter Blair and Honeyman 1966) with similar offsets. The gate, which is 8.00 metres square, is more complete and is barrel vaulted. As with the other examples it has solid walls about 2 metres thick, offsets, and no guard chambers. The slightly earlier gate (*c.* 1102) at Tickhill, S. Yorks. (Birch 1981, 416–7), is closer in size (10.00 metres–10.00 metres), and has a simple closed tunnel without barrel vaulting (see Illingworth 1938, 112 for an illustration). It is also of interest to note that Tickhill was fortified in 1102 by Robert de Belleme (Colvin *et al.* 1963, 844–845), who was also Third Earl of Arundel until 1102. In addition to these two examples, the Upper Ward west gate at Castle Acre, Norfolk, is very similar (mid–late 11th century on stylistic grounds; Coad and Streeten 1982), as is the south west gate at Sherbourne Castle (1107–1135) (R.C.H.M. 1952, 64–6).

The presence of a 'Norman' gate would indeed make sense if one accepts the arguments (see below) for the possible form of the Norman town. Indeed, it would seem unlikely that a gate would be built here much later considering the line of the 1295 defences (see below). One might try to argue a Civil War (1643) date, but it seems most unlikely on the basis of the building style, material, and the lack of documentation for an otherwise well-documented period in Arundel.

DISCUSSION

Whilst town gateways are often some of the best preserved of our medieval monuments (e.g. York, Canterbury, Winchester, Rye), it is also

true that a great many were demolished in the late 18th century (e.g. Winchester East Gate in 1768, North and South Gates 1771; all gates at Chichester in 1772–1783; Rye Strandgate in 1761–1820; Christchurch Bar Gate *c.* 1744). Consequently town gates remain in the South East only at Canterbury, Rye, Sandwich, Southampton, Winchelsea and Winchester. As such, the remains at Arundel are a welcome addition to the list, although their ruinous state makes it very difficult to make comparisons.

At Arundel the 'passage' between the offsets is 4 metres wide. This may not have been too wide to span by an arch, as the Bars at York have arch spans between 3.5 metres and 4.00 metres (e.g. Bootham Bar, 3.9 metres, R.C.H.M. 1972, 118). Indeed, the majority of gateways have spans between 3.00 metres and 4.00 metres (e.g. Rye 3.6 metres, Turner 1971, 160), and it therefore seems likely that the gate at Arundel was originally arched. Although many town gates have guard chambers at ground level on either both sides (e.g. Rye, Winchelsea) or on one side (e.g Warkworth) this is by no means the rule. At York, the Bootham, Micklegate and Warmgate Bars all have solid ground level walls 1.5–2.00 metres thick, as is also the case at Beverley (Turner 1971, 68, 94, 110). With these extant gateways access to upper storeys is from the walls or earthworks, and a similar situation may have existed at Arundel. This assumes that there would have been chambers above the entrance, but as this is a rule rather than an exception, it seems most likely at Arundel.

FUNCTION

From a consideration of the dating and morphology of the gateway, a progression to its function must now be considered. To a great extent this depends on an understanding of the development of the town defences at Arundel in general.

It has been suggested (Hudson, T. *pers. comm.*) that the circuit of earthworks, of which the gate under discussion is in the northern limb, may be late Saxon in origin. As illustrated in Fig. 2, these earthworks now surround the Little Park and are substantially larger than any of the other 'town defences'. In support of a Saxon presence, the Domesday Book records a church (reference is made to the clerks of St Nicholas holding land in Harting: see *V.C.H. Sussex* **IV**, 20), and a mill at Arundel in 1066 (Eustace 1922, 21). Evidence for a Saxon minster has also been highlighted by Hudson (*pers. comm.*) in the statement that there were '12 secular canons of the English nation' at Arundel Priory before it was appropriated to Seez Abbey by Roger of Montgomery. To this should now be added the (equivocal) evidence afforded by the first Saxo-Norman pottery from Arundel.

The suggestion is that this circuit of earthworks is a late Saxon Burh (Edward the Elder or Athelstan) replacing the one at Burpham (Fig. 1). This process, of which the replacement of Eashing by Guildford is a local example (Haslam 1984, 265; Poulton 1987, 208), has been suggested for some time (e.g. Haslam 1984, 262–267). There is some argument over dates (Haslam 1984, 262–267, and 279), but the process seems confirmed, with the replacement of the earlier fort involving a new burh guarding a river and its crossing point. The regular form of these earthworks is indeed reminiscent of burhs such as Wareham (R.C.H.M. 1959, 121), Wallingford (Brook 1965, 17–21) and Christchurch (Jarvis 1963, 10), though Arundel encloses a smaller area. The height of the earthworks is not dissimilar to Wareham, Wallingford and Burpham (Sutermeister 1976, 197), though the ditch at Arundel appears wider and deeper. However, there are so many factors affecting the size of the earthworks that such comparisons may not be valid.

If this is a Saxon burh, then the entrance at 'A' (Fig. 2) might be in its original position if the earthworks are superimposed on a possible existing routeway (Aldsworth and Freke, 1976, 10–13; Hudson, *pers comm.*). Indeed, this entrance aligns acceptably well with the High Street and the bridge.

With the advent of the original castle (*c.* 1070?) this may have acted as a catalyst for the Norman town to develop "ribbon-like" along this route, both inside and outside the 'burh'. Building remains are known from within the Little Park (West Sussex County Council S.M.R. No. 1963), and these could be remains of Norman building. It is possible, therefore, that it

was now that the gateway was inserted into existing defences, perhaps to act as a toll collection barrier, or as a sign of civic pride. Coad and Streeten (1982, 164) have suggested that the very wide (4.5 metres) Upper Ward gate entrance at Castle Acre would lack defensive qualities and could be interpreted as a sign of ostentation.

In the late 13th century Arundel appears to have been drastically reorganized if one accepts the preceding 'theory'. The area enclosed by the putative burh was made into a park which is first mentioned in 1301: the Little Park of Fig. 2. Also a grant of murage was received in 1295 to allow the building of the new town defences, (perhaps the proximity of these dates suggests deliberate enclosure of part of the old town and the need to form a new boundary). The route of these defences is assumed to run due west from the castle to the Mary Gate (first conclusively mentioned in 1343, *Calendar of Patent Rolls*, 1343–5, 121). This length would have utilized existing 'burh' defences, though the bank would have to have been moved from the north side to the south side of the ditch. The line of defences then ran south-west from the Mary Gate down Mount Pleasant to where the Marsh Gate stood at the end of Maltravers Street (Fig. 2). It is presumed that they then continued down to the river. However, to what extent this circuit involved the construction of new earthworks, as opposed to the utilization of natural terraces, may take excavation to deduce. With this replanning, the High Street would have been diverted to more or less its pre-1803 route (Eustace 1922, 203), and would have made its egress from the town via the Mary Gate. At this date, therefore, the 'Norman' gate would have ceased to function as an entrance to the town. However, archaeologically it is impossible to suggest if it continued in existence in its original form. What evidence there is does not suggest that it was blocked, though this could have been removed at a later date.

The earthworks, and perhaps the Gate, played a major part in Lord Hopton's defence of Arundel in 1643 Eustace 1922, 157), though again it is impossible to state to what degree the gate was still a functioning structure, or if it was merely blocked to form a continuous earthwork.

CONCLUSION

In the preceding sections a theory has been outlined which sets out to explain the development and function of the gateway, and hence its changing relationship to the town of Arundel. However, much of the evidence is circumstantial and will remain so without a foundation based on archaeological 'facts'. It is most unlikely that such facts will be forthcoming, as there are no obvious threats to the 'burh defences' that might make excavation necessary, but should such threats arise, archaeology should be able to recover the information with relative ease. Although examination of the putative burh would probably be the most rewarding, important work could also be done along any stretch of the '1295' defences south of the Mary Gate. We still do not fully know the nature of these defences, the form of the Marsh Gate, or how the defences ended at the River Arun.

The Finds

The Medieval Pottery:

This report is a synopsis of a more detailed report by Mark Gardiner which is stored with the archive. Only the dating of the pottery will be considered here.

Six fabric types were recognized and their frequencies are summarized in Table 1. Fabric 1 (Fig. 6) is Iron Age in date and is very closely paralleled by examples of Saucepan Pottery found at Oving (Hamilton in Bedwin and Holgate 1985, Figs. 6,14).

TABLE 1
Sherd Numbers according to Fabric Type per Context
Number of Sherds

Fabric:	*1*	*2*	*3*	*4*	*5*	*6*	*Total*
Context							
1					3	2	5
3	1						1
4			1				1
5					1		1
7					2		2
10		1	2	1	3		7
15		1			1		2
Total	1	2	3	1	10	2	19

Fabrics 2 and 3 are attributed to the period 950–1100 and were similar to fabrics commonly found at Botolphs (Gardiner, forthcoming).

Fabric 4 was not dateable and occurred only once.

The most common ware, Fabric 5, cannot be tightly dated and is given a range from 950 to 1300.

Fabric 6 is a Binsted-type ware which has been associated with the 14th and first quarter of the 15th centuries (Barton 1979, 170–179).

Miscellaneous:

Pottery:

Sherds of 18th/19th century unglazed earthernwares were recovered from contexts (2) and (8).

Clay Tobacco Pipe:

A clay pipe recovered from a topsoil context is very similar to a type known from the Old Wesleyan Chapel in Dorking (*c.* 1880–1910: Davey (ed.) 1985, 408).

Carbine shot:

Two 0.65 calibre carbine shot were recovered from contexts on top of the west wall of the gate. Mr Mark Murray-Flutter of the Royal Armoury informed the author that carbines were cavalry weapons and might have been in use from the reign of Henry VIII until the early 19th century.

Acknowledgements

The excavation and post-excavation work were both made possible by funding from the Historic Buildings and Monuments Commission; the assistance and donations of the Arundel Society and the Arundel Museum Society are also gratefully acknowledged. I should also like to thank the Arundel Castle Trustees Ltd. for permission to excavate; and the Friends of Arundel Castle Cricket Club, and the Arundel Estates Office for their assistance.

I am greatly indebted to Dr T. P. Hudson for sharing with me, and letting me use, his findings concerning the town defences (to be published in *VCH Sussex* **5**, part 1), and to Mark Gardiner (Field Archaeology Unit) for preparing the report on the medieval pot. I should also like to acknowledge the help of Mr R. Sanderson (British Museum, Natural History) in identifying the Caen stone. Thanks are also due to Dr P. Dixon and Dr D. F. Renn for their advice on the dating of the gateway.

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References

Aldsworth, F. and Freke, D. 1976 *Historic Towns in Sussex. An Archaeological Survey.*

Barton, K. J. 1979 *Medieval Sussex Pottery.*

Birch, J. 1980 'Tickhill Castle'. *Archaeological Journal* **137**, 416–7.

Brook, N.P. 1965 'Excavations at Wallingford Castle, 1965; an interim report' *Berkshire Archaeological Journal* **62**, 17–21.

Coad, J. G. and Streeten, A. D. F. 1982 'Excavations at Castle Acre, Norfolk, 1972–77: Country House and Castle of the Norman Earls of Surrey' *Archaeological Journal* **139**, 138–301.

Colvin, H.M., Taylor, A. J. and Brown, A. 1963 *The History of the King's Works* **2**.

Davey, P. (ed.) 1985 'The Archaeology of the Clay Tobacco Pipe' *British Archaeological Reports* British Series **146** (ii).

Eustace, G. W. 1922 *Arundel: Borough and Castle.*

Gardiner, M. F. (forthcoming) 'An Anglo-Saxon and Medieval Settlement at Botolphs, Bramber, West Sussex'

Hamilton, S. 'The Iron Age Pottery' *in* Bedwin, O. and Holgate, R. 1985 'Excavations at Copse Farm, Oving, West Sussex' *Proceedings of the Prehistoric Society* **51**, 215–45.

Hunter Blair, C. H. and Honeyman, H. L. 1966 *Norham Castle.*

Haslam, J. 1984 'The Towns of Devon' in Haslam, J. (ed.) *Anglo-Saxon Towns in Southern England.*

Illingworth, J. L. 1938 *Yorkshire's Ruined Castles.*

Jarvis, K. 1983 'A Review of the Anglo-Saxon Burh and Medieval Town of Christchurch' in Jarvis, K. (ed.) *Excavations in Christchurch 1969–80.* Dorset Natural History and Archaeological Society, Monograph Series 5.

Poulton, R. 1987 'Saxon Surrey' *in* Bird, J. and Bird, D. G. *The Archaeology of Surrey to 1540*, 197–222.

Royal Commission on Historical Monuments 1952 *An Inventory of the Historical Monuments in Dorset, Vol. 1: West*, 64–6.

'Wareham West Walls. Excavations by the Royal Commission on Historical Monuments', *Medieval Archaeology* **3**, 1959; 120–38.

Royal Commission on Historical Monuments 1972 *An 'Inventory of the Historical Monuments in the City of York, Vol. 2, The Defences.*

Sutermeister, H. 1976 'Burpham: A Settlement Site within Saxon Defences' *Sussex Archaeological Collections* **114**, 194–206.

Turner, H.L. 1971 *Town Defences in England and Wales. V.C.H. Sussex,* **IV**.

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Sussex Archaeological Collections **130** (1992), 140–146

RECENT WORK ON THE EARTHWORKS AT ISFIELD, EAST SUSSEX

by Mark Gardiner

Dredging of the stream beside earthworks at Isfield produced pottery, tile and leatherwork. The spoil was sampled and it is suggested that it had accumulated in the ditch around the medieval manor house of Isfield. Finds suggest a date range of 12th to middle 13th century.

The earthworks lying on the end of the tongue of land to the west of Isfield church (Fig. 1) were first described by Montgomerie (1934). During Spring 1991 the National Rivers Authority dredged a length of the Isfield Mill Stream close to the confluence with the River Ouse. The stream passes to the south of the earthworks and in cleaning the water course archaeological deposits connected with the site were disturbed. Mr David Knight, who works locally, noticed medieval pottery and water-logged leather on the surface of the dredged material and reported his discovery to the Sussex Archaeological Society. The Isfield earthworks have been scheduled as an Ancient Monument and it was decided in consultation with the Historic Buildings and Monuments Commission that the soil from the stream bed should be examined by the Field Archaeology Unit (Institute of Archaeology, University College London) and then removed from the scheduled area.

The spoil had been dug from the stream bed by dragline and then deposited in a band along the north bank of the stream. The dragline had been worked obliquely to the line of the bank so that the spoil was not dumped directly opposite the place from which it had been extracted. The finds appear to have come from the length of stream which runs on the line of a former ditch and archaeological work was concentrated in this area. Initially five one-metre wide trenches (Fig. 1, A–E) were excavated by hand through the spoil at ten-metre intervals. Two further trenches (F, H) were then dug in the areas with the greatest number of finds.

Removal of the spoil in the area of Trench E showed that the dragline had also cut into the archaeological deposits on the bank above the stream. Soil had been removed to create a ramp to allow the machine to cross a ditch. A band up to 0.5 metres deep below the ground had been dug out and when this was cleaned up two layers containing medieval pottery (E2, E3) were recorded below the topsoil. At the equivalent point on the west side of the ditch a similar machine cut had been made. Here a larger area (G) was cleaned up and examined. No evidence of archaeological features or stratified deposits were found there.

Historical Evidence

The earthworks probably lay within the demesne of Isfield manor. Certainly in the late 18th century the land was part of the estate of Isfield Place. The field names Lower, Middle and Upper Court Fields to the south and east of the site were presumably named when the manorial buildings lay within the earthworks (East Sussex Record Office FIG 798).

Isfield was held of the manor of South Malling for suit of court. From at least 1171 Isfield was in the possession of Hugh de Folkington I who died *c.* 1214 leaving a widow, Eggeline and a son, Hugh (Round 1930, 104; Salzmann 1902, no. 137). Hugh de Folkington II died a few years later in 1217 and his lands were inherited by an infant son, also called Hugh. During the minority of the heir the manor was held by Ralph de Willington, who as Budgen has shown, had a close, but uncertain relationship with the family (Du Boulay 1966, 371; Budgen 1921, 120–1). Hugh III seems to have died without heir for the manor came to Olympia, daughter of his brother Geoffrey de Folkington. She married John de la Warr before 1243 and the manor subsequently descended with the de la Warr family (Salzmann 1902, no. 411; Du Boulay 1966, 371–2).

Discussion

There is a clear contrast between the age of the pottery and leatherwork, which are discussed

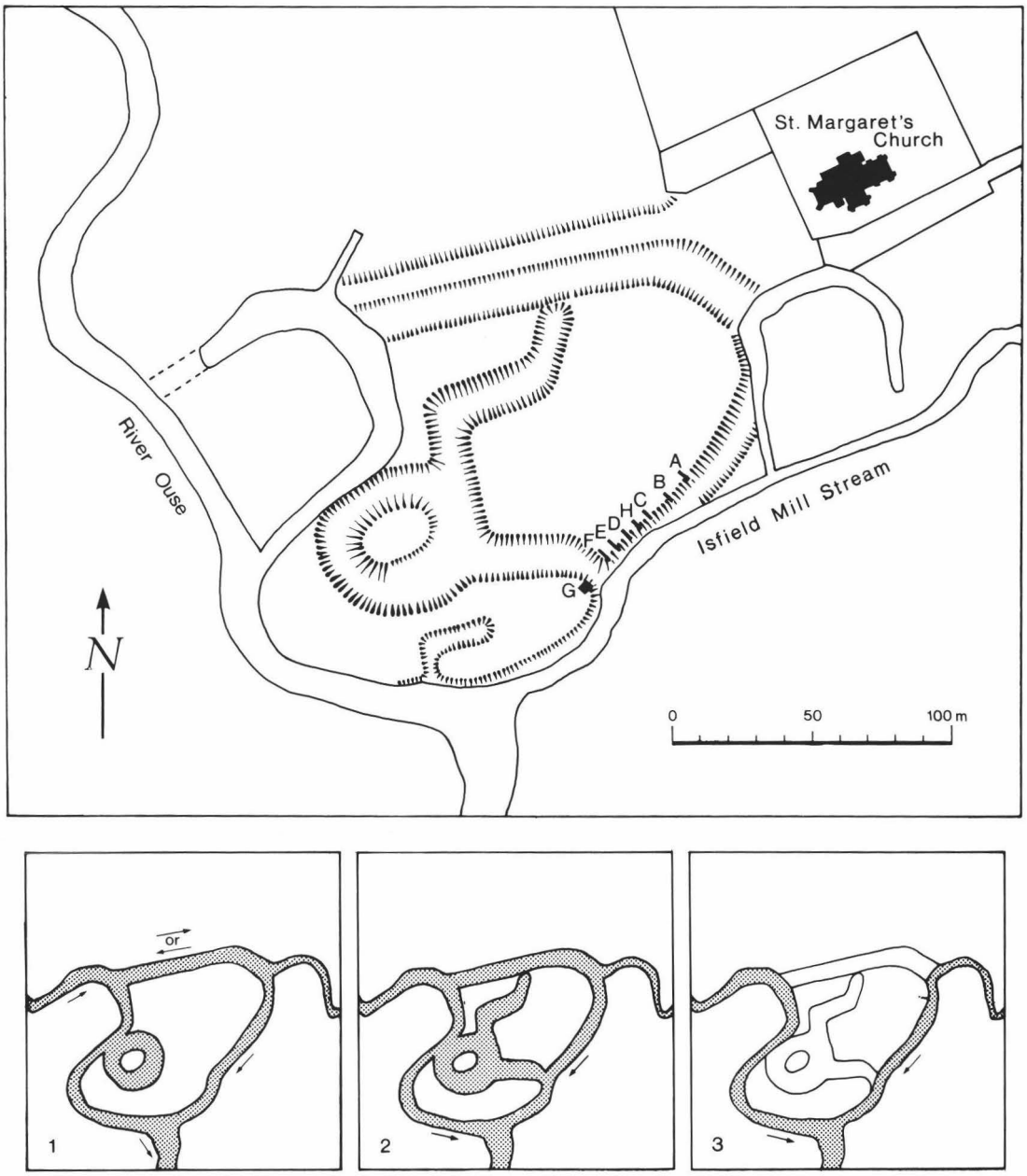

Fig. 1. Earthworks at Isfield, East Sussex and an interpretation of their development. The water-filled channels at each stage (1–3) are shown by tone.

below. The finds were not only unstratified, but coming from the course of a stream may have been moved some distance before being buried. The leatherwork is more likely to have been moved downstream, but pottery, being of greater density, may have become buried in mud at the base of the stream at the point of deposition. It is the pottery, therefore, that provides a more reliable date for the earthworks.

The historic evidence suggests that the earthworks represent the site of the manorial buildings. The finds of pottery indicate a period of occupation from the 12th to the middle of the 13th century, though it should be stressed that only a small quantity of material from one area of the site has been examined. If it is representative of the whole, it suggests that the manor house must have been subsequently moved to a new location, perhaps to the site of Isfield Place, though no medieval work apparently survives above ground there (Nairn and Pevsner 1965, 545).

The surviving earthworks are of some complexity, but a possible sequence of development may be suggested. The courses of the River Ouse and the Isfield Mill Stream were improved in the late 18th and early 19th centuries by making new channels to bypass meanders. Previously the Isfield Mill Stream had flowed around a meander to the east of the earthworks and then along the south side (Fig. 1, 3). At an earlier date it seems likely that the stream must have also flowed along the ditch on the north side of the earthworks to join the River Ouse. Alternatively, the River Ouse may have flowed eastwards along the north ditch to a confluence with the Stream just south-west of the church (Fig. 1, 1). The earthworks which link the north ditch and central circular ditch seem to be a later modification, as Montgomerie observed (Fig. 1, 2).

Montgomerie described the earthworks as a motte-and-bailey castle, though this is not strictly accurate. The 'motte' is barely raised above the level of the surrounding land and though the earthworks clearly do reflect in form the pattern of a motte and bailey, the defensive quality of the site was essentially derived from the water-filled ditches. It is better to term this a moated site and place it in the category of enclosures which imitated the defences of castles and expressed the social pretensions of their occupants (Le Patourel and Roberts 1978, 51). If the dating of the site suggested above is correct, then this may be an early example of a moated site. Certainly it seems to resemble more closely in its defensive form the castles it was attempting to imitate than later moats.

Finds

Pottery (Fig. 2)

Only the pottery found in the excavated trenches was quantified; although a considerable quantity was also found on the surface of the spoil by David Knight. He has made this material available for study and some of the pieces are illustrated here.

The pottery was sorted into fabrics using a hand lens where necessary:

Fabric A—brown-red or light brown surfaces and grey core, rough feel, jagged sometimes slightly laminar fracture with a temper of fine, sub-angular multi-coloured flint grit < 1 mm. and occasional shell and other chalk inclusions.

Fabric B—oxidised surface and reduced core, rough, sandy feel, jagged fracture, tempered with copious medium or coarse sand-size quartz and sub-rounded and sub-angular flint < 1.5 mm.

Fabric C—oxidised or reduced surface with reduced core, rough fracture with a temper of copious grey and translucent sub-rounded and sub-angular medium to coarse sand-size quartz and occasional sub-angular flint.

Fabric D—brown-red exterior and grey or grey-brown core, rough feel with angular and sub-angular flint < 1.5 mm.

Fabric E—hard-fired earthenwares described by Streeten (1985, 114–16).

Fabric F—dark grey or grey-brown surfaces and dark grey core, hard fabric with temper of sub-rounded translucent quartz sand 0.25 mm. across.

Fabric G—this fabric is described by Gardiner (1991) as Fabric DA.

The assemblage is largely unstratified, although the clearance of the machine-dug cut at the base of trench E allowed the recovery of some stratified material. The pottery cannot, therefore, support a detailed interpretation.

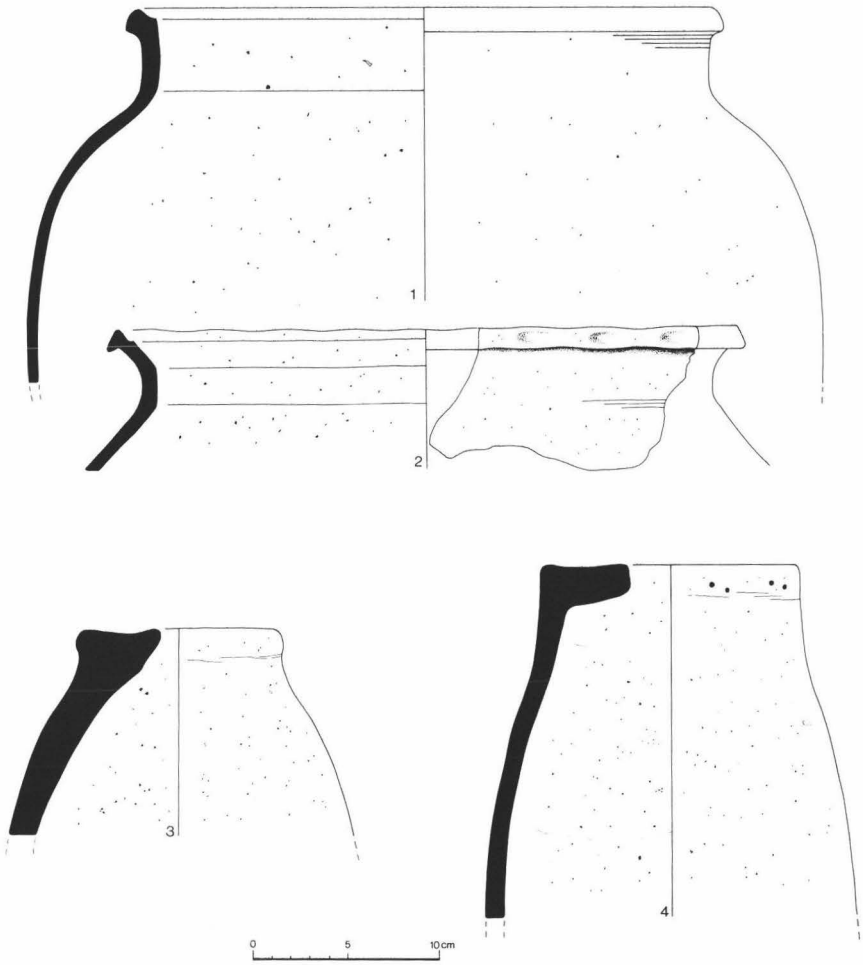

Fig. 2. Pottery and chimney pots from Isfield (x$\frac{1}{4}$).

The large size of many of the pieces of pottery and number of joining sherds suggests that they were discarded shortly after breakage. The number of conjoining pieces with old breaks also substantiates the view that the pottery has not been moved far since deposition in the Isfield Mill Stream. The pottery forms are utilitarian and comprise almost entirely cooking and storage vessels with very few jugs. There are no finer sandy wares from the site and Rye Ware, though found nearby at Michelham Priory and Lewes Friary, is entirely absent here (Barton and Holden 1967, 7; Gardiner in prep.).

Fabric A which forms the greater part of the assemblage is not closely datable and could have been in use at any time from the 12th to 14th centuries. It may be significant that there are no finer sandy wares indicating, perhaps, that deposition had ceased before the later 13th century. A substantial proportion of the sherds have facetting on the rim, a typical Saxo-Norman decoration. A further indicator of an early date is the presence of three sherds of Fabric G, which has been found in excavations in the Adur Valley (Gardiner 1990, 253). This fabric has been found in Bramber village and in

the excavations at Bramber Castle, both of which were established in the late 11th century. It is uncertain how late in the 12th century this type continued in production.

A tentative date range suggested for the pottery is the 12th to mid-13th century. Details of the distribution of pottery is given on fiche, p. 56.

1. Large coil-built pot with sooting on exterior suggesting it was a cooking vessel. Fabric D. Surface find.
2. Wheel-turned rim and hand-made body with dimples on the outer face of the rim. Fabric A. Surface find.

Chimney Pots

A substantial number of sherds from chimney pots were found on the surface of the dredged material and in the trenches dug through it. The pots are of usual 'Sussex-type', except that a number have a bulging profile (Fig. 2, 4) and a conical inner surface (Fig. 2, 3). Pots with these characteristics have been found previously in Lewes and this may represent a local variant of the type (Dunning 1961, Fig. 5.2, nos. 1, 2, 4).

Two fabrics were distinguished, which seem to correspond to those at Pevensey (Dulley 1967, 229).

Fabric Y—brown-red surfaces and core, rough texture and jagged fracture with a temper of fine, sub-angular multi-coloured flint grit <2 mm. and usually <1 mm., occasional shell and other chalk inclusions.

Fabric Z—similar to fabric C above.

A total of 30 pieces of chimney pot were found in the excavated trenches with a total weight of 2.6 kg. representing an estimated vessel equivalent of 0.93.

3. Chimney pot with vent at top and conical inner surface. Fabric Y. Trench D.
4. Chimney pot with vent at top. The sides towards the top and the top face are stabbed. Fabric Y. Context E2.

Tile

Peg tile was found in all the trenches excavated and a sample was collected. Two surviving widths were found among the tile from the surface of the spoil and they measured 166 mm. and 175 mm. The tiles are generally poorly made and many had warped during drying or subsequent firing. A considerable number of tiles had been over-fired producing a reduced, rather hard surface. Splashes or drips of green glaze are common on the tiles, but as these occur equally on the sanded and upper surfaces, and sometimes on both, it seems that the glaze had not been applied intentionally.

A single bonnet hip tile and a few fragments of hearth or oven tiles were recovered. The latter were in a coarse sandy reduced fabric about 22 mm. thick and, unusually, were not pricked on the underside (Holden 1963, 145–7).

Leatherwork (Fig. 3)

The comments on the shoe fragments are based on information kindly provided by June Swann.

5. Upper (a), rand and part of sole (b) of a quarter shoe. The quarter shoe became the usual pattern after 1500, though it is found less commonly at an earlier date. The shoe seems likely to come from either the mid-15th century or the period 1550–70. By the latter date turnshoes were often made without rands and with uppers of comparatively thin leather. The earlier date therefore seems more likely. Trench A.
6. Part of a girl's or small woman's ten-button boot which has been machine sewn. Scalloped button holes are most common from the 1880s to about 1920, though this piece may be from about 1890 as the number tends to increase with the height of the leg in the later 1890s. Surface find.
7. A button-hole piece from shoe, possibly hand sewn. Though hand sewing tends to die out in the 1860s, button boots are most common from this period onwards. Surface find.
8. Glove with separate thumb (b) and part of one finger (d). A circular piece of leather (c) found with the glove may be a gusset. The utilitarian form of this type of glove is likely to have changed little over a considerable period of time and therefore cannot be dated by its shape. Surface find.
9. (Not illustrated.) Fragment of undecorated lined knife scabbard. Surface find.

Acknowledgements

I am indebted to David Knight for informing us about the site and making his finds available for

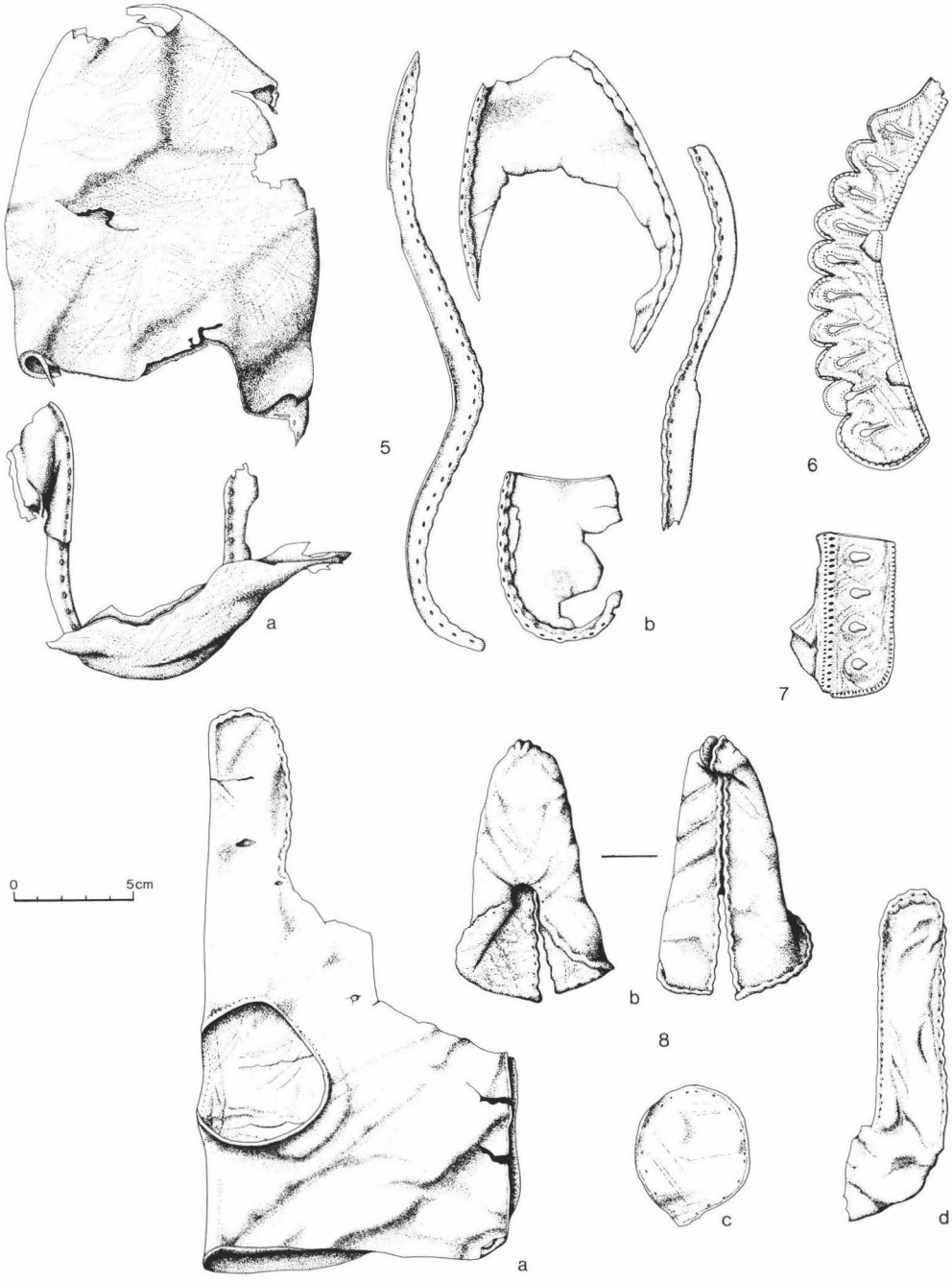

Fig. 3. Leatherwork from Isfield (x⅓).

study. Andrew Woodcock (East Sussex County Council) kindly helped in arranging funding for the work and the National Rivers Authority supported the examination of the site. I would like to thank Michael Dalling, Hope Knight, David Gregory, and Jane Russell for their help on the excavation. Jane Russell also drew the illustrations. The finds have been deposited in Lewes museum (accession number 1991.9).

June Swann kindly commented on the shoe fragments and Frances Pritchard (Museum of London) made available a drawing of a comparable glove from the Boys' School, Blackfriars. Brian Davidson visited the site and made valuable suggestions about the nature of the earthworks.

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References

Barton, K. J. and Holden, E. W. 1967 'Excavations at Michelham Priory', *Suss. Arch. Coll.* **105**, 1–12.

Budgen, W. 1921 'The Manor of Chollington in Eastbourne', *Suss. Arch. Coll.* **62**, 111–32.

Du Boulay, F. R. H. 1966 *The Lordship of Canterbury: An Essay on Medieval Society*.

Dulley, A. J. F. 1967 'Excavations at Pevensey, 1962–6', *Medieval Arch.* **11**, 209–32.

Dunning, G. C. 1961 'Medieval Chimney Pots', in E. M. Jope (ed.), *Studies in Building History*, 78–93.

Gardiner, M. F. 1990 'An Anglo-Saxon and Medieval Settlement at Botolphs, Bramber, West Sussex', *Arch. Jnl.* **147**, 216–75.

Gardiner, M. F. in preparation 'The Pottery', in 'Excavations at Lewes Friary 1985 and 1988–89'.

Holden, E. W. 1963 'Excavations at the Deserted Medieval Village of Hangleton: Part 1', *Suss. Arch. Coll.* **101**, 54–181.

Le Patourel, H. E. J. and Roberts, B.K. 1978 'The Significance of Moated Sites', in F. A. Aberg (ed.), *Medieval Moated Sites* (CBA Research Report **17**), 46–55.

Montgomerie, D. H. 1934 'Description of Earthworks at Isfield, Sussex', *Suss. Arch. Coll.* **75**, 206–208.

Nairn, I. and Pevsner, N. 1965 *The Buildings of England: Sussex*. Harmondsworth.

Round, J. H. 1930 'Sussex in the 'Pipe Rolls under Henry II'', *Suss. Arch, Coll.* **71**, 97–105.

Salzmann, L. F. (ed.) *An Abstract of Feet of Fines Relating to the County of Sussex from 2 Richard I to 33 Henry III*, Suss. Rec. Soc. **2** (1902).

Streeten, A. D. F. 1985 'Pottery', in J. N. Hare, *Battle Abbey: the Eastern Range and the Excavations of 1978–80* (H.B.M.C.E. Arch. Rep. **2**), 103–26.

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THE SIXTEENTH-CENTURY FORGE AT BLACKWATER GREEN, WORTH, WEST SUSSEX: EXCAVATIONS 1988

by Christopher Place and Owen Bedwin

This report describes the rescue excavation of a late 16th-century forge at Blackwater Green, near Crawley, West Sussex. Although two well-preserved timber water-channels and an anvil base were found, recent stream erosion meant that little else connected with the operation of the forge had survived. The case is made for a short-lived forge, the site of which was comprehensively robbed-out and levelled after going out of use.

INTRODUCTION

The site of the water-powered forge at Blackwater Green lies in a broad valley on the south-eastern edge of modern Crawley, although in the parish of Worth, West Sussex (Fig. 1; NGR TQ 292 363). It is probably one of the two forges in Worth Forest, described as belonging to Lord Abergavenny in the 1574 list of Wealden furnaces and forges (Cattell 1979). There is little else in the way of documentary record, and the forge does not appear in any subsequent list.

On the ground, the position of the forge was indicated by a bay *c.* 150 metres long and up to 3 metres high, now used as a bridle path (Fig. 2; Maidenbower Lane). No hammerpond survived, though there was a small pond at the south end of the bay, thought to indicate a former spillway (Cleere and Crossley 1985). Behind the bay was an area thickly covered with scrub and trees; there were no visible indications of archaeological remains, apart from hammerscale in the banks of Gatwick Stream (Fig. 2).

Early in 1988, the Field Archaeology Unit (hereafter FAU) of the Institute of Archaeology, University College London, was notified of proposals for large-scale residential development in the area, likely to cause considerable damage to the forge site. In March 1988, an evaluation of the degree of survival of archaeological deposits was carried out by the FAU, under the direction of Christopher Place. This took the form of three trial pits (shown in Fig. 2), plus a resistivity survey. One of the trial pits (TP2) located a substantial waterlogged timber, apparently *in situ* at the edge of Gatwick Stream. The resistivity survey identified three areas of high resistivity, indicative of timber and/or masonry structures. This implied good survival of at least some of the main features of a Wealden forge. This assessment of the site's potential was accepted by the development consortium, Taylor Woodrow Homes Ltd., Bryant Homes Ltd. and Wimpey Homes Ltd. Because the development would cause unavoidable damage, the consortium agreed to fund fully both the excavation of the site and the post-excavation work necessary to produce this report.

Large-scale excavation was therefore carried out during August to November 1988 by the FAU, under the direction of Christopher Place. Following his departure to a post with Wiltshire County Council, this report has been prepared by Owen Bedwin, with the assistance of staff within Essex County Council Archaeology Section.

EXCAVATION

After removal of dense scrub and a few mature trees from behind the bay, Gatwick Stream was temporarily diverted, and excavation proceeded as follows. There was large-scale machine clearance of humic topsoil over an area *c.* 25 metres east–west by a maximum of 20 metres north–south, straddling the former stream bed (Fig. 2). This revealed an extensive spread of charcoal-rich soil containing forge bottoms, but in which there were no visible archaeological features. (All subsequent excavation was by hand.) Next, a series of test pits measuring 2 metres by 1 metre were dug down through the charcoal-rich deposit to the orangey-brown clay subsoil. When these failed to locate any structural features, a larger area was opened up, starting from the edge of the former stream bed, and this located the northern water-channel.

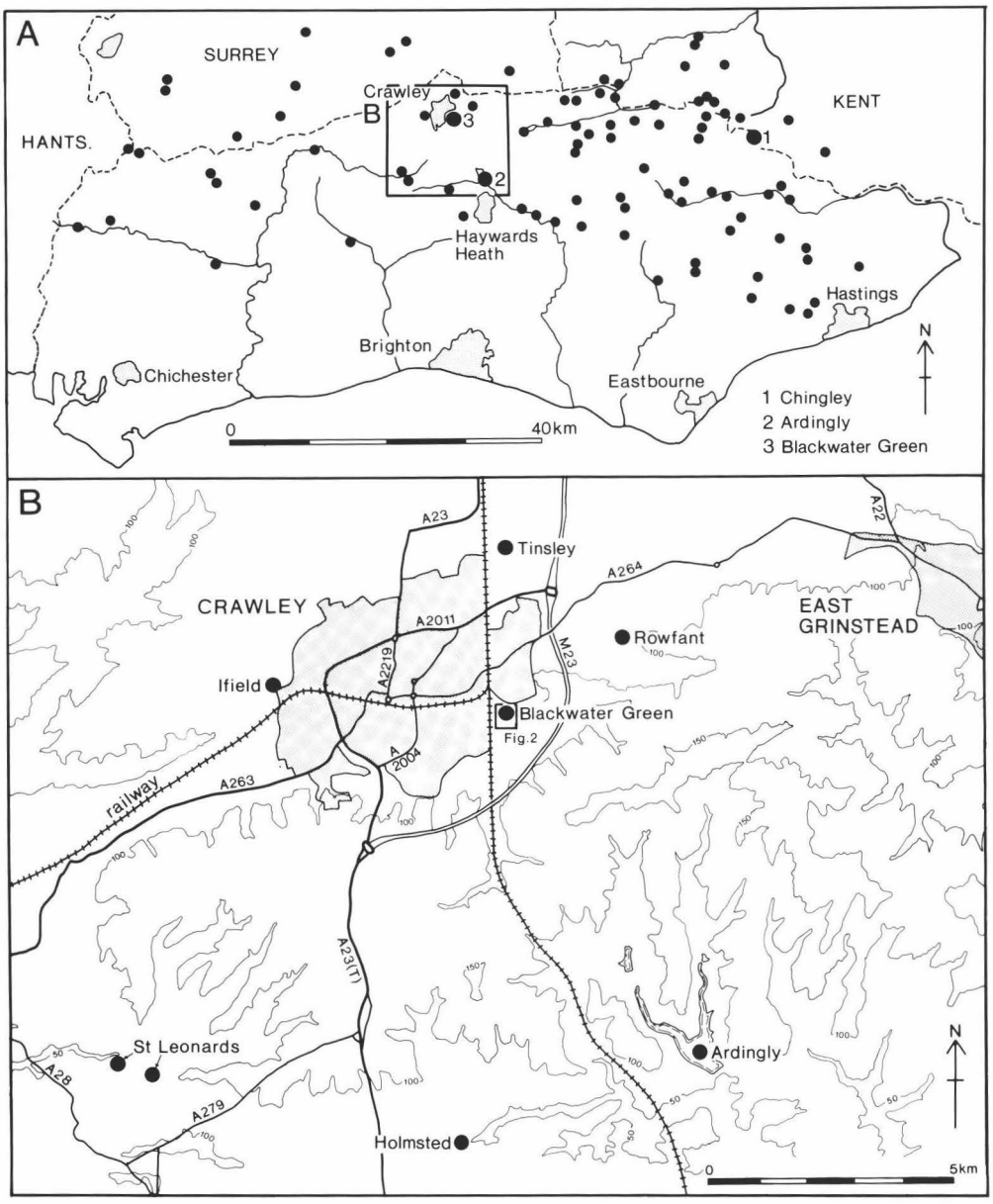

Fig. 1. Blackwater Green 1988. Top: distribution of Wealden forges (after Cleere and Crossley 1985), showing the three excavated examples. Bottom: site location, showing Blackwater Green and other nearby forges. Contours in metres O.D.

Working back from this, the anvil base and the southern channel were also exposed and fully excavated. The good condition of the timber was due to waterlogging. The area between the two channels and the areas to their immediate north and south were excavated down to the natural subsoil.

However, apart from the water-channels and the anvil base, little else survived that could confidently be assigned to the time when the

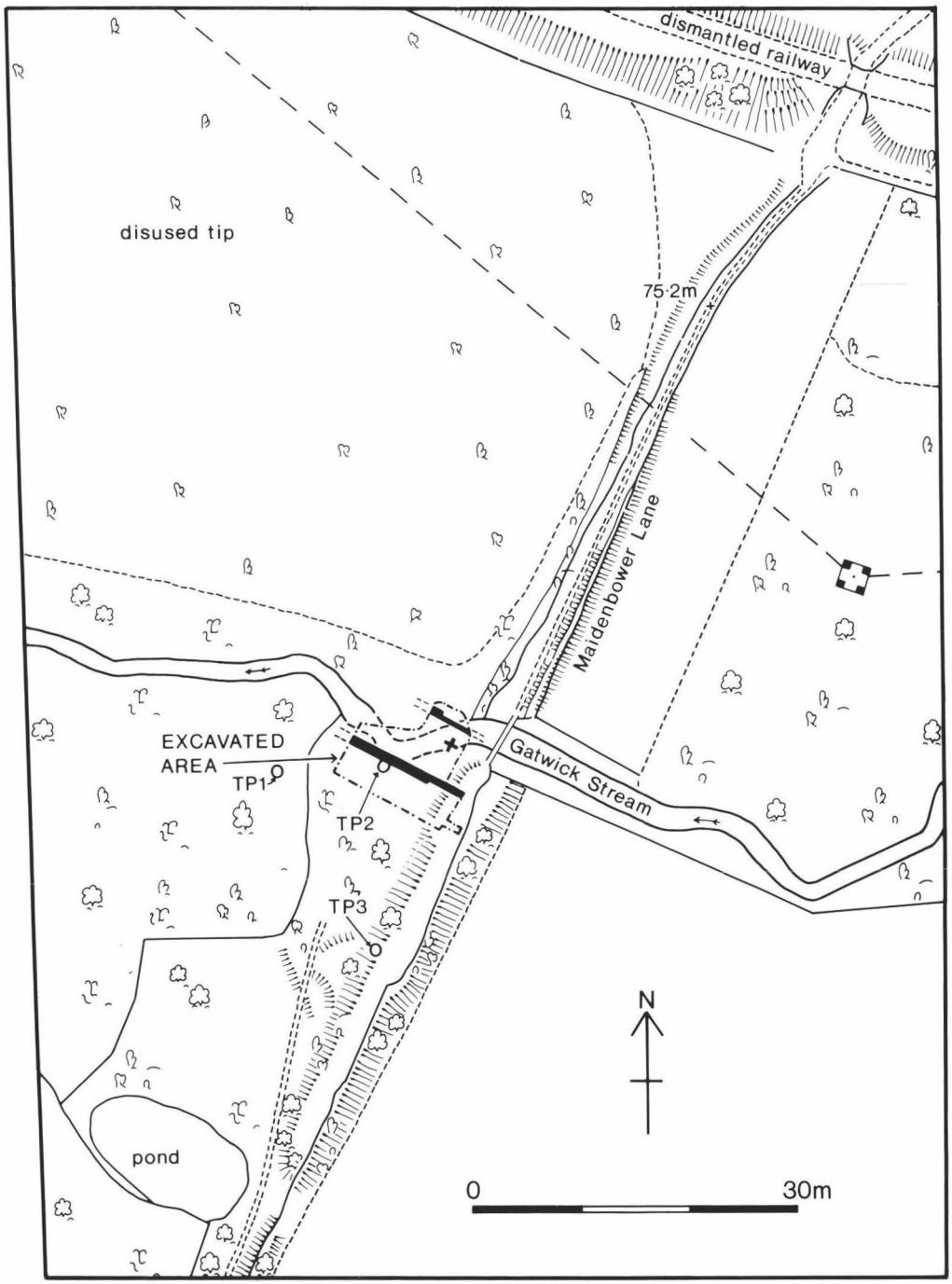

Fig. 2. Blackwater Green 1988. Location of excavation, with major timber features shown in black, and location of trial pits, TP 1–3.

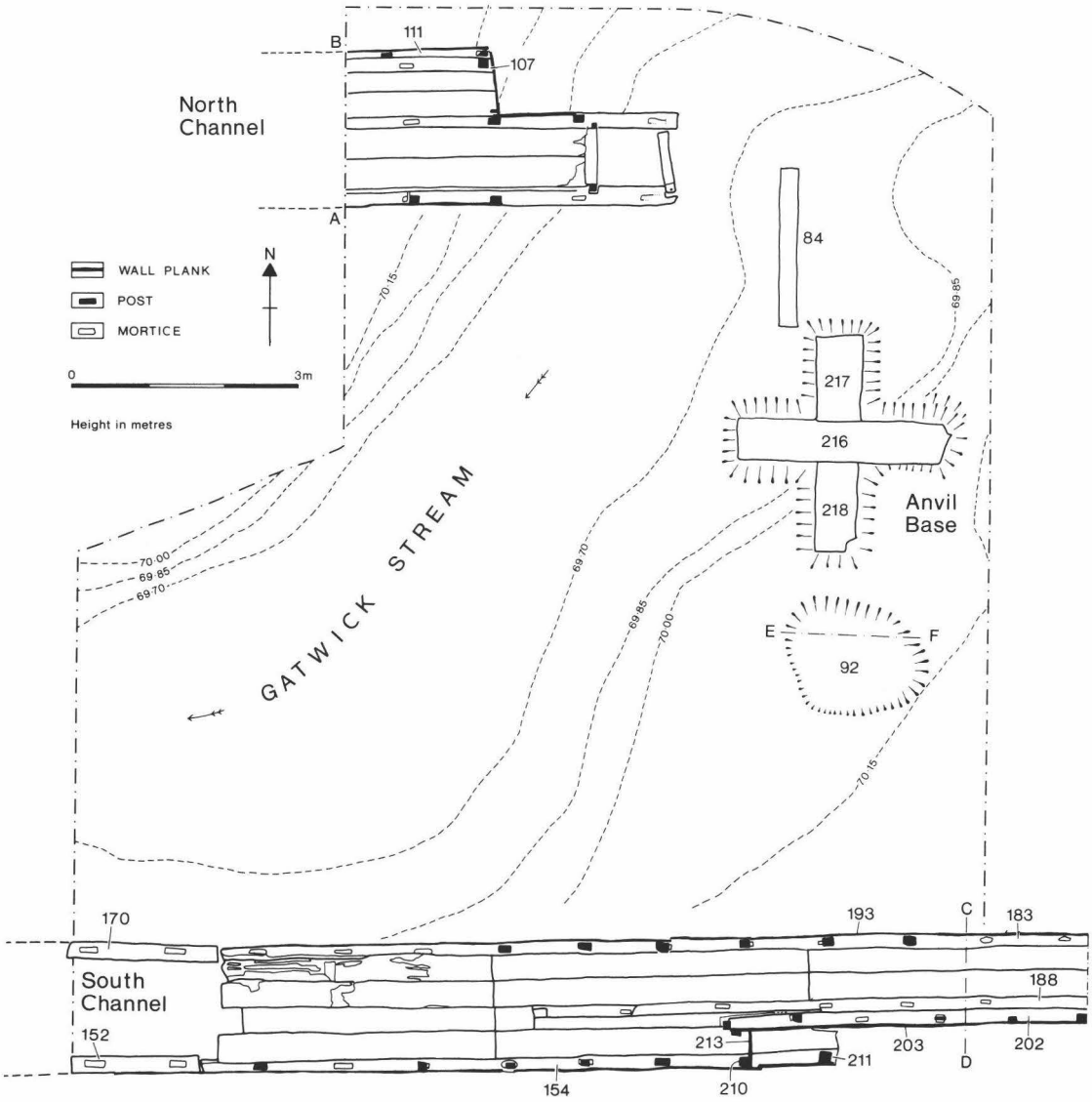

Fig. 3. Blackwater Green 1988. General site plan showing major timber features. Erosion due to Gatwick Stream (temporarily diverted during the excavation) is indicated by the contours (in metres O.D.) corresponding to the sloping sides of the stream.

forge was in operation. Pit, context 92 (Fig. 3), is thought to be related to the forge; it contained much slag and charcoal, but could not be linked stratigraphically to any of the other forge features. There was no sign of any building housing the hammer, unless timber 84 (Fig. 3) is interpreted as part of such a structure. Nor was there any indication of finery or chafery hearths. Much damage will have been done by erosion as the course of Gatwick Stream meandered across the centre of the site (Figs 2 and 3), but there was evidence too for robbing out (see below).

The three main timber structures are now described in more detail:

The northern water-channel (Fig. 4)

A 4.5 metre length was exposed (Fig. 3), but this was clearly incomplete. The channel must have extended further to the east where the wheel-pit housing the wheel which powered the hammer must have been (due north of the anvil base; Fig. 3), but this had been entirely eroded away by the stream. In fact, much of the exposed 4.5 metre stretch lay in the stream bed, and it would have been merely a matter of time before it too disappeared. The channel also extended further west, but this stretch lay beneath an unexcavated baulk (Fig. 3).

Only the channel floor survived, with just the base of one or two uprights and a little side-planking. The main longitudinal members and cross beams were in good condition. There were signs of wear on the floor planks and exposed parts of the longitudinal members. Whether this resulted from scouring during the operation of the forge or subsequent erosion by Gatwick Stream, or both, is not clear. All the timber in this channel was oak.

The uprights were set into the longitudinal beams by simple mortice and tenon joints. The cross beams were jointed at each end by identical pegged mortice and tenons. There were neat rectangular grooves in the inner edges of the longitudinal members to accommodate the floor planking, which was nailed in position.

The dimensions of the channel and its main components were as follows:

Initial width:	1.2 metres
Width at offset:	2.2 metres (2.0 metres before adding timber 111, Fig. 3)
Longitudinal members:	*c.* 25 cm. square
Cross beams:	*c.* 12–15 cm. square
Uprights:	*c.* 15 by 11 cm.
Planking:	*c.* 30–35 cm. wide by 3–4 cm. thick

Fig. 4. Blackwater Green 1988. The floor of the northern channel with planks removed to show cross-beams; from the south-east. Scale 2 metres. Photo: G. McDonnell.

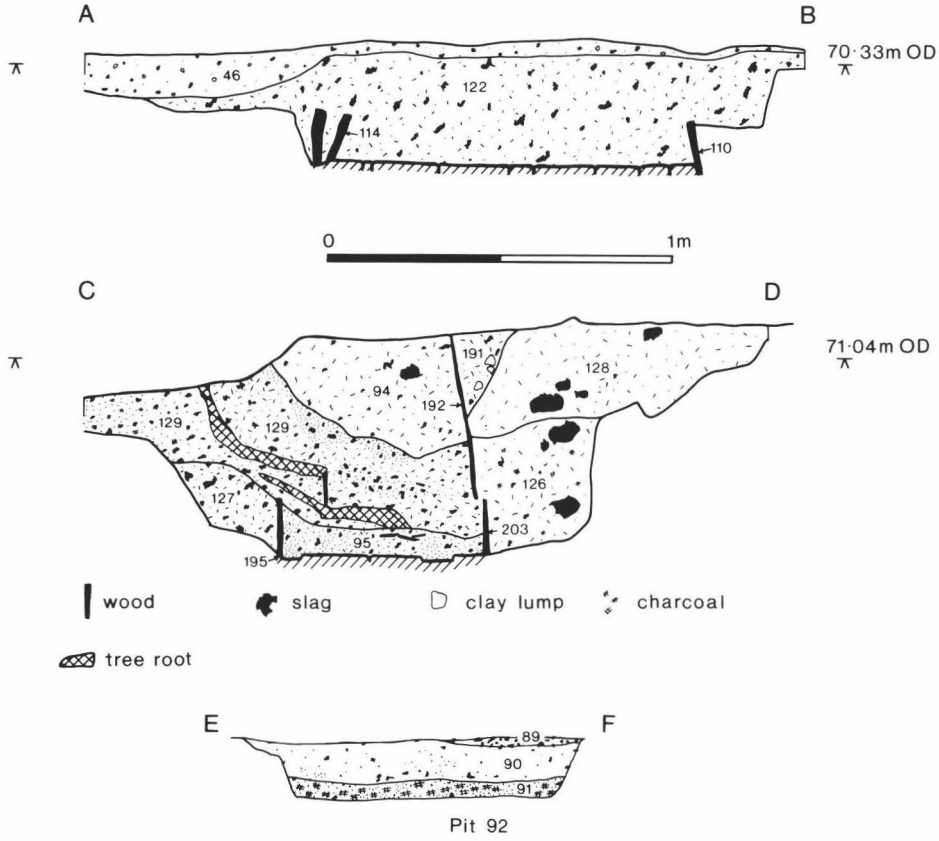

Fig. 5. Blackwater Green 1988. Sections across the northern and southern channels and pit 92. (Refer to Fig. 3 for their positions.) Note that in section CD, the position of timber 192 in the backfill is purely fortuitous; it is not structural.

The original depth of the channel is uncertain because of the considerable stream erosion. The section (A–B in Fig. 5) is thus not very informative and shows the channel at this point backfilled entirely with a compact slag-rich fill (context 122 in Fig. 5).

The southern water-channel (Fig. 6)

A length of 14 metres was excavated, though the head of the channel was not defined (Fig. 3). As with the northern channel, there was an offset chamber, and the basic construction of the floor was very similar. There was better survival of both side-planking and uprights (the latter to a height of up to 45 cm.) in the southern channel; however, this clearly did not represent the full height of the channel. Since this channel had not been subjected to stream erosion to anything like the same degree as the northern channel, the missing uprights almost certainly indicate robbing-out. The structure of this channel was basically the same as the northern channel, with the same system of joints. An isometric reconstruction of the southern channel is shown in Fig. 7; this is necessarily incomplete due to the lack of surviving evidence. The side-planking in this channel was simply set in position (not nailed or pegged) behind the uprights. This had been suspected in the northern channel, but poorer survival made this difficult to prove. The dimensions of this channel and its main components were as follows:

Initial width at eastern end; 1.2 metres
Initial width implied by timber 188; 1.0 metre
Width at offset; 1.7 metres
Longitudinal members; *c.* 20–25 cm. square
Cross beams; 15 cm. square

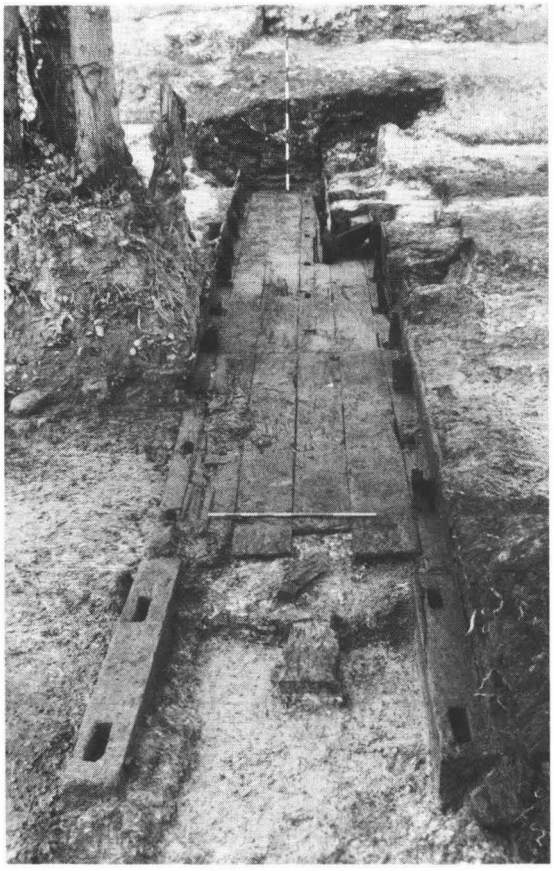

Fig. 6. Blackwater Green 1988. The southern channel from the western end. Horizontal scale 1 metre; vertical scale 2 metres. Photo: G. McDonnell.

Uprights; *c.* 15 by 12 cm.
Planking (side and floor); *c.* 30–35 cm. wide by 3–4 cm. thick.

Again, virtually all the timbers were of oak, though the one upright sampled was of ash, as was one of the planks towards the western end of the channel. If the length of the middle set of planks in the southern channel are a guide to the length of the first (easternmost) set, then the channel extended about 1 metre further east.

The sections across the southern channel were not very informative (a typical one is shown in Fig. 5). It had clearly been totally backfilled with slag-dump deposits (contexts 95 and 129 in Fig. 5).

The anvil base (Figs. 8 and 9)

This consisted of three substantial oak timbers laid in the form of a cross, set in a cross-shaped pit (Fig. 3; timbers 216, 217 and 218). Timber 216 was 2.8 metres long, with a cross-section 0.6 metre square. Timbers 217 and 218 (simply butted to 216) were each 1.2 metres long with cross-sections 0.6 metre square. There were clear signs of wear in the centre, caused by repeated hammering on the anvil above (best seen in Fig. 8). There were no signs of the anvil itself or the hammer-helve.

Other features can be summarily dealt with. Only the single straight unjointed beam, timber 84, set into the subsoil, and the pit, context 92, cut into the subsoil, are identified with the forge. Pit, 92, was an irregular, rounded shape, *c.* 1.60 metres by 1.45 metres across at the top, and cut *c.* 45 cm. into the subsoil (Figs. 3 and 5). It had a flat bottom and almost vertical sides. It contained a loose, root-disturbed, silty clay fill, with some charcoal, slag and a few fragments of burnt clay. Lacking any stratigraphic relationship with the nearby anvil base, and lacking anything, such as pottery, to date it more precisely, this pit can only be cautiously considered part of the forge. The section E–F (Fig. 5) argues against it having been left open to silt up naturally, and it was probably backfilled, like the channels, when the site was cleared. It is interpreted, very tentatively, as a quenching pit. The only other features were a series of shallow, slag-filled ruts, presumably caused by carts running north–south across the centre of the site (not shown in Fig. 3 for the sake of clarity). These clearly post-dated the abandonment of the forge.

Finds were limited. There were 183 potsherds; the few which came from a context contemporary with the forge's operation provide the only archaeological dating evidence (report below). There were 144 iron objects (of which 108 were nails), 50 fragments of waterlogged leather (some of which were very small), 17 pieces of struck flint (all residual) and three fragments of clay tobacco pipe. Of almost as much significance as the presence of these finds was the total absence of any building debris. There were five fragments of brick and one roof tile, plus some discarded pieces of timber in the channels. Finally, from context 95, the lower fill of the

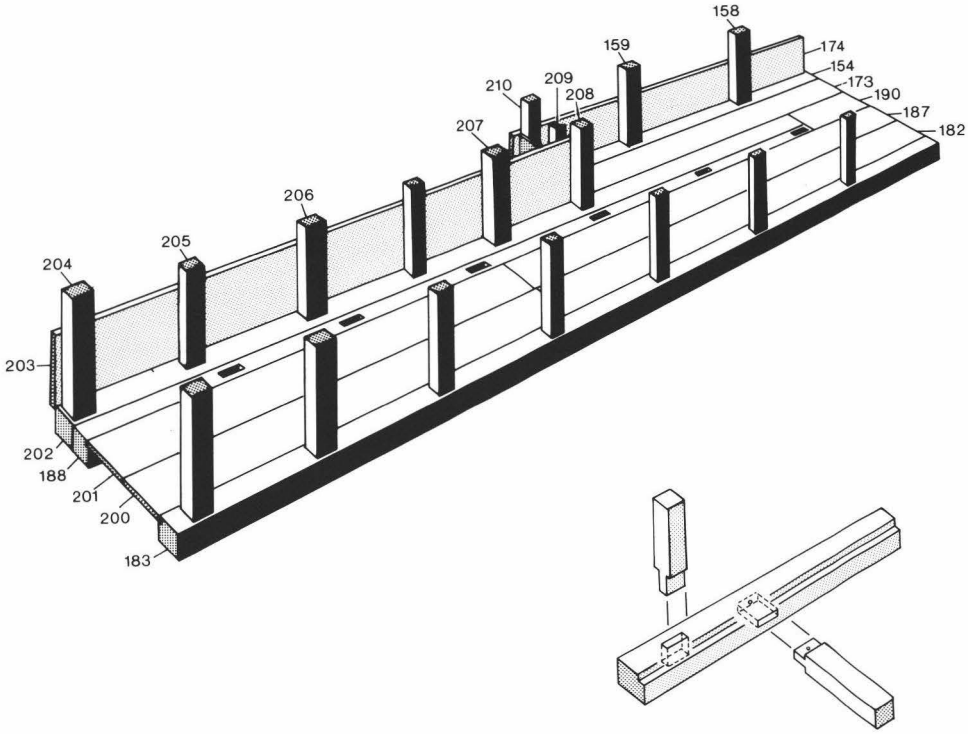

Fig. 7. Blackwater Green 1988. Top: three-dimensional reconstruction of the southern channel, viewed from the north-west. The upper part of the framework is not shown for lack of evidence. Also the side planking on the near side is omitted for clarity. Bottom: detail of the jointing (identical with the northern channel).

southern channel (Fig. 5), came a pile of four rectangular wooden boards, typically 48 by 17 by 2.5 cm. These were chamfered along one edge and were almost certainly bucket boards from a water wheel. There were also a number of fragmentary timbers of similar appearance.

SPECIALIST REPORTS

Post-medieval pottery (by Helen Walker)

The pottery comprised 183 sherds, weighing *c.* 2.8 kg. With the exception of a single sherd, all the material was post-medieval.

Method

As the pottery belongs to the post-medieval period, when pottery-making became more uniform, it has been possible to use the classification devised for Essex pottery (Cunningham 1985). However, for the earthenwares, Streeten's (1979) fabric descriptions for the Hartfield area of Sussex have been used.

The fabrics

These were classified as follows:

Red and grey sand-tempered ware (Streeten 1979)

Post-medieval earthenware; this was by far the commonest fabric type. It has been classified as Streeten's type E (iv)—'other hard-fired, smooth-surfaced earthenwares', although some contexts produced a distinctive but unattributed type of earthenware, described in the text. Black-glazed wares are also included as post-medieval earthenware.

Raeren stoneware (Hurst *et al.* 1986)

Frechen stoneware (Hurst *et al.* 1986)

Southern white ware (or Surrey-Hampshire border ware) (Holling 1971)

English tin-glazed earthenware (Draper 1984)

Fig. 8. Blackwater Green 1988. The anvil base from the south-east. Note the wear caused by the forge hammer in the centre. Scale 1 metre. Photo: G. McDonnell.

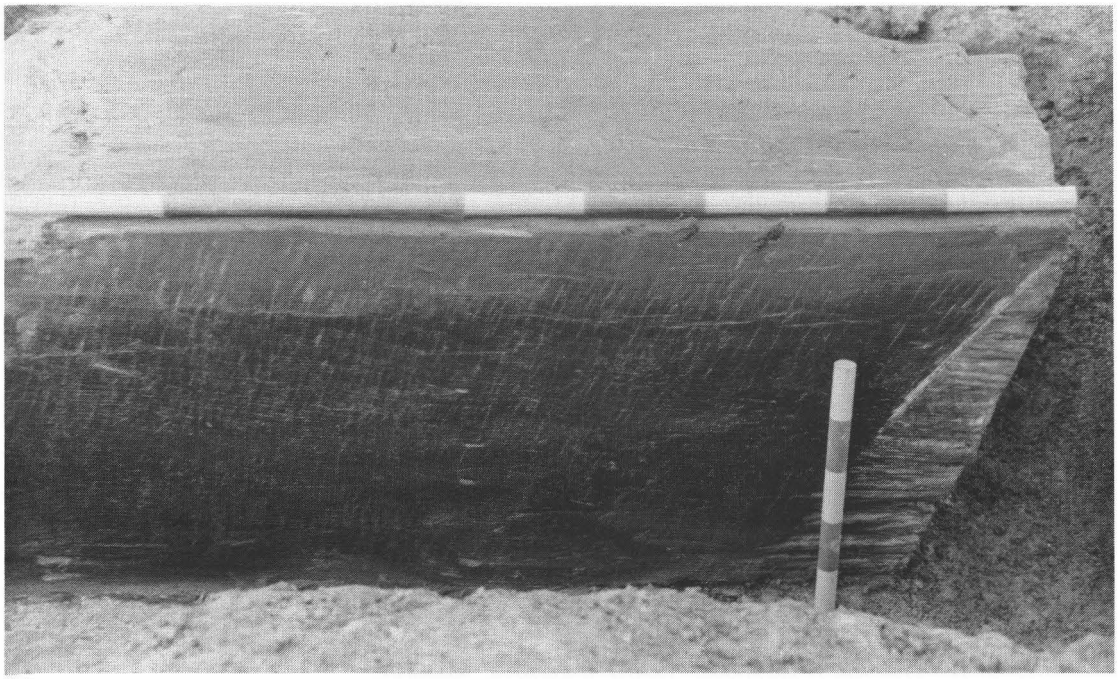

Fig. 9. Blackwater Green 1988. Detail of tool marks on the side of the anvil base. Vertical scale 25 cm. Photo: G. McDonnell.

Nottingham/Derby stoneware (Draper 1984)
English stoneware (Draper 1984)
English porcelain (Draper 1984)
Staffordshire ironstone types
Late kitchen earthenwares

Pottery contemporary with the working of the forge

Because of the damage done by stream erosion (Fig. 3), hardly any contexts remained which could confidently be linked with the operation of the forge. Of these, only one produced any pottery; context 76, a charcoal spread at the outside upper edge of the northern channel. The pottery consisted of two sherds of Southern white ware and a fragment of post-medieval earthenware in a creamy orange fabric with occasional veins of lighter coloured clay and with darker surfaces. The texture is smooth with no obvious added tempering. The sherd has an internal lead glaze and is iron-stained. (There was also a residual medieval sherd in red and grey sand-tempered ware.) The presence of the Southern white ware would date the deposit to not before the late 16th century. The distinctive post-medieval earthenware is not so easy to date (but see discussion of jar rim from context 95, below).

Pottery from backfill in the southern channel

Sections across both channels tell the same story; rapid and extensive backfilling with slag-rich material. Only deposits in the southern channel yielded pottery; contexts 95 (Fig. 5; CD) and contexts 69, 75, 77 and 78 (not shown in section). Context 95 produced an earthenware jar rim (Fig. 10.1) in the unusual fabric described above. It is paralleled by a vessel found at the Lower Parrock kiln, but is not a product of that kiln (Freke 1979), and has been classified by Freke as 'alien' local ware. However, it is likely to have been contemporary with the pottery made at Lower Parrock, giving an early 16th-century date for the jar. Context 95 also produced sherds of Southern white ware and one sherd of Frechen stoneware with a mottled tiger ware salt glaze. The remaining pottery is all post-medieval earthenware. Three rims are present (Fig. 10.2–4), comprising a flanged ?dish rim, collared rim perhaps from a jar, and a triangular beaded rim of unidentified form. The latest pottery from this group is the mottled Frechen stoneware dating from the late 16th to the late 17th century. The Southern white ware fits in with this, and the flanged dish rim is a similar shape to those found on Metropolitan slipwares of the 17th century. Only the jar (Fig. 10.1) could be earlier, but then it could be a long-lived form.

The other contexts (69, 75, 77 and 78) produced only two types of ware; German stonewares and post-medieval earthenware. Part of a Raeren globular drinking jug with all over external brown glaze came from context 78. Also in this context were stoneware sherds with a slightly mottled brown salt glaze; they belong to the upper part of a narrow-necked jug and may be Frechen products. In context 69 was a flat stoneware base showing concentric arcs on the underside where wire was used to remove the pot from the wheel. This is diagnostic of Frechen stoneware.

As for the earthenwares, many seem to be of the distinctive fabric noted above. Forms comprise two very similar glazed jugs with flared rims and grooved handles where the groove tapers to a point as it meets the handle (e.g. Fig. 10.5). Of the other earthenwares, a black-glazed tyg base (Fig. 10.6) was found in context 77. All the earthenwares are iron-stained and there are cross fits between the earthenwares in all four of the contexts (see table in Archive).

The dating of this group of pottery from backfill deposits may not be very much later than that from context 76, contemporary with the forge. The Raeren stoneware jug is dated to the first half of the 16th century (Hurst *et al.* 1986), but may have been old when discarded; it is unlikely to have been residual because of the large size of the fragment (*c.* 20 per cent of the pot). The tyg (Fig. 10.6) has a broader date range, as black-glazed wares were introduced into other parts of the country from the early 16th to the 17th centuries (Jennings 1981). The flanged dish (Fig. 10.2) may suggest a 17th-century date.

Pottery from other post-abandonment contexts

The slag dumps and other slag-rich deposits produced pottery ranging from the 16th to the 20th century. This material is fully recorded in

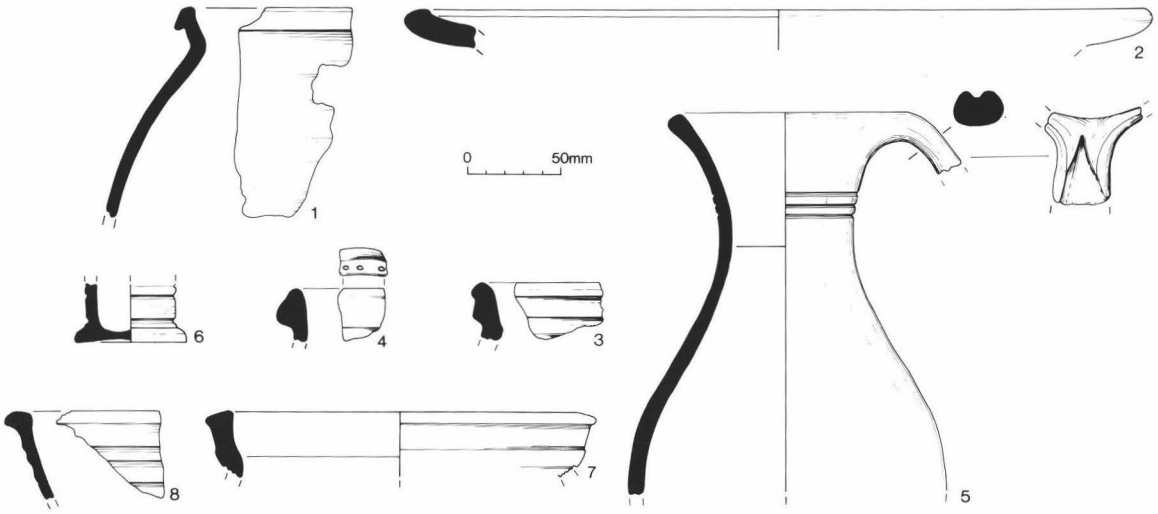

Fig. 10. Blackwater Green 1988. Post-medieval pottery.

the Archive, but does not merit detailed publication. Two sherds are worth noting; a lid-sealed jar rim in post-medieval earthenware (Fig. 10.7), and a Southern white ware bowl rim (Fig. 10.8).

Catalogue (Fig. 10)

1. Jar rim: post-medieval earthenware; all over internal dark brown glaze, splashes of glaze externally; some iron staining. *Context 95* (Fig. 5; CD).
2. Dish rim: post-medieval earthenware; internal plain lead glaze; abraded. *Context 95*.
3. Jar rim: post-medieval earthenware; rough abraded surfaces; oxidised but with a grey core in places. *Context 95*.
4. Rim: post-medieval earthenware; thick pale grey core, buff-orange margins and external surfaces; internal decayed green glaze extending over rim; impressed dimples on rim. *Context 95*.
5. Jug: post-medieval earthenware; partial external plain lead glaze with glaze extending to inside of neck; incised horizontal lines around neck; heavily iron stained, especially internally. *Contexts 75 and 77*.
6. Tyg base: post-medieval earthenware; all over black manganese glaze; iron stained. *Context 77*.
7. Lid-seated jar rim: post-medieval earthenware; internal very dark green glaze; some iron staining. *Context 46*.
8. Bowl rim: Southern white ware; internal apple-green glaze. *Context 61*.

The ironwork (by Hilary Major)

A total of 144 pieces of iron were examined, of which 108 were nails. These latter are considered separately below; of the remaining 36 pieces, nearly half came from context 95, a slag-rich fill in the lower part of the southern channel (Fig. 5; CD).

The assemblage is notable for the almost complete absence of the 'domestic' ironwork normally found on archaeological sites—objects such as knives, small personal items, and door and furniture fittings. A number of pieces of sheet iron and strip fragments were found, but all were broken and may have been scrap, apart from a perforated plate from context 95 (Fig. 12.9). Some of the other iron may also have been scrap metal, e.g. a cylindrical object from context 78 (Fig. 12.11), and the bars from context 95. Most of the actual objects present would have been associated with iron-working, including wedges, punches, spikes and a possible chisel. The chisel (context 169; Fig. 13.14) and some of the wedges appear to have been damaged before they were discarded, suggesting that they too might be regarded as scrap metal. The small range of object types at Blackwater Green may be contrasted with the Bewl Valley ironworks, where tools such as wedges were common, but a wide range of other object types was also present.

Context 95 contained several roughly rectangular blocks (Fig. 11.2–5), which may have been blanks for making wedges.

The nails

Of the 108 examined, 69 were complete. Only four contexts (45, 75, 77 and 95) contained more than 10 nails, the largest group being from context 95 (37 samples). Preservation was generally good. In depth analysis was not considered worthwhile because of the small size of the assemblage, but some comments may be made.

The nails were fairly uniform in size and shape. Two thirds were between 50 mm. and 70 mm. long; the average length was 63 mm. The length range was 28–137 mm. but only 3 nails were over 90 mm. long. Heavy nails for use in structural timber are thus virtually absent. Head shapes were varied—round, square or rectangular, but most commonly oval (41 per cent of examples). The majority had flat heads, but three distinctive head types were noted and have been illustrated (Fig. 13.15–17):

Type A: The head had four facets; the shape of the head was variable; round, oval, square or rectangular. The head shape may not be significant. A group of nine type A nails from context 95 contained both square and oval heads. (18 examples)

Type B: oval or rectangular head, with chamfered corners. (13 examples)

Type C: a rectangular head with four facets forming a longitudinal ridge. (1 example)

Definition of these nail types was made possible by the good preservation of the iron. Some of the other nails may have had similar heads, but are too heavily corroded to be identified.

Catalogue of illustrated pieces (Figs 11–13)

1. Spike with square section, becoming rectangular towards the point. The top is slightly angled. Good condition. L 157 mm; section of head 16 × 15 mm. *Context 46.*
2. Block with slightly rounded ends. 100 × 29 × 27 mm. *Context 95.*
3. Block with irregular ends. 209 × 60 × 14 mm. *Context 95.*
4. Block, slightly curved and tapering. 95 × 24 × 19 mm. *Context 95.*
5. Block; slightly curved. 110 × 58 × 42 mm. *Context 95.*
6. Wedge, damaged at both ends. 102 × 50 mm., maximum thickness 18 mm. *Context 95.*
7. A thin wedge; the thicker end has a slight flange, probably caused by hammering, and the point is irregular. 160 × 63 mm., maximum thickness 12 mm. *Context 95.*
8. Rather crudely shaped small wedge. 97 × 26 × 7 mm. *Context 95.*
9. Triangular plate with a single circular perforation. Probably the end of a hinge strap or similar fitting. 88 × 2 mm., maximum width 40 mm. Diameter of perforation 6 mm. *Context 95.*
10. Spike with slightly expanded head. L 107 m., maximum section 24 × 17 mm. *Context 95.*
11. Solid cylinder, slightly bent, with a flattened oval head and a hollowed base. This is probably an artefact, although the irregularity of its shape suggests it might be scrap metal or processing waste. L 79 mm., diameter *c.* 24 mm., head 39 × 30 mm. The hollow in the base is *c.* 3 mm deep. *Context 78.*
12. Circular sectioned rod, pointed at one end and broken at the other. Slightly bent 100 mm. from the point. L 354 mm., diameter 18 mm. *Context 90.*
13. Wedge, or possibly a broken pick-head, with a constriction towards the thicker end. L 100 mm., maximum section 25 × 13 mm. *Context 95.*
14. Tapering bar, flattened at one end. This may be a chisel, but the point is broken. L 70 mm., maximum section 12 × 9 mm. *Context 169.*
15. Nail, example of type A. *Context 95.*
16. Nail, example of type B. *Context 95.*
17. Nail, example of type C. *Context 95.*

Summary of unillustrated iron

This included further bars or bar fragments, sheet and strip fragments and spikes. The Archive contains a fuller description.

Leather (by Jon Wallis)

Fifty fragments of waterlogged leather were recovered; many were very small. Twenty one were shoe fragments and eight were part of straps or harness. This material does not merit detailed publication; a full description is to be found in the Archive.

Flintwork

A total of 17 humanly-struck flakes were recovered from nine contexts. All were residual and offer no scope for dating.

Clay pipe

Three small fragments were found, all in post-abandonment contexts. The size of the fragments precludes precise dating.

Building materials

These consisted of brick and tile, both in very small quantities. There were five fragments of brick and one of unglazed ridge tile. One of the

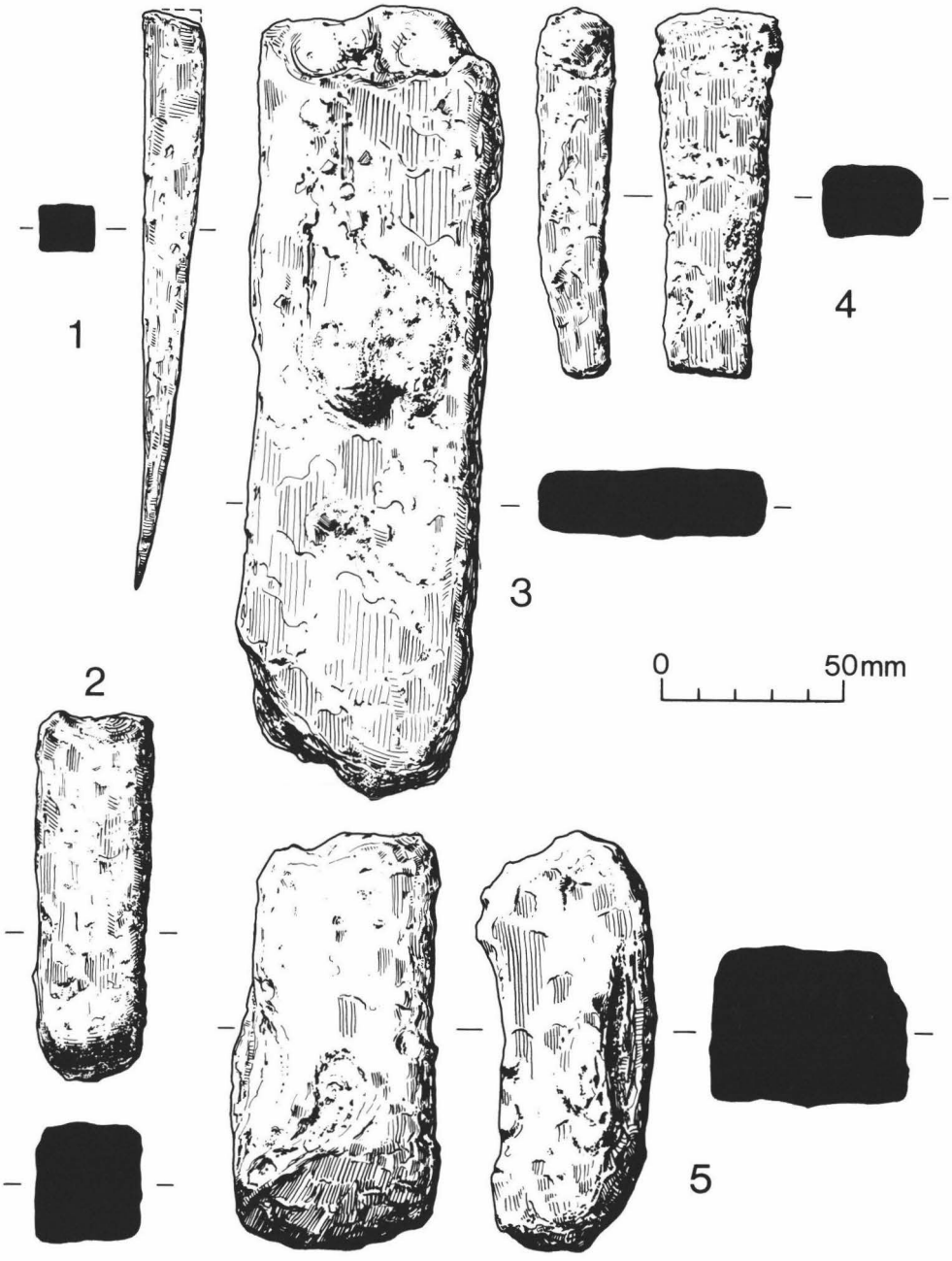

Fig. 11. Blackwater Green 1988. Iron objects.

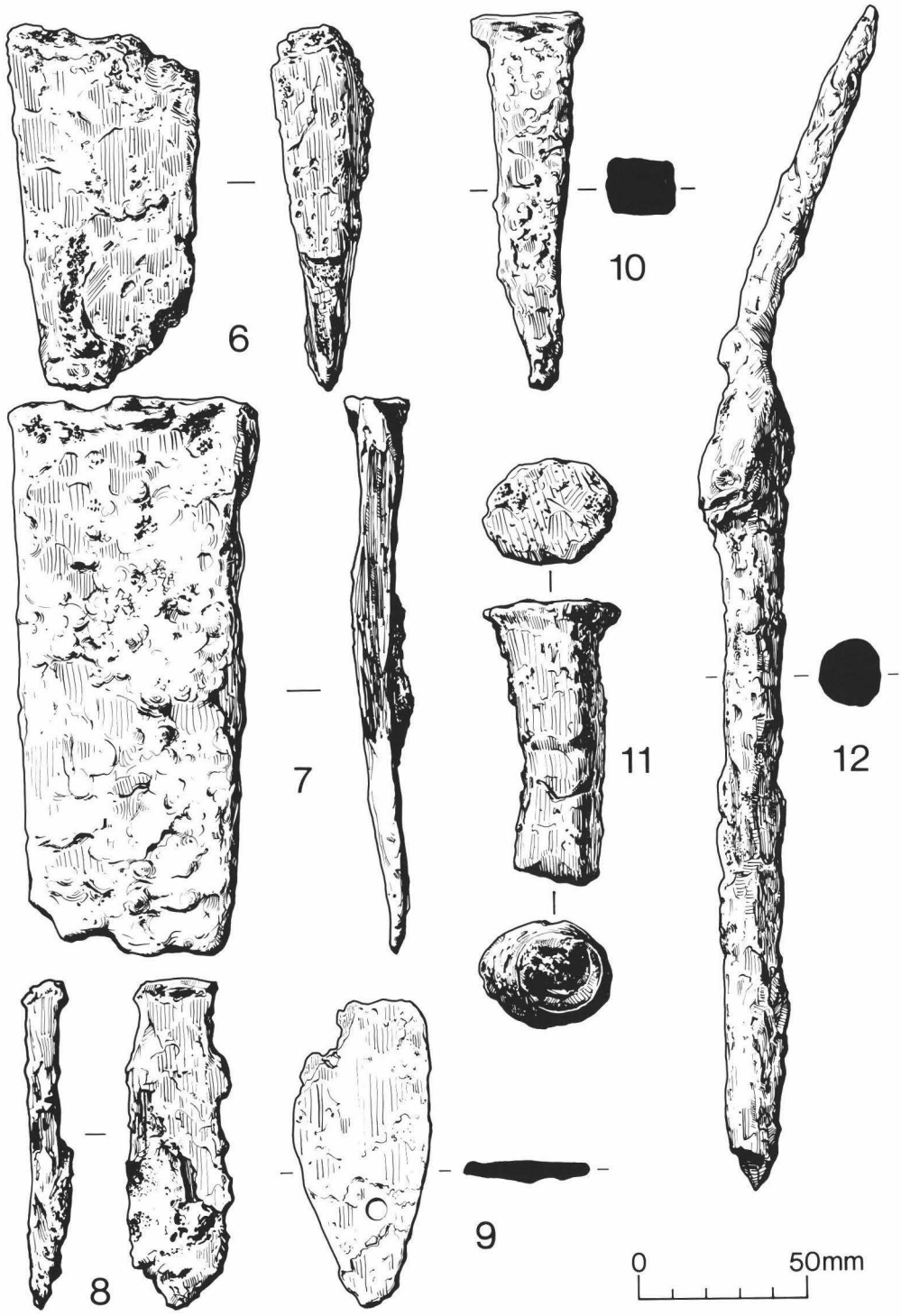

Fig. 12. Blackwater Green 1988. Iron objects.

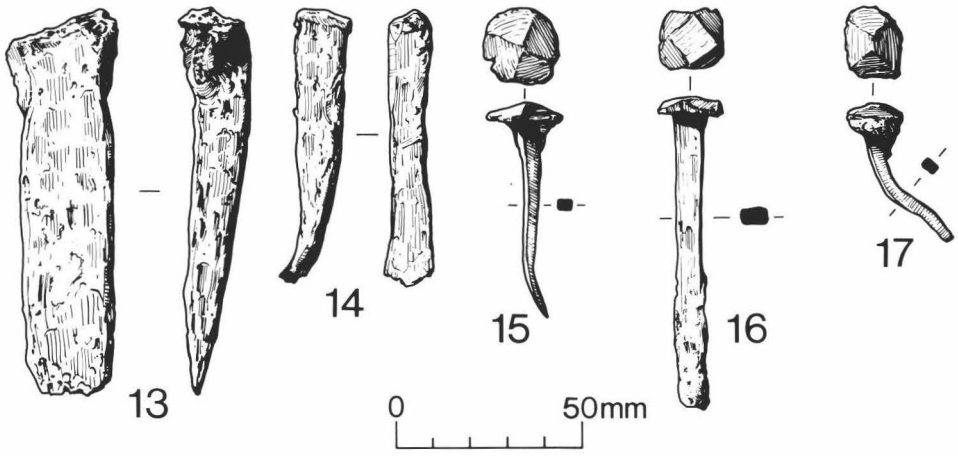

Fig. 13. Blackwater Green 1988. Iron objects.

brick fragments came from context 95 (Fig. 5, CD), and was very water worn.

DISCUSSION

Blackwater Green is the third Wealden forge to have been excavated, the other two being Chingley (Crossley 1975) and Ardingly (Bedwin 1976). It is therefore something of a disappointment that the survival of structures was poorer than these two previously excavated sites; this makes certain aspects of interpretation rather difficult.

The single documentary reference, the 1574 list, and the pottery contemporary with the operation of the forge are compatible. However, it is not entirely clear whether Blackwater Green was a long-lived forge or not. The evidence, such as it is, remains circumstantial rather than compelling. The non-appearance of Blackwater Green in subsequent lists is certainly indicative; nearby Tinsley Forge, for example, was also operating in 1574, but is noted in later lists up to 1717 (Cleere and Crossley 1985). Equally, the date range of the pottery contemporary with the forge need not be very different from that of the pottery recovered from the slaggy deposits dumped into the southern channel, implying a short life for the forge. However, since the two groups of pottery consist of only a few sherds, too much reliance should not be placed on this. Finally, the almost complete lack of those small metal items which normally build up on a long-lived site (e.g. door fittings, knives, etc.) is significant.

Against these observations, the evident remodelling of both channels might be thought to suggest a fairly long life for the forge. The northern channel (Fig. 3), although largely of a single build, had been widened along its offset by the width of the longitudinal beam 111. The southern channel displays a more complicated sequence. It may have begun life as a simple channel with no offset, defined north and south by longitudinal beams 183 and 188, respectively (Fig. 3). The eastern end was widened by the width of beam 202, and the offset part of the channel added, though not necessarily simultaneously. In addition, the point at which the channel widened was shifted, with side plank 213 cutting off a short stretch to the east. There is no way of knowing whether these changes took place as a single episode or several, or over what period of time, or how they relate to the widening of the northern channel. It should be emphasised that the structural changes in the southern channel do not *inevitably* imply a long chronological sequence. The main structural

elements in a water channel are subject to considerable wear, especially in the wheel-pit area and may need regular replacement. However, the *widening* of a channel may indicate rather that design factors are involved, i.e. that the original configuration may not be working effectively and a new lay-out is needed. This, of course, could be the case after only a year or two of operation. On balance, the evidence summarised above suggesting a short lifespan for the forge may be thought the more convincing.

What happened after the forge stopped working is perhaps less ambiguous. The absence of any structural debris apart from a few bits of brick, tile and wood suggests that the forge was robbed of all materials which could be re-used elsewhere (even allowing for the destructive activity of Gatwick Stream after abandonment).

The complete backfilling of both channels with dumps of slag (Fig. 5) indicates levelling of the site using slag which accumulated during the operation of the forge. The fact that these slag deposits go right down to the floor planking in both channels implies little or no delay between the forge ceasing work and the backfilling, otherwise silty deposits would have begun to collect. The whole area subsequently became overgrown.

After considering the sequence of events at Blackwater Green itself, it is instructive to compare the lay-out here with Chingley and Ardingly. All three sites have two parallel channels, with forge operations taking place in the area between them. But at each of the three sites the configurations were different. At Ardingly (Bedwin 1976), one channel was the hammer race, the other (offset) was for chafery and finery. At Chingley (Crossley 1975), the hammer and finery wheels were set in tandem in the same channel, in spite of potential drawbacks (early phase). Later on, the hammer wheel was moved to the other channel, with the chafery wheel in an offset, while the finery wheel stayed in its original channel. Blackwater Green differs from these in that *both* its channels had offsets and it is therefore unfortunate that so little evidence survived between the channels to understand how the four water-wheels implied by this configuration operated. One can begin by identifying a wheel-pit (now lost by erosion) due north of the anvil base (Fig. 3) as housing the wheel driving the hammer, although the existence of timber 84, which seems to have been *in situ* when excavated, is hard to interpret, unless it was positioned beneath the floor of the putative wheel-pit. The remaining three wheels would have powered chafery and finery hearths, though because of the lack of evidence, it is impossible to say how these disposed.

It is also noteworthy that each of the three Wealden forges has demonstrated a different type of anvil base. At Chingley, a 1.7 metre length of oak tree-trunk was used, held in place by substantial radial timbers, the whole structure being set in a pit. At Ardingly, a 1.0 metre length of tree-trunk was set in the ground and held in position by a triangle of timbers. Both differ considerably from the substantial cross-shaped timber structure at Blackwater Green.

What emerges from these comparisons is that there was no uniform lay-out for the late 16th-century Wealden forge; the contrasts between Blackwater Green and Ardingly, both mentioned in the 1574 lists, and only a few miles apart, are considerable. It would seem that the local traditions of building water-powered sites either for the grinding of grain or for fulling were adapted with great versatility for the iron industry.

Acknowledgements

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References

Bedwin, O. 1976 'The Excavation of Ardingly fulling mill and forge, 1975–76', *Post-medieval Archaeology* **10**, 34–64.

Cattell, C. S. 1979 'The 1574 lists of Wealden ironworks', *Suss. Arch. Coll.* **117**, 161–72.

Cleere, H. and Crossley, D. W. 1985 *The iron industry of the Weald* (Leicester).

Crossley, D. W. 1975 *The Bewl Valley ironworks, Kent*, Royal Archaeological Institute monograph.

Cunningham, C. M. 1985 'A typology for post-Roman pottery in Essex', in Cunningham, C. M. and Drury, P. J., *Post-medieval sites and their pottery: Moulsham Street, Chelmsford*, CBA Res. Rep. **54**, 1–16.

Draper, J. 1984 *Post-medieval pottery 1650–1800*, Shire Archaeology.

Freke, D. J. 1979 'The excavation of a 16th-century pottery kiln at Lower Parrock, Hartfield, East Sussex', *Post-medieval Archaeology* **13**, 79–125.

Holling, F. W. 1971 'A preliminary note on the pottery industry of the Hampshire–Surrey borders', *Surrey Archaeological Collections* **67**, 57–88.

Hurst, J. G., Neal, D. S. and van Beuningen, H. J. E. 1986 *Pottery produced and traded in North-West Europe 1350–1650*, Rotterdam Papers **VI**, 194–208.

Jennings, S. 1981 'Eighteen centuries of pottery from Norwich' *East Anglian Archaeology* **13**, 150.

Streeten, A. D. F. 1979 'Medieval and post-medieval pottery of the Hartfield area', in Freke, D. J., 'The excavation of a 16th-century pottery kiln at Lower Parrock, Hartfield, East Sussex', *Post-medieval Archaeology* **13**, 116–20.

Sussex Archaeological Collections **130** (1992), 164–188

STEYNING TOWN AND ITS TRADES 1559–1787

by Janet Pennington and Joyce Sleight

Steyning is fortunate in possessing a fine collection of 236 probate inventories, most of them with associated wills. These, together with other contemporary documents, reveal hitherto undiscovered information on the trades, occupations and home lives of the people of Steyning from Elizabethan times to the reign of George III. In particular, a portrait gallery of Steyning tradesmen has emerged, men and women who lived and worked in many of the extant timber-framed buildings of the town. Little modern documentary research on Steyning has appeared since the work of the Reverend Ernest Cox, a former vicar of Steyning. Mr Cox produced a monthly series of historical articles based upon material held at that time in the parish chest. These appeared in the parish magazine throughout the 1920s and 1930s. What follows is the first comprehensive post-war study of the early modern town and its trades to be based upon documentary sources.

INTRODUCTION

G. H. Kenyon, writing in 1958, remarked that he knew of no small country town other than Petworth that had been examined in the light of probate inventories.[1] In the three decades since that article appeared, probate inventory research has proved a rich seam for local historians. Where such documents survive in any quantity and have been examined, many 17th and 18th century communities have been brought back to life.[2] This is particularly true of Steyning, as not only have 236 inventories survived, most of them with wills, but the area is covered by the Wiston Archives, the immense collection of title deeds and other documents kept at the West Sussex Record Office.[3]

The parish of Steyning (now approximately 3,400 acres) contains the late Saxon town, which was given Borough status by Edward I and which by Tudor times had developed into a prosperous market town. It grew up on a chalk spur between two streams which provided water for drinking, brewing and tanning as well as power for the mills. Certain trades connected with the leather industry assumed greater importance due to the growth of sheep farming and to the regular markets and fairs held in the town.[4]

Between the town and the South Downs were open fields, the arable slopes at the foot of the Downs. From the mill at the west end of town, known as West Mill or Court Mill, to the steep Bostal leading over the escarpment to Sompting at the east, stretched West Field, Rublee and Steyning Field, divided into furlongs. Sheep cropped the Downs, eastward lay the rich grazing of the Adur river estuary, and northward were the farms of the ancient manors of Wappingthorn and Wickham. The town of Steyning itself included Steyning manor together with others, such as Charlton and Gatewick.[5]

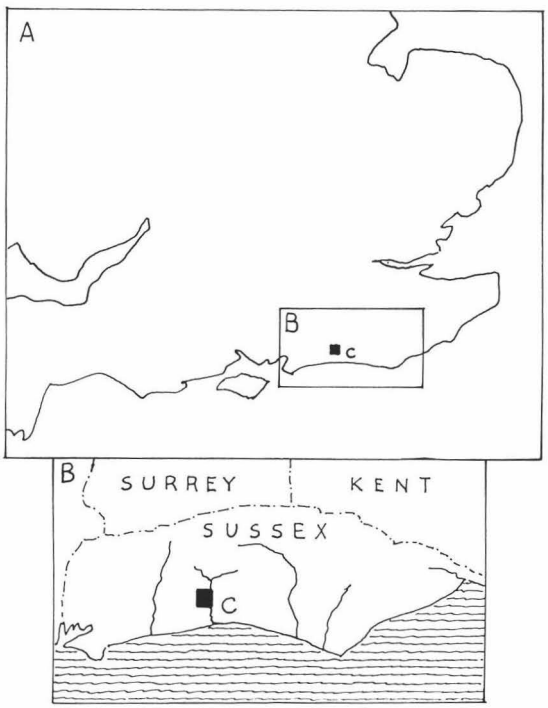


Fig. 1. Placement map.

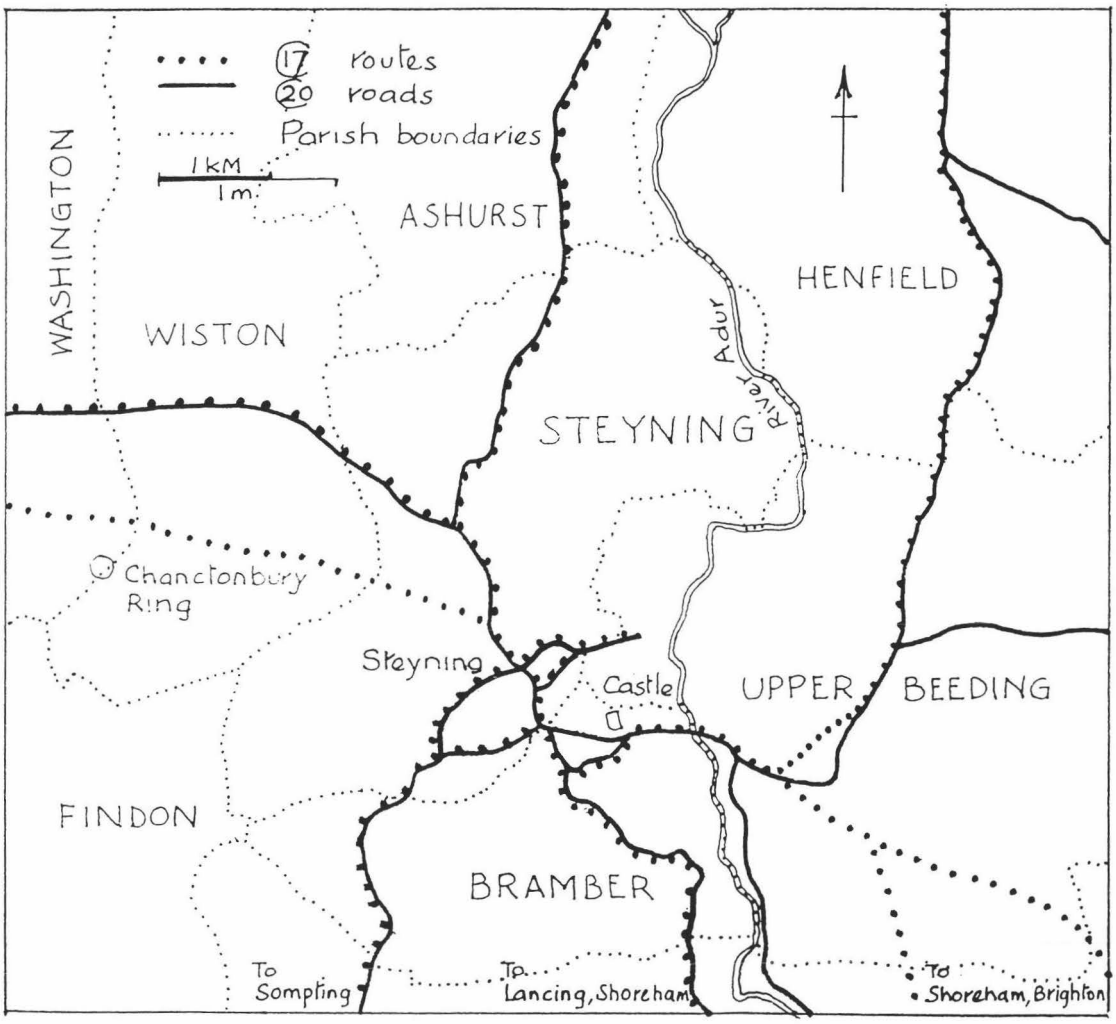


Fig. 2. Steyning and surrounding parishes.

Links had existed for centuries with the surrounding area, but trade was growing by the 16th century. The market town of Horsham, 12 miles to the north, provided one of the stages on a route to London, whose growing population fed off the mixed agriculture of the surrounding counties. London is mentioned several times in the inventories. Steyning also had ties with the harbour of Shoreham; barges plied the river Adur through nearby Bramber and Beeding to the port, and it was often easier to gain access to London by sea than by crossing the thick clay of the Weald. The population of Steyning in 1565 was approximately 300. By 1642–44 it had grown to about 1,000. Epidemics reduced the population to perhaps 6–700 by 1676 and in 1724 140 families were recorded. By 1801 the population was 1,174 persons.[6]

The Wiston Estate, to the west of Steyning, (Fig. 2) has had a great influence on the town over the centuries. Only six families have owned Wiston since the Conquest, and family connections have resulted in one of the finest surviving collections of documents for a Sussex

estate. Until the early 20th century, Wiston owned much land and property in Steyning, and the Wiston Archives contain the title deeds to approximately 80 houses in the town during the 17th and 18th centuries. These, together with other documents, such as conveyances, indentures, leases and wills, have helped to provide details of house and land abutments; they have also supplied names of property owners and tenants, their occupations, social status and family relationships.

With this evidence at least ten inventories have been linked to existing Steyning houses, a rare occurrence in inventory studies. In several other cases, buildings mentioned in inventories have disappeared, or been altered, but a more modern house of the same name replaces them.[7]

STEYNING INVENTORIES

The requirement to produce an inventory of the goods, and chattels of a deceased person worth over £5 in order to obtain probate for the will dates at least from 1529.[8] The task of valuation was normally carried out soon after the death by two or three 'appraisers' who made a room by room survey. They listed furnishings, household goods, clothing, money, valuables, tools, weapons and stock-in-trade. Inventories also included farm equipment, animals, acreages, crops both in store and on the ground, timber and fuel, credits and debts, and occasionally leases. Certain Steyning townsfolk regularly acted as appraisers, becoming reliable and expert. They were sometimes paid fees or given a meal afterwards.

The process of inventory taking and the granting of probate was followed by the administration of the will and the settling of debts against the estate, after which the executors, accountants as they called themselves, rendered their accounts to the court at Chichester, and obtained their 'Quietus est under the seal', a discharge given on the clearing of accounts. Some of these accounts survive for Steyning.[9] In the Charge, they took responsibility for all the contents of the inventory and any money since received. In the Discharge they then proceeded to crave allowances for what they had spent. These covered funeral expenses such as the knell, coffin, laying out, grave, sermon and clerk's fees, legal costs, stationery, parchment, the writing out of the inventory and will, the deceased's debts paid, legacies, board, education and clothing for children, apprentices' clothing, alms for the poor, poor tax and tithes. They claimed for travelling expenses, stable fees for their horses, money for threshing the deceased's corn, feeding animals, killing off stock, rebate for appraisers' over-valuations,[10] the doctor's and apothecary's bills, money for women who had watched over the sick person, workmen's bills and widows' housekeeping money paid out. Servant's wages were also claimed, 'Chimney Money' appears (the Hearth Tax), and money needed for extra food and candles during any sickness. In one case 10*s.* was paid out for a supper for the appraisers and in another the appraisers had charged 11*s.* 6*d.* in fees. Rings for themselves, as often given in wills, were also included.

The occupations, either listed by the appraisers or deduced from wills and other evidence are given in Table I.

There are many pitfalls in inventory studies. The inventory itself is a valuable social document but it is dangerous to deduce too much about the lifestyle of the deceased from this alone. Property, land and leases were only rarely listed, whereas the will often contained full details, and the preamble, in itself, is often indicative of a particular religious belief.[11] Horses and other valuable goods were frequently taken as heriots before the will was proved; bequests, too, were often taken away by friends and relations in the time between a death and the taking of the inventory. It is also likely that any money in the house at the time of a death was immediately collected up and disposed of by the family. In the case of Steyning, however, information contained in an inventory without a will can often be augmented by documents in the Wiston Archives.

In the majority of cases the procedure for making the list as soon as possible after the death and evaluating the contents of the premises was carefully carried out. Most are legible and in reasonable condition. The spirit of the Stuart town breathes through the faded secretary hand, and the local Sussex voices speak through the

TABLE 1

STEYNING TRADESMEN WITH SURVIVING INVENTORIES 1559–1787

*Bracketed debts indicate that it is not clear to which trade they refer

NB Tradesmen with dual occupations are entered under each trade. Valuations have been rounded up. Trade debts—'none' indicates no debts mentioned in inventory, The column has been left blank where it is not possible to distinguish trade from personal debts.

The Leather Trade

Name	*Inventory Date*	*Occupation*	*Valuation*	*Value of House Contents*	*Value of Leather Goods*	*Trade Debts*
James Holland	1621	Tanner	£81			Retired
Edward Goffe	1634	Tanner/Yeoman	£44	£30	£2	
Richard Washer	1641	Tanner	£130			
William Washer	1643	Tanner	£77	£14	£61	
George Withers	1680	Tanner/maltster				
John Backshell	1706	Tanner	£364	£63	£187	£110

Fellmongers/glovers

Name	*Inventory Date*	*Occupation*	*Valuation*	*House Contents*	*Leather Goods*	*Wool & Sheepskins*	*Trade Debts*
Edward Fussell	1669	Fellmonger/glover	£140	£83	£20	£49	£18
George Cogger	1670	Fellmonger/mercer	£995				(£570)*
William Sharpe	1674	Fellmonger/glover	£134	£49	£37 (and wool)		£30
Robert Holden	1690	Fellmonger-glover	£34	£23	?retired		none
Thomas Dennett	1706	Fellmonger/glover	£78	£27	£30	£17	£2
John Smith	1707	Fellmonger/glover	£291	£52	£66	£31	£45
Robert Holden	1709	Fellmonger-glover	£130	£22	£60	£6	none

Saddlers

Name	*Inventory Date*	*Occupation*	*Valuation*	*Value of House Contents*	*Trade Goods*	*Trade Debts*
Thomas Askols	1693	Saddler	£70	£14	£8	?£40
Edmund Mills	1703	Saddler	£81	£41	£40	none
John Wheeler	1768	Saddler	£54	£25	£29	none

Shoemakers

Name	*Inventory Date*	*Occupation*	*Valuation*	*Value of House Contents*	*Value of Shop Goods*	*Trade Debts*
Charles Awcocke	1612	Shoemaker	£13	£9	£4	none
Elizabeth Taylor	1665	Shoemaker's widow	£48	£21	£7	£2
Thomas Lisle	1672	Shoemaker	£36	£12	£3	£15
Thomas Lysle	1681	Shoemaker	£79	£20	£3	£5
Robert Penfold	1687	Shoemaker	£32	£12	?retired	none
Francis Willett	1692	Cordwainer	£62	£25	£31	none
Joseph Peckham	1692	Cordwainer	£43	£21	£17	none
Mary Peckham	1692	Cordwainer's widow	£29	£21	£7	none
Thomas Longley	1706	Cordwainer	£20	£8	retired	£3
John Marner	1748	Cordwainer	£18	£15	retired	none

The Cloth Trade
Mercers and Drapers

Name	*Inventory Date*	*Occupation*	*Valuation*	*Value of House Contents*	*Trade Goods*	*Trade Debts*
James Peeres	1559	Draper	£130	?£20	?£30	£72
Thomas Smyth	1619	Mercer	£212	£17	£1	£189
George Cogger	1670	Mercer/fellmonger	£995		£270	(£570)*
Samuel Lucke	1706	Mercer	£1,406	£72 Steyning £26 Shoreham	£414 Steyning £447 Shoreham	£60 Steyning £331 Shoreham
Elizabeth Martin	1740	Mercer's widow	£147	£14	£42	£77

Clothiers and Weavers

Name	*Inventory Date*	*Occupation*	*Valuation*	*Value of House Contents*	*Trade Goods*	*Trade Debts*
John Turner	1624	Shearman/clothier	£145	£58	£20	£12
Richard Barrow	1666	Weaver	£34	£21	£13	none
George Burt	1679	Clothworker	£23	£13	£6	none
Richard Clarke	1684	Weaver	£81	£37	£7	none

Tailors

Name	*Inventory Date*	*Occupation*	*Valuation*	*Value of House Contents*	*Trade Goods*	*Trade Debts*
John Hills	1631	Tailor	£6	£4	1*s.*	none
Francis Thorpe	1647	Tailor	£43	£17	£2	£20
Henry Brown	1668	Tailor	£11	4*s.*	?retired	£9
John Hooker	1696	Tailor	£20	£17	retired	none

Feltmakers and Hatters

Name	*Inventory Date*	*Occupation*	*Valuation*	*Value of House Contents*	*Trade Goods*	*Trade Debts*
William Benbridge	1665	Feltmaker/ haberdasher	£275	£90	£131	£52
Thomas Temple	1670	Hatter/feltmaker	£21	£18	£3	none

The Drink Trade
Innkeepers and Alehouse-keepers

Name	*Inventory Date*	*Occupation*	*Valuation*	*Value of House Contents*	*Trade Goods*	*Trade Debts*
John Cowlstocke	1633	Innkeeper	£240	£83	£4	
Neville Hearsi	1642	Innkeeper	£109	£50	£2	
Edward Kemp	1675	Innkeeper/gentleman	£128	?£60	£16	
William Burnett	1690	Innkeeper	£77	£51	£17	
Ann Bryant	1707	Innkeeper	£54	£35	£17	none
Mary Burnett	1720	Innkeeper	£413	£107	£27	none
Margery Fevens	1633	Alehouse-keeper	£31	£27	£2	none
Thomas Golding	1692	Alehouse-keeper	£22	£9	£9	none

Beerbrewers and Maltsters

Name	*Inventory Date*	*Occupation*	*Valuation*	*House Contents*	*Value of Malt*	*Amount of Malt*	*Trade Debts*
Richard Standing	1614	Beer Brewer	£16				
John Farley	1641	Maltster/yeoman	£271				
William Kitchener	1648	Maltster	£203	£25	£47		none
William Cobby	1667	Maltster	£139	£51	£63	90 qrs	none
John Blackfan	1672	Maltster	£844		£78		(£130)
George Withers	1680	Maltster/tanner				34 qrs	
Bartholomew Bowler	1703	Maltster/carpenter	£137	£35	£78	120 qrs	(£5)*
Richard Simans	1706	Maltster/?yeoman	£375	£33	£57		(£187)
George Bull	1706	Maltster	£92	£16	£55	55 qrs	£5
William Kitchener	1709	Maltster/wheelwright	£344	£62	£100	90 qrs	(£50)

Other Trades
Meat

Name	*Inventory Date*	*Occupation*	*Valuation*	*House Contents*	*Shop Goods*	*Slaughter House*	*Trade Debts*
Richard Christopher	1633	Butcher	£149	£21	£1	11*s.* 6*d.*	
William Wilson	1635	Butcher	£4	£3	8*s.*		
William Lidgitter	1667	Butcher	£35		retired		
William Aylwin	1681	Butcher	£72	£50	£1		
Thomas Lidgitter	1682	Butcher	£358	£41	£1 4*s.*	11*s.* 6*d.*	£266
Philip Butcher	1687	Butcher	£196	£43	15*s.*	£2 5*s.*	£10
Walter Hilman	1744	Butcher	£214	£10	7*s.*		£203

Chandlery

Name	*Inventory Date*	*Occupation*	*Valuation*	*Value of House Contents*	*Trade Goods*	*Trade Debts*
John Groome	1646	Chandler	£35	£17	£8	£2
William Parson	1668	Chandler	£35	£15	retired	
Thomas Groome	1671	Tallow chandler	£389	£35		£354
William Langford	1693	Tallow chandler	£125	£35	£62	£10

Building

Name	*Inventory Date*	*Occupation*	*Valuation*	*Value of House Contents*	*Trade Goods*	*Trade Debts*
Thomas Burden	1636	Healyer/Husbandman	?£66			
Francis Burden	1648	Mason/Husbandman	£104	£18	6*s.* 8*d.*	(£3)*
Richard Easton	1676	Mason	£23	£17	£4	none
John Cooper	1681	Mason	£25	£23	15*s.* 6*d.*	none
Thomas Petoe	1704	Mason/Healyer	£67			
John Woolven	1720	Mason	£60	£15	?retired	
William Barnes	1736	Bricklayer	£20	£20	retired	none

Timber

Name	*Inventory Date*	*Occupation*	*Valuation*	*Value of House Contents*	*Trade Goods*	*Trade Debts*
Richard Constable	1614	Cooper/shopkeeper	£365	£326	£39	
John Gray	1623	Cooper	£13	£4	£9	
Richard Gray	1640	Cooper	£17	£10	£7	
James Patching	1637	Carpenter	£26	£9	£17	
Richard Patching	1644	Carpenter	£200	£42	£11	
John Michell	1668	Carpenter	£114	£58	£21	£35
Thomas Weeks	1679	Carpenter	£51	£10		
Bartholomew Bowler	1703	Carpenter/maltster	£137	£35		(£5)
Jerome Beale	1705	Carpenter	£33	£15	£18	
George Read	1731	Carpenter	£74	£22	£7	
William Kitchener	1709	Wheelwright/maltster	£344	£62	£40	(£50)

Metal

Name	*Inventory Date*	*Occupation*	*Valuation*	*Value of House Contents*	*Trade Goods*	*Trade Debts*
John Swift	1618	Blacksmith	£479	£193	£14	
William Ventris	1640	Blacksmith	£30	£18	£3	
Richard Barr	1666	Blacksmith	£112			
Benjamin Newarke	1667	Blacksmith	£151	£41	£55	£40
William Peckham	1714	Blacksmith	£129	£45	£23	
William Christopher	1771	Blacksmith	£11	£9	£2 retired	none
Benjamin Peckham	1728	Clocksmith	£40	£20	£17	none
Edward Ward	1697	Locksmith	£60	£30	£9	
John Barnes	1696	Brazier	£50	£5	£33	£5

Miscellaneous Trades

Name	*Inventory Date*	*Occupation*	*Valuation*
John Norris	1614	Welldigger	£83
Philip Turner	1637	Glazier/yeoman	£81
John Ward	1646	Thatcher	£44
William Woolven	1664	Carrier/husbandman	£237
Mary Flite/Fleete	1678	Baker	£30
Richard White	1701	Miller	£39
John Soale	1704	Miller	£223
Anthony Soale	1706	Postmaster	£304
Thomas Wine	1709	Pedlar	£48
David Forster	1712	Gardener?/retired alehouse-keeper	£18
Thomas Finch	1722	Gardener	£106
William Morris	1737	Salesman	£98

dialect words and variety of spellings. Apart from such gentry as James Colley in his stone house, still standing in the centre of the town, most Steyning residents lived in timber-framed houses and flint cottages on either side of the crossroads (Fig. 4).

The documents highlight three main areas of the town (Fig. 3): High Street, Church Street and Singwells. Singwells, named after the town well in the south-eastern end of the town is now part of the High Street.[12] The name, altered to Springwells, remains attached to a large house near the old town pump. It has become apparent from the documents that this was the artisan area of the town where bricklayers, coopers, leatherworkers, maltsters, and masons lived and

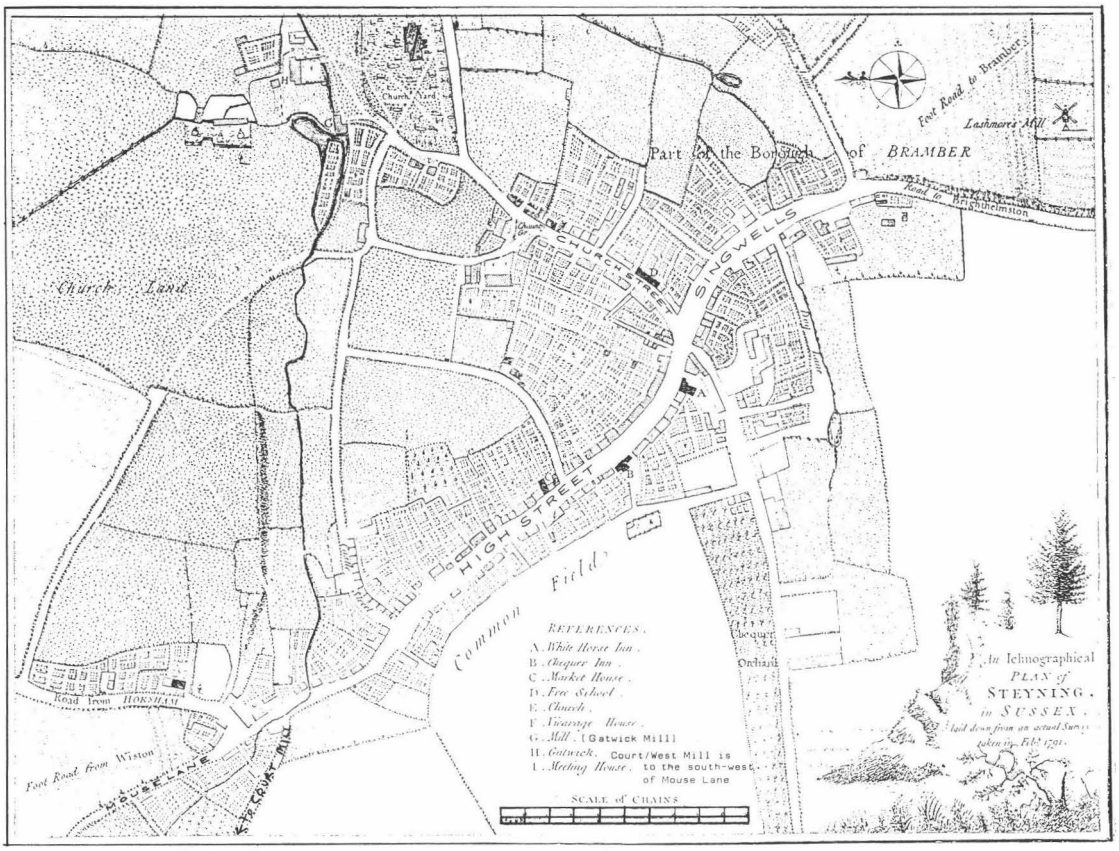


Fig. 3. 1791 map of Steyning.

worked. Before the 19th century, the tanyard was at this end of the town.

One of the most striking features of the analysis is the presence of the shops, and 56 of the inventories list one, or sometimes two. While the word 'shop' during this time can be loosely defined as a workshop, some tradesmen had a shop where goods for sale were specially displayed: counters, and shopboards, cupboards and shelves were in evidence, and the workshop was usually a separate room or outhouse. For example, hatter Thomas Temple (1670) was busy with his blocks and dyes 'in the workhouse below the stayers', but he also displayed his hats and hatbands for his customers' delectation in his shop, which also doubled as another workshop.[13] The lower part of the premises facing onto the street was often a shop or workshop with chambers above, and kitchen, parlour and other rooms behind.

A feature of Steyning's main streets was the window curtains, which gave an indication of the social status of those who owned them. Few inhabitants of the Singwells area appeared to have curtains, other than around their four-poster bedsteads, but some of the wealthier High Street and Church Street dwellers regularly opened and closed theirs at parlour and front bedroom windows. Back rooms rarely contained a curtain at the window. Seven Steyning gentlemen, five yeomen, six prosperous tradesmen and four widows, one of whom was an innkeeper, owned window curtains.

Amounts of household linen sometimes seem surprising today. Four households had 30 or more pairs of sheets, and 17 had at least 20

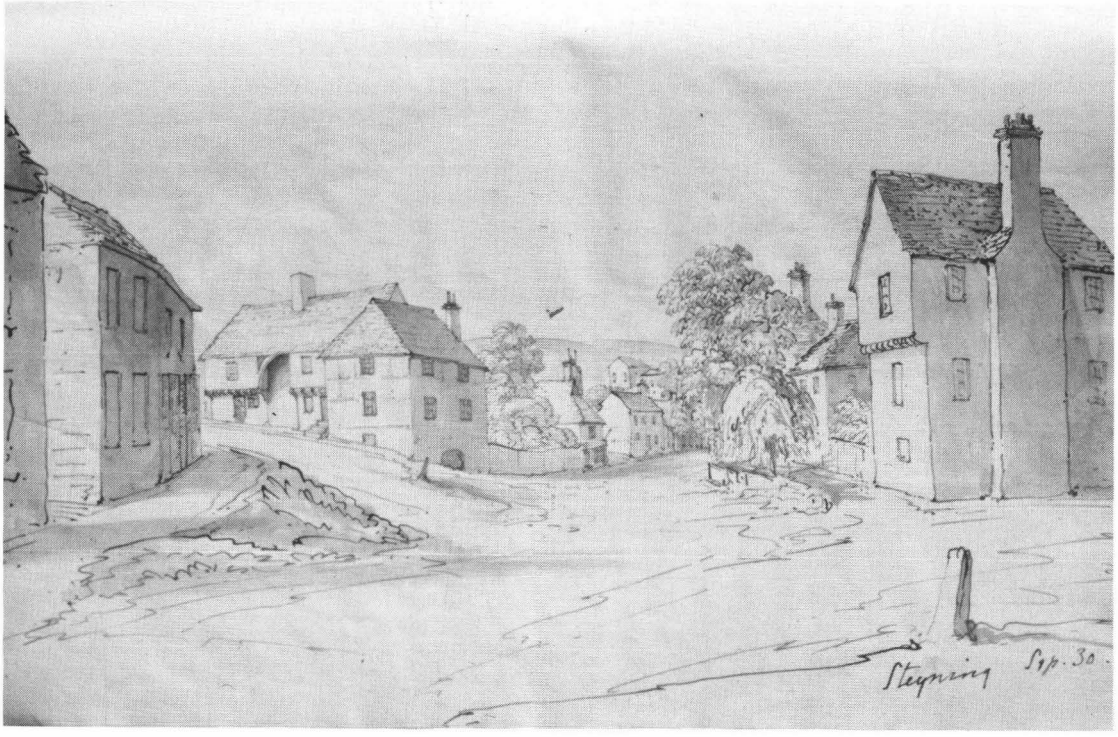


Fig. 4. The Crossroads, showing the town pump and the Stone House, *c*, 1845 (by permission of R. H. Goring).

pairs. Napkins, pillow cases, towels and table cloths were plentiful. Linen was always separately listed, sometimes in a chest, but never with the bed. Beds had curtains, vallances, pillows, bolsters, blankets, coverlets, rugs, mats and cords, but the bed linen was always listed elsewhere. It was a valuable part of an inventory, unlike the deceased's clothing which was only occasionally specified. 'Apparel and money in purse' was the usual opening item, but with no further details. Here and there is a mention of a best cloak, a cloak-bag, 'her woollen and linen clothing', hats and hoods, aprons, handkerchiefs, outdoor riding coats, gloves, bodices and breeches, a doublet and jerkin, a pair of silk garters, a black silk gown, serge and fustian mantles, or some shirts, stomachers and waistcoats. Three inventories had childbed linen and two had bearing clothes for christenings. Apart from the shoemakers' stock-in-trade, only two inventories, both for women, listed shoes. Three butchers had shop clothes, and there was one smock.[14] However, one inventory, that of John Eede, (1731), contains a remarkable amount of clothing.[15]

Stored food in the house was common, and reflected the nature of local produce. Flitches of bacon were found in 42 inventories, bushels of apples in eight, dried beef in five, butter in 20, and cheese in 25. Salt fish, pork and gammon, honey, lard, suet and vinegar, stores of corn, peas and beans, hay, malt and straw were also found on the premises.

A number of Steyning residents owned weapons and armour. Draper James Peeres (1559), had 'a bowe . . . a sheffe of Arroes'[16] and a sword, while gentleman Edward Michell had a sword and two pistols in 1730. Body armour, muskets, swords, a rapier, sabres, daggers and a pike survived until 1645, reflecting the troubled times. After the Restoration there is only mention of one old musket and one old sword in 1667 and 1671 respectively, though Thomas Finch had a pike in 1722. Birding and fowling

pieces were seen from 1622 to 1722. There were no muskets after 1674, but 'guns' are listed from 1679 to 1738. Saddler John Wheeler had a javelin in 1768.

Credit played a large part in business life, then as now. Tradesmen kept shop books in which they recorded their transactions, and references to money 'on book' were frequent (Table 1). Bills, bonds and mortgages were also recorded, and sums from £1 to £266 were out and earning interest for a large proportion of Steyning inhabitants throughout the period. It was unusual for money to be kept in the house. Several tradesmen or gentlemen were caught with sums from £30 to £100 in the house at the time of their deaths, but normally money was no sooner paid in than it was out again, earning interest for the lender. Sex or social status was no bar to credit or financial dealing. Husbandmen, shoemakers, masons, shepherds, yeomen, gentlemen and several women had monies out and earning interest for them.

One hundred and five Steyning tradesmen's inventories survive, representing 33 trades. Kenyon looked at 140 tradesmen's inventories for Petworth town and found 55 different trades, but discovered very few listings of trade tools, which disappointed him. Steyning, however, is more fortunate, as nearly all the trades are represented by listings of tools and working equipment, often given in descriptive detail. There was a small cloth industry, but Steyning's specialist trade appeared to be tanning.[17]

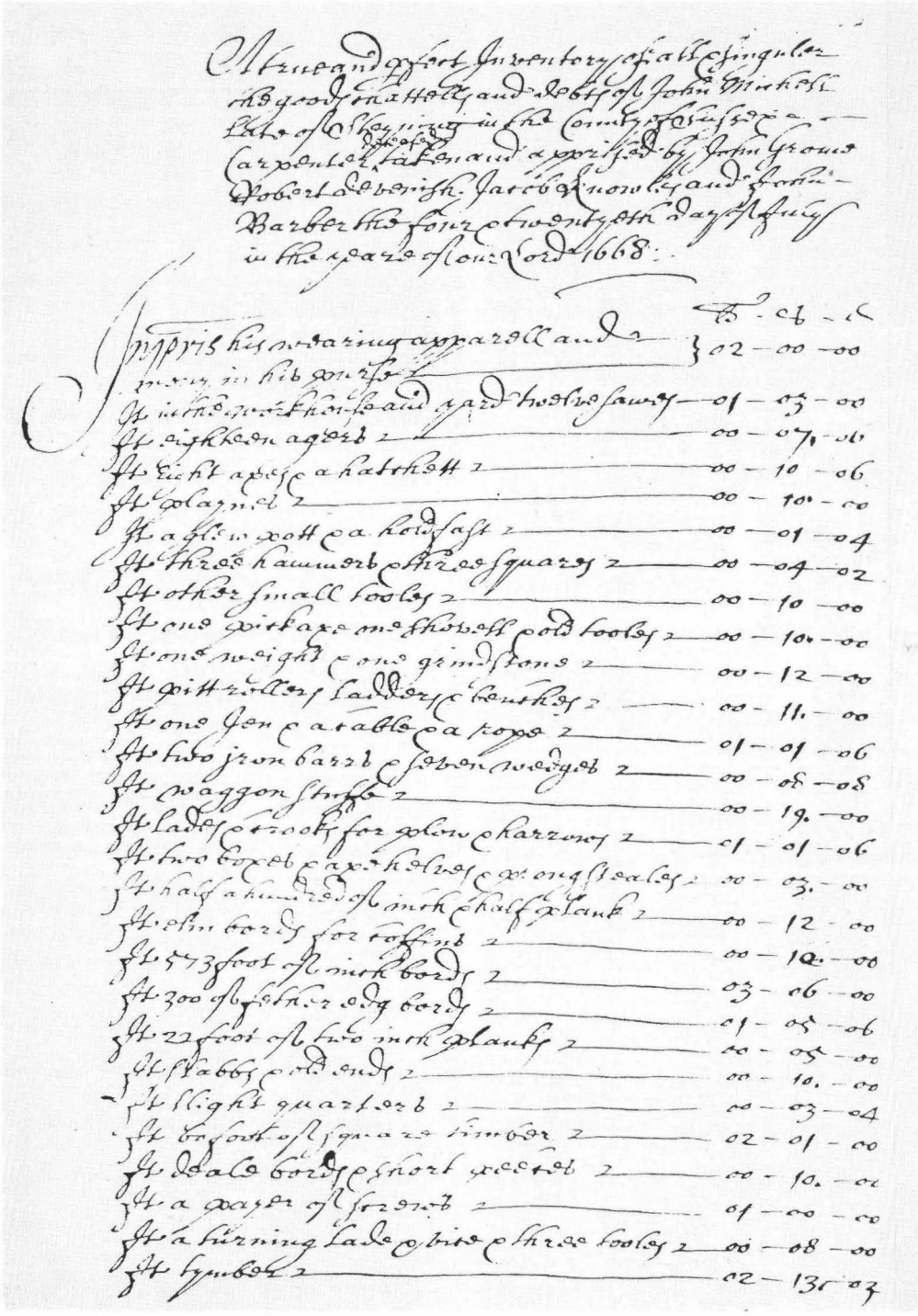
THE LEATHER TRADE IN STEYNING

Tanyard Lane, on the north-west side of the town, takes its name today from Breach's tanyard which opened in the early 19th century. Some tanning may have been going on in a small way at the west end of the town before then, but at least since medieval times an earlier tanyard functioned at the south-east end, utilising the water supply from the Singwells area. It is likely that the development of the breweries in this area in the late 18th and early 19th centuries, and their use of the water supply, contributed to the move to the opposite end of Steyning.[18] Tanyards, with their attendant smells and water pollution problems, have traditionally been situated at the periphery of inhabited areas.

The leather industry is one of the earliest trades connected with Steyning. The first known documented reference is in 1327 when a glover was recorded in the town; glovers and tanners were also recorded in the 14th and 15th centuries. The only trade guild known to have existed in Steyning was the guild of shoemakers and tanners in the late 15th century.[19] The leather market at Lewes is known to have attracted tanners from Steyning in 1654.[20] The modern tanyard closed in 1941, and throughout the long period of its history was probably the most important of all the Steyning trades. There are no inventories for curriers, though they are known to have been operating in the town. The fellmongers and glovers appear to have been the wealthiest of the leather tradesmen, though the highest inventory valuation in this section is for a tanner. As the leather industry has been well described elsewhere the process will not be detailed here.[21] The Steyning inventories give a good picture of a thriving leather industry throughout the 17th and 18th centuries.

George Withers (1679) is the only tanner's inventory with a mention of horns, two hundred of them, which would have been used, together with hooves, for making glue. Sixteen loads of tan were listed, together with a beam over which the stretched skins were worked, baskets, a wheelbarrow, and shutes for directing the water. There was a grindstone for sharpening the knives, which had to be razor sharp for the scivers.[22] These skilled craftsmen could split a skin vertically into two or three pieces.[23] Leather was being tanned at Steyning by the same methods until World War II, and the tanner of 1940 would have recognised the contents of his 1640 counterpart's inventory quite easily.

More details of the tanning process are revealed in the fellmongers' and glovers' inventories. These Steyning tradesmen were not only involved in curing the leather, but in preparing and working it up to finished articles. Edward Fussell (1669) described himself as a glover in his will and his daughter Elizabeth married William Sharpe (1674), fellmonger. Both men had workshops full of buckskins, calfskins, doeskins and horsehides with tanned and white leather, woolskins and packs of graded wool. There were also items of alumming equipment, tubs, kettles and keelers, and a



A true and perfect Inventory of all & singuler the goods chattells and debts of John Michell late of Steyning in the County of Sussex Carpenter deceased taken and apprised by John Grome Robert Devenish Jacob Knowles and John Barber the four & twentyeth day of July in the yeare of our Lord 1668:

	lb	s	d
Impris his wearing apparell and mony in his purse	02	00	00
It in the workhouse and yard twelve sawes	01	03	00
It eighteen agers	00	07	06
It eight axes & a hatchett	00	10	06
It playnes	00	10	00
It a glew pott & a holdfast	00	01	04
It three hammers & three squares	00	04	02
It other small tooles	00	10	00
It one pickaxe one shovell & old tooles	00	10	00
It one weight & one grindstone	00	12	00
It pitt rollers ladders & benches	00	11	00
It one Jen & a cable & a rope	01	01	06
It two iron barrs & seven wedges	00	08	08
It waggon stuffe	00	19	00
It lades & crooks for plow & harrows	01	01	06
It two boxes & axe helves & prongsteales	00	03	00
It half a hundred of inch & half plank	00	12	00
It elm bords for coffins	00	10	00
It 573 foot of inch bords	03	06	00
It 300 of fether edg bords	01	05	06
It 22 foot of two inch planks	00	05	00
It slabbs & old ends	00	10	00
It slight quarters	00	03	04
It 60 foot of square timber	02	01	00
It deale bords & short peeces	00	10	00
It a payer of screws	01	00	00
It a turning lade & vice & three tooles	00	08	00
It tymber	02	13	03

Fig. 5. The first section of the inventory of John Mitchell, (1668), carpenter, listing his trade tools and details of his timber.

'drench tub' for treating skins. Sharpe had a load of lime at his tannery. Fussell's tanning stock was 'At the watter sied' and 'In the Alimming rome'. His made-up goods were only described briefly as 'gloves and other madeware' but Sharpe's inventory lists

> fifteeene payre of loynings, foure setchells, two duzen payre and a halfe of mens gloves sowd with silke, fowar doz[en] of Childerenes gloves, thirtene payere of mens out seame gloves soud w[i]th thrid

These workmen's gloves were used by carpenters and masons, amongst others. The amounts of leather seem quite large. Fussell had 480 tanned and white leathers, 250 pelts, 48 calf skins and 72 wool skins, while his son-in-law had 500 white leathers, 250 tanned leathers, 40 pelts and 96 'wooled skins'. The wool was graded into fine, middle and coarse.[24]

The inventory of Robert Holden (1709), describes workshop goods such as five dozen beaver pelts at £1 15*s*., and 11 beaver skins at 11*s*. These would have been used by the local hatters and may have been imported through Shoreham harbour. He had 18 gross of buttons, 4 lb of thread and 8 oz of silk.[25]

Thomas Dennett's (1706) inventory lists lime and charcoal, 'Leather in the Allum', 7 beavers, London leather, London gloves. There were 27 pairs of breeches for sale, and 138 pairs of gloves; the latter are described as London, women's, girl's, half handed, men's, boy's and men's outseamed. John Smith's (1707) workshop contained:

> Bucks skins in the Hairs . . . 25 Bucks skins in Oyle . . .10 Bucks skins in Dressing . . . 12 pairs of painted Skins

There were also the 'Ingin', i.e. the tanning machine, two beams, knives and shears, with slinks, beaver breeches and gloves.[26]

Saddlers

There were three saddlers' inventories surviving: Thomas Askols (1693), Edmund Mills (1703) and John Wheeler (1768) but no trade goods are itemised. There were workshops in all the premises and the inventory of John Wheeler mentions 'Working Tooles in the Trade of a Sadler'.[27]

Shoemakers

Thomas Lisle's (1681) workshop describes shoes, leather, shoemaking feet, lasts, hammers, a cutting board, an old table and cupboard and 'other working tools'. Francis Willett (1692) was living in Robert Penfold's house five years before Penfold's death and seemed to have taken over his business. Willett's stock is itemised: 79 pairs of mens', womens', boys' and girls' shoes as well as 3 pairs of short boots and ten pairs of children's pumps. Four pairs of shoes, 'the work not payd', presumably indicated that the others were paid for or bespoken.[28]

The leatherworkers can be seen as a tight-knit group, with many family connections within the industry, exploiting the water resources of their town and the good supplies of hides and skins from the cattle and sheep of the Weald and the Downs.

Elizabeth Taylor, (1665) daughter of Richard Washer, (1641) tanner, and widow of Richard Taylor, shoemaker, had a shop containing 48 pairs of shoes, three seats, two hides for overleathers, two and a half hides, two backs (for sole leathers), and a nail of tallow. She had a small, modestly furnished house, which included painted cloths on the walls, a testament and a Psalm book, and is a good example of a widow carrying on her husband's business after his death.[29]

THE CLOTH TRADE

Mercers and Drapers

There were four cloth merchants recorded in Steyning in 1248. This industry supported wool merchants, weavers, tailors, drapers and mercers, all of whom were active in the town throughout the 14th and 15th centuries. Early wills indicate a minor concentration of clothmaking activity centred on Steyning during the reign of Henry VIII, with weavers taking outwork in Steyning and surrounding villages.[30]

There are 37 named mercers' inventories in the West Sussex Record Office, the majority belonging to the later 17th and early 18th centuries.[31] Mercers in country towns such as Steyning extended their range to cover not only haberdashery but household goods such as candles, soap, starch and blue, and store-cupboard items such as currants, raisins, sugar, pepper and nutmegs. Others sold tobacco, pipes and spirits, and some carried a wider range of clothing, both adult and childrens', including

frocks, waistcoats, trousers, underwear and shirts.

The earliest of the Steyning inventories to be found happens to be that of a draper, James Peeres (1559). With goods valued at £129 18*s.* 8*d.*, his premises comprised his shop, a hall and a kitchen, each with rooms above, plus a wool loft and a field outside for a gelding, mare, cow and some poultry. The fabrics in the shop include black, russet, marble and red cloth; white, yellow and black kersies; cotton, including Welsh cotton, and wolsey cotton;[32] linen; frieze and puke.[33] There were two painted cloths in his hall, a bow and a sheaf of arrows, harness and sword together with his outer clothing: a coat, jerkin, doublet and cap. In the loft over the hall were four more painted cloths and two beds; in the shop chamber another good bed, linen, silver spoons and a further three painted cloths. The wool, yarn, 'press for pressing kersies', stock cards for carding wool, scales and 20 lb of lead weights were kept in the wool loft. There were two linen wheels in the kitchen chamber.

Evidently Peeres dealt solely in cloth by the yard, and of the more homely woollen varieties at that. There were no luxury fabrics and no ready-made clothes. He had £2 in ready money, £2 in desperate debts, and £72, over half his assets, owing to him by his customers.[34]A 'mercer's book' was the term commonly used to describe the debts of an Elizabethan gallant. Mercers, like tailors, were particularly liable to carry debts from followers of fashion who were slow to pay up for their finery.

The first of the named mercers was Thomas Smyth (1619) one of whose appraisers was Steyning clothier and shearman John Turner, described below. Out of a total of £212 0*s.* 6*d.*, £189 2*s.* was for debts owing at the time of Smyth's death, the principal debtor being Sir Thomas Sherley of Wiston, owing £100. Seven others range more modestly from £1 10*s.* to £24. Of his stock-in-trade, 21 bottoms of tow hempen yarn are mentioned, diverse remnants of old tissany, 1 lb of silk fringe and 12 papers of buttons.[35]

Elizabeth Martin (1740), was probably a mercer's widow. She had a shop with potter's, salter's and haberdasher's goods and grocery. There was a cask of vinegar in her back room. From the total of £146 11*s.* 4*d.*, £15 was for her clothing and ready money, £42 for shop goods, and £77 10*s.* for 'money on several bills and book debts'.[36] Evidently the 'mercers book' was no mere figure of speech.

The most valuable of the Steyning probate inventories, and also the longest and most interesting of the tradesmens', is that of the mercer Samuel Lucke, taken in May 1706. The three generations of the Lucke family, all mercers, were important members of Steyning's community and commerce, first appearing in 1628. Samuel Lucke bequeathed properties in Brighton and New Shoreham, and the valuable contents of his shops to his wife, Martha. She inherited two thriving businesses: a mercer's shop in Steyning High Street, occupying the building that is now Steyning Post Office, and another shop in New Shoreham, together with goods and outstanding accounts valued at £1,406 3*s.*[37]

The bulk of Lucke's stock consisted of cloth in a wide range of fabrics and qualities. He was not only a retailer of cloth by the yard, ell or piece, a supplier of yarn and finished items of clothing, but also a general merchant and grocer. The shop at New Shoreham may have been more in the nature of an import warehouse. Its stock reflected the nautical occupation of many of his customers, containing a range of spirits, tobacco, sugar, starch, salt, pipes, mops, brooms and brushes, red lead, alum, copperas, rosin, whiting, red sand, nails and baskets. There were also stocks of whalebone, tobacco, engine grease, crockery, horse collars, and pattens. He kept no ready-made clothing at Shoreham, but the amount of cloth totalled an impressive 3,680 yards. Equally impressive were the debts due to him which amounted to £331. The premises at Shoreham were smaller than the Steyning shop, but equipped with two furnaces, casks, tubs, bottles and stallages. The range of textiles covered muslins, thickset, serge, fustian, Russian cloth, dowlas, dymothy, shalloon, drugget, lining, cotton and flannel, cantaloon, silk damask, denim, camlet, crepe and broad cloth.

In Steyning, Lucke stocked ready-made clothing for adults and children; hats, bodices, stomachers, printed petticoats, handkerchiefs, coats, knitted caps, gloves, hosiery, waistcoats

and garters, as well as a pall and a box of shrouds. Business in funeral goods was very evident, with black silk and burying crepe and hatbands. It was possible to buy rugs, blankets and bedticks there, and sacks for every purpose. There were laces of various kinds, silver lace, an assortment of buttons, ribbons, tapes, thread, flax for spinning, mohair, silk and worked yarn for weaving and knitting. There was a similarly wide range of textiles to those in Shoreham. The total amount in Steyning was slightly greater at 4,089 yards. He also stocked French brandy, gold rings and plate at Steyning, together with books, account books and paper, glasses, cruets, earthenware, vinegar, soap and grocery. Crocks and scythes, combs and skins, hemp and flax, clogs and pattens reflected a more agricultural clientele.

Lucke had no money out on bond. All his wealth lay in his two shops and his properties. Trade goods accounted for 61 per cent of his inventory total; clothing and money, both in his purse and received since his death for 4 per cent; his household goods in Steyning and Shoreham for 7 per cent and debts for 28 per cent. The latter differ strikingly: £331 in Shoreham, but only £60 in Steyning. Mariners no doubt owed him money in Shoreham, paying up when they came into port; possibly the items involved in these debts were of a more costly nature.

Many Steyning widows seem to have carried on their husbands' businesses and Martha Lucke may have continued to run the mercer's shop for another 20 years or more.[38]

Clothiers and Weavers

Shearman or clothier John Turner's (1624) name survived in Steyning until the 17th century as Turner's Croft, attached to a long narrow piece of land sold to his father in 1558. This croft was the site for the tenters where the cloth pieces were stretched out and dried before they were finished.[39] Turner had a large, well-furnished house, including workshops, plus a barn, some land, animals and grain crops. He kept some sheep locally and had more land in Surrey, at Goldalming and Charlwood. Much of the wool was put out to be spun, fulled and dyed, but returned to John Turner for its final dressing. This skilled work involved 'shearing' the nap of the cloth to varying lengths. Turner had 3 cwt of various grades of wool in the lofts of his house, with yarn and scales. The main shop contained his working tools and tenters, and the little shop contained a table and 'other Lumber', perhaps where he displayed some of his cloth.[40] Richard Clarke (1644) who called himself a yeoman, had no occupation ascribed to him in the inventory. However, 'In the woorkehouse, for 5 Loomes and other weeving Takelen £7' and seven smoothing irons clearly indicated his trade.[41]

Tailors

The four tailors' inventories and wills contain very few items descriptive of their trade. Seven yards of woollen cloth were mentioned, two pressing irons and 'one seeing glase and sisers 1s.'.[42]

Feltmakers and Hatters

Two hatters' inventories survive; William Benbridge (1665) was described as a feltmaker in both inventory and will, but his workshop was full of the 'hatts, hattbands, lynings, fuell and . . . implem[en]ts belonging to his trade', amounting to £131 5*s*. He was owed £52 10*s*. on book. There was a 'men's chamber' in his 8-roomed house, so perhaps some employees lived in.[43]

Thomas Temple's (1670) inventory is very different from Bembridge's rather sparse one. Though the latter's valuation was £275 3*s*. 4*d*., Temple's, taken four years later, was only £20 15*s*. 1*d*., yet it reveals a complete picture of the feltmaker and hatter's craft. He had five appraisers, which was unusual; he was a widower with four children under 21. His house had a 'workhouse below the stayers', two ground floor rooms, two first floor rooms and two garrets. There was a barn and three outhouses: a washhouse, backhouse and wellhouse.[44]

The 'below the stayers' room may have been a cellar, or a room attached to an outside staircase leading to the first floor.[45] His 'shope' contained a counter, 55 hat blocks, two new hats and a hat band, 2 lbs of wool, a bason, mallet, stiffening blocks, a lead standish, seven dressed hats, two shelves and a plank. Below stairs were 114 hat blocks, three furnaces, two 'waake' planks,[46] a dye plank, a vat, a hogshead, a

'bakell', a pair of seacoal irons, '1 tube to hold dye liquor', two stampers, an ash tub and two 'waoke pots'.[47] In the 'Bow Garrett' were three basons, two hurdles, two bows and a plank.[48] The other garret held baskets of wool, scales and weights and two bedsteads. The barn contained wood, seacoal and an oak slab.

THE DRINK TRADE

Innkeepers and Alehouse-keepers

Four inventories can clearly be seen to have belonged to fairly prosperous innkeepers in the town. John Cowlstocke's cellar contained only beer in 1633, but William Burnett (1690) had approximately 8–900 gallons of beer and cider and Mary Burnett, (1720) perhaps his widow, or a family member, 1,240 gallons. She also had two furnaces and a bag of hops. Ann Bryant's (1707) cellarage was listed as 14 vessels for beer and cider, which could have contained about 700 gallons if they were all hogsheads. John Cowlstocke did not seem to brew his own beer. The other three all had well-furnished brewhouses, valued at £6, £8 and £16 respectively.[49]

Only William Burnett is called an innkeeper by his appraisers. John Cowlstocke, named as 'the inholder' in the parish register burial entry, would appear, from other evidence, to have been tenanting the Chequer Inn in the High Street. The rent of the inn, owned by the Wiston Estate, was 7*d.* p.a. and this antiquated rental remained until the 19th century. Cowlstocke may have been a lessee and paying a much higher sum. William Clarkson, 'innholder' in 1640, seemed to be a prosperous yeoman farmer from his inventory contents, but receiving £5 15*s.* 'upon lease for the Cheq[uer]', and so making a good return on his money.[50]

Records for the Chequer Inn show that it was an important meeting place for the local Hundred Court of Charlton, the Overseers of the Poor, the Commissioners of the Sewers and

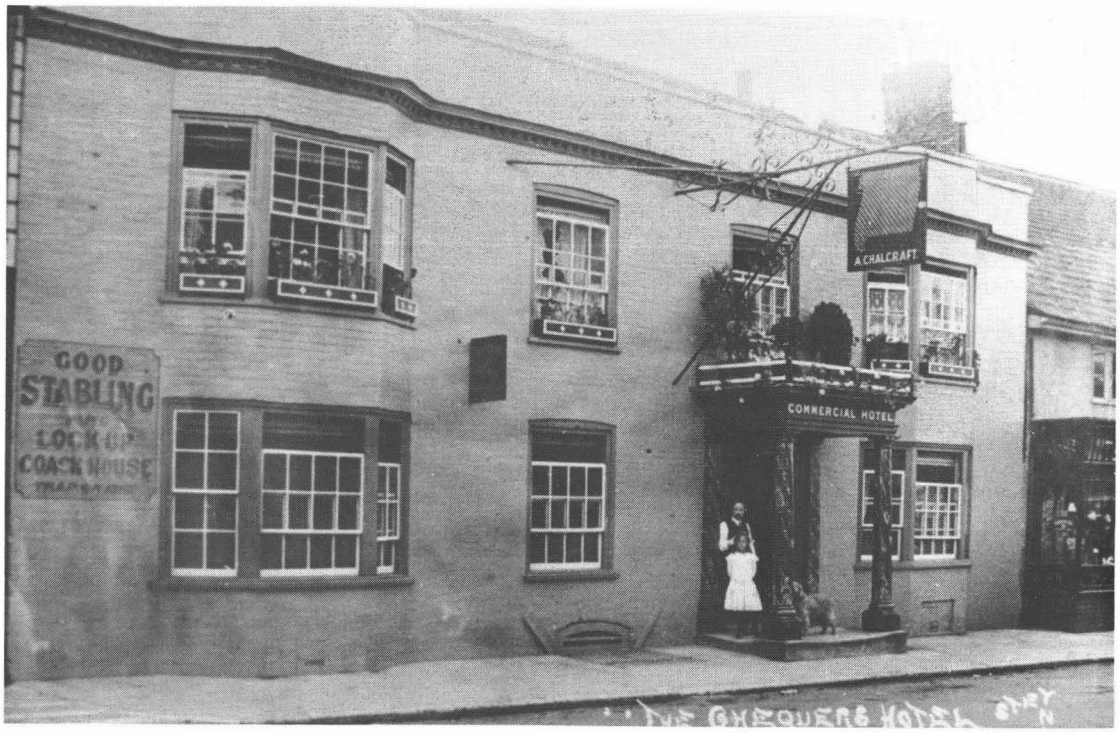


Fig. 6. The Chequer Inn, High Street, Steyning, early 20th century.

many other bodies in its long history. It can be seen from the innkeeping inventories that a room for meetings, (which always seemed to have been on the first floor), was a prerequisite for an inn of good standing. While Cowlstocke had a 'Great chamber' to offer for meetings, with its four-poster bed, framed table, livery table, form, five stools, two chairs, nine cushions, carpet (probably on the table) and a pair of bellows for the fire, William Burnett, possibly running the White Horse Inn, an important building at the town's crossroads, could offer his 'Best chamber'. This fine room, with its four-poster bed covered with a green rug, contained a 'drawing' table, little table, sideboard, stand, looking glass, ten leather chairs and two cushions. There was a fireplace, and a cloth graced the sideboard while two flower pots and 13 pictures decorated the room. Curtains were implied by the curtain rod. In the adjoining chambers there were 15 more chairs, two of leather and five rush-bottomed, and a stool which could be brought in if necessary. The gatehouse chamber contained two bedsteads and some charcoal. The White Horse and the Chequer Inn were the town's two important lay meeting places, and they no doubt vied with each other for custom. The stables and yards of these, and Mary Burnett's inn, contained poles, trestles or boards, indicating that further tables and seating could be brought into use, probably outside in the inn yards.[51]

By modern standards the inns could sleep from 12–20 in the beds mentioned, but as usually more than two people shared a double bed, this could rise considerably. Sheets, napkins and tablecloths feature in all the inn inventories.

Neville Hearsi (1642) was an innkeeper on a smaller scale, judging by his six kilderkins of beer, valued at £2, though he had six chamber pots and three warming pans in his kitchen with plentiful cooking equipment, 26 napkins and six tablecloths. There was a table and trestles in an inner room. He could sleep at least 16 people and there was a stable available. He had £40 out on bond, bringing him in some interest. Edward Kemp (1675) was described as a gentleman, and the presence of eight pewter chamber pots in the kitchen, together with wine pots and flagons, a wine cellar with half a hogshead of sack and half a hogshead of French wine, worth £12, and a beer cellar containing 4 hogsheads of beer worth £4 indicates premises offering superior hospitality. He had two chambers over the boards end room and a pair of virginals. Thomas Pick (1679), also had a 'bordsend chamber' in his house, which could have been used as a meeting room.[52]

Apart from a number of chamber pots in the kitchen, a good indication that an inventory belonged to an inn can be gained from rooms named, such as the Crown, the Star, or the Angel.[53] Also the presence of a 'boardsend room' or 'boardsend chamber' seems to be associated with a building that was, or had been, an inn.[54]

Ann Bryant kept an inn, with a well-stocked cellar of about 700 gallons of beer and cider in containers, plus 240 bottles, a good brewhouse with two furnaces and a 'Kings Chamber' guest room—perhaps trading on the fact that Charles II had passed near, or through Steyning in 1651. No tables feature in the inventory, apart from 'One leafe of a Table' in the kitchen chamber.[55]

It is apparent from the inn inventories that the kitchen served as the drinking room—the 'bar' of today. Anne Bryant's contained 19 flagons and wine pots, with two pewter chamber pots, and a well furnished 'cooking' fireplace with three spits. Her 'Dinning Roome' and ten tablecloths show that food was served. Each inn inventory provides a kitchen-cum-drinking room furnished with chamber pots—four pewter chamber pots in Mary Burnett's case. Her rooms comprised the kitchen-cum-drinking room, a shop, hall, room over the cellar, the cellar, four first floor chambers and a garret. There was a well-stocked brewhouse with two furnaces and in the stable, with the usual tackle, 'a Curry Comb . . . four horse Clothes . . .' were a game of ninepins and six pairs of slippers. Muddy travellers were obviously encouraged to change their riding boots before entering the house. The kitchen of Mary Burnett's inn contains a good description of an early 18th century drinking room and is worth quoting in some detail—a large table, a dresser, a cupboard, four joined stools, a settle, two benches, six bullrush chairs, and shelves for the pewterware. A big inglenook fireplace contained three spits, ten iron skewers, a toasting iron, various fireirons, a frying pan, a

basting ladle and an egg spoon, the jack with its weights and lines, two brass chafing dishes for keeping food hot and an iron kettle. There was a cruet and also a pair of tobacco tongs. The well bucket and rope were stored in the kitchen; and the well itself may have been there too, which was often the case. There were 21 candlesticks in the room, one of pewter, two of brass and 17 of iron, plus a sconce. There was a lantern for trips outside. The drinking equipment was divided into two sections: for beer, 14 glasses, five pewter quartern pots, 11 pewter pint pots, two pewter basons and a punch bowl, and for wine, two pewter wine quarts, five pewter wine pints, two pewter half pints, two quarterns and a half quartern. There was a coffee pot, seven knives and a dozen forks; many people carried their own knives when travelling.[56]

Amongst other kitchen and cooking equipment were trenchers, 17 pewter dishes, 33 pewter plates, a cheese plate, a pie plate and two salts. Forty three table napkins and 11 table cloths show the extent of the catering at this inn. Mary Burnett could seat well over 100, and there were also trestles and poles outside. Window curtains feature in the rooms facing on to the High Street. The cellar contents are typical:

> five Hogsheads, Eight half hogsheads, three Keelers, four stallages, three Butts, three Pipes, Seven Firkins, two Poudering tubbs and Nine Doz[en] of bottles.[57]

The 'Great Chamber', which must have been her meeting room, held 15 leather chairs, six 'turkey' chairs, a deal table, a round table, a leafe and framed table of oak, and an ash table. In other rooms there were bullrush chairs, oak tables, 11 ashen chairs and four alder chairs. One of the appraisers knew his woods well.

Innkeepers were often moneylenders. John Cowlstocke certainly was: nine people owed him £151 in bonds varying from £5 to £40. He had three unsecured debts of lower amounts. Mary Burnett had £180 out on bond and £80 cash in the house when she died. Cowlstocke was a churchwarden, as was his son-in-law who seems to have taken over the inn. An innkeeper was a respected figure in the town, the men serving the community in administrative capacities as overseers, churchwardens and officers of the Borough, while the widows can be seen, in the persons of Ann Bryant and Mary Burnett, to be supporting themselves well in what must have been a hard-working but sociable lifestyle.[58]

Though no licenses for these survive, Steyning would no doubt have supported several alehouses as well as inns. Widow Margery Fevens (1633), with a house on the south side of the High Street, may well have run it as an alehouse. Her modest inventory describes a shop with a table, form, two benches, two stoups, and a dozen wooden dishes and other earthenware pots. She had eight boards and two pairs of trestles in the loft, with ten bushels of oats and three loads of wood outside in the yard. Here was a widowed lady, serving beer and food for a living. She also had 3 kilderkins, (54 gallons), a case to keep glasses in, a bench, form, board, six more trestles, 36 trenchers and 12 stone pots and six glasses in the buttery, together with eight table cloths and 30 napkins.[59]

Beerbrewers and Maltsters

Brewhouses were named in 79 of the inventories, though mostly for small-scale domestic use. The two streams, issuing from the springline at the foot of the Downs and encircling Steyning, plus the supply of barley from local farmers ensured that the brewers produced a steady supply of malt beer. The malting process went hand in hand with brewing, and the maltsters' inventories in the collection give a good picture of their prosperous lifestyle.

The earliest beer brewer recorded is Richard Standing who died in 1633. He referred to himself as a brewer in his will, though his inventory gives no clue that he had followed this trade; of the eight men owing him money, two may have had innkeeping connections. John Farley (1641), a prosperous yeoman farmer, was also a maltster, with a copper furnace, seven tubs, and a lead cistern, for soaking the barley.[60]

John Blackfan's (1672) possessions were valued at £844 4*s*., with £100 in dry malt and £48 in green malt and dried barley. Bartholomew Bowler's inventory is a very good example of a listing which fails to represent the full wealth of the deceased person. The will reveals fuller details of his property. It is obvious that he became a prosperous maltster. His inventory shows £137 worth of goods and chattels, £78 of

these being the value of his malt. The inventory describes his malthouse and millhouse, with only £5 owing on 'Booke debts'. He provided for his wife Mary to stay on at his house, while bequeathing it to one of his married daughters, Martha.

> My malthouse lying next and adjoining next to my dwelling house . . . and the use of the pump for water for the Cesterne to Martha my daughter . . .

He made provision for his wife and youngest single daughter, Dorothy, to jointly make use of the malthouse and keep on the trade of malting 'for one whole year after my decease, paying a reasonable rent for the same. They shall have the use of the pump belonging to my dwelling house for their convenience in malting during this year'.[61]

OTHER TRADES

Meat

The butchers played an important part in Steyning's leather trade, profiting from the proximity of the tanyard, where they sold their hides and woolskins. Six of the butchers' inventories list shops, of which three had slaughter houses. Three butchers had old shop linen or shop clothes. They had scales and weights, 'a beam of Iron' in 1633, 'steelyards' in 1744, lead and iron weights, and either one or two blocks, which would probably have been sections of elm trunk, with three small legs. This hard wood was difficult to split. There were up to four cleavers and knives, hooks, '2 ranges of butchers hooks', smaller scales, and a sheep hook, probably a crook. The three slaughter houses each contained a pole-axe and several ropes. There were two old tubs, probably used for scalding pigs before scudding, well buckets, boards and one table. In all cases the slaughter house also appears to have doubled as a stable, and the horse may have been used to pull the ropes which aided the slaughtering. Water at hand was obviously useful for sluicing down after a killing.[62] Thomas Lidgitter (1682) and Philip Butcher (1687) both had livestock, mainly sheep, and two saddles and bridles each, with a pillion for Mrs Butcher. She, though appropriately named, did not seem to be carrying on her husband's business after his death, when the scales were in an upstairs room and the shop was not listed. William Aylwin (1681) and Walter Hilman (1744) both had horses and shop clothes, though apparently did not do their own slaughtering. William Lidgitter (1667) had retired and his son Thomas had taken over the business.[63]

The wills of Richard Christopher (1633), William Aylwin, and William and Thomas Lidgitter give clear instructions for the education of the children. This does not stand out particularly in the other trades examined, and perhaps reflects the need for accounts training, bearing in mind the extended credit that butchers gave. Christopher, Thomas Lidgitter, Butcher and Hilman had debts owing to them of between £131 and £256. Though some of this was on bond, Hilman appeared to be the unluckiest, with 'Dubious debts' of £203 10*s*.[64]

The butchers lived in substantial houses, often of seven or eight rooms, including the shop, with outhouses. Thomas Lidgitter seemed to be the most affluent butcher. His shop was the only one with a settle for seating his customers. He had £243 of good and £23 desperate debts contributing to his inventory total of £357 5*s*. 4*d*. Approximately £45 covered the value of his house contents, excluding his wearing apparel and money in his purse. He lived very comfortably. There were four first floor chambers; the ground floor contained a kitchen, a 'sinke' (probably a sort of scullery), parlour, buttery, shop and brewhouse. His old shop linen was listed amongst the sheets and table cloths. The parlour sounded attractive with its eight red leather chairs, a well-furnished hearth, curtains at the windows, four flower pots, four pictures on the walls and a case of knives. The best bedroom was above, with a four-poster curtained bed worth the high sum of £8, a fireplace with bellows, brass and fire irons, a looking glass, seven cloth chairs and seven cloth stools, a little table, a sideboard with two cloths, a 'box of drawers' a 'glass cage' and two brass kettles. Curtains at the windows and a warming pan, completed the scene. The shop chamber was also curtained, and contained a 'presse to hang Clothes in', two chests, four old chairs and a close stool for added comfort. There was a green

rug on the bed in the kitchen chamber and a joined chair in the buttery chamber. Three chests and two boxes were used for storage. One of the appraisers was a carpenter, so the value of £1 7*s.* put on the table and frame, seven joined stools, a small draw table, eight chairs, four cushions, a cupboard and 'a nest of Drawes' is likely to be correct. Brass and pewter candlesticks, pewter plates, flagons and dishes, with other cooking implements, toasting irons, three spits and 'one jack to roaste meate' show that this butcher and his family lived comfortably and ate well.[65]

Thomas Lidgitter's will shows that he kept some of his sheep with a farmer nearby; he also had five acres of his own adjoining this farm, at the west end of town. A probate account survives to complement the information gained from Lidgitter's inventory and will. The will was made on 6 January 1682, he was buried on 11 January, and the inventory drawn up on 16th of that month. Not until 11th November of that year were the three accountants, his executors, able to present the final bill. They paid themselves 6*s.* 8*d.* 'for drawing this Accompt, being very large, a Counsell about the same', and 10*s.* 'for trouble ingrossing this Accompt (being very large) in parchment'. The Discharge totalled £296 15*s.* 8*d.*[66]

The accountants acted as guardians of young John Lidgitter, paid widow Lidgitter's legacy, arranged for a £200 bond to be drawn up for the children, and paid the 'Cryer of the sale'. A mason was paid 'to mend the house', and sand, lime and nails were purchased; time was spent 'letting the house'. Payments were made for cattle, pigs and sheep, grazing for a horse and a slaughter. The surgeon was paid for 'letting Thomas Lidgitters blood . . . in his sicknes', and the apothecary for medicine. The glover, tailor, and shoemaker Joseph Peckham, were paid. Lidgitter's apprentice was paid his 5*s.* bequest and the accountants purchased three rings for themselves, as stipulated in the will.[67]

Chandlery

There are four inventories for chandlers, two of them probably for makers of tallow candles, and two for shopkeepers dealing in other goods besides candles.

The tallow chandlers had ready supplies of material from the butchers and from the processing of sheep and other carcases in Steyning. The Groome family in particular became prosperous in the trade. Candles themselves are not mentioned in these inventories but John Groome's (1646) appraisers listed a shop containing nails, crocks, iron, pitch, tar and hops. His will described him as a chandler; his son, Thomas, however, was described as a tallow chandler in his 1671 inventory. There was no stock-in-trade on his premises, but there was good furniture, leather and bullrush chairs, two Bibles and a substantial sum, £322, owing to him in good debts and specialty. His son, John, had probably taken over the business, and he it was who issued trade tokens featuring a stick of candles. The Groome's candle factory was near the present White Horse Inn.[68]

The will of another Steyning chandler, Walter Parson, appraised in 1668, mentions property in Church Street which he left to his wife and two of his children, but his inventory is badly damaged and there is no sign of trade goods. William Langford, however, referred to as a tallow chandler in 1687, and appraised in 1693, had goods in his shop and warehouse of a kind associated with a chandlery: cloth, sugar, grocery, salt, crockery, shot, hops, glass bottles and vinegar, pitch, tar, rosin, soap, starch, cheese, brooms and bedmats. He had 4 cwt of tobacco with an engine and screws for cutting it up. He had a substantial property with shop, warehouse, kitchen, parlour, buttery, brewhouse, four chambers with five beds, a large quantity of household linen, two quarters of wheat, a mare, saddle and bridle. Debts due on his book amounted to £10. Thomas Sowtham of Steyning, another chandler, is mentioned in an executor's account of 1600, when a bill of 20*d.* was paid to him for five pounds of candles.[69]

Building

These tradesmen comprise six masons, who were sometimes described as stonehewers or healyers, and a bricklayer. The Petoe and Easton families both produced bricklayers from 1728 to 1791. The masons, who also often doubled as bricklayers, operated from the south-east end of town, the Singwells artisan quarter. Thomas Burden (1636) and his son Francis (1648) had

modest livings; Francis, who had two trowels, a lathing hammer and an iron bar or crowbar, was also a dairyman. Other masons had ladders, lime, laths and tiles, and loads of 'stones', probably Horsham slab. Richard Easton's (1676) inventory listed lime, sand, 3,000 laths, paving and roofing tiles, 1,000 bricks and one long ladder.[70]

Timber

The importance of the cooper in the local economy is easily seen in many of the Steyning inventories; for example, a widow, Elizabeth Eversfield (1688), of Charlton Court Farm, had twelve tubs, eleven barrels, a mash vat, two hogsheads, two churns, a kneading trough and a beef tub. Richard Constable (1614) presents an interesting picture of a busy man combining coopering with another trade. He described himself as a cooper in his will, and he had a workshop and several storerooms where he kept cleft timber, 1,000 3-inch and 4-inch tun staves, bottom and featheredge planks, shingles and barrel board, hazel hoops and 'whyte' hoops. He had two houses in Steyning, one described as 'the Lower Howse'; he can also claim to have Steyning's first documented fish shop, selling vinegar, fish, salt and candles. He apparently had no debts.[71]

Richard Gray (1640) was one of the three sons of John Gray (1623), all coopers. Neither father nor son had any debts, and Richard left all his coopering tools to his son Richard. Amongst the carpenters Thomas Weeks (1679) seemed to be retired and living on the interest from a £40 mortgage. He had bequeathed his working tools so they had probably been handed over prior to the appraising. He left a chest to Martha, daughter of maltster/carpenter Bartholomew Bowler. The latter's inventory (1703) and will (1702) are full of interesting details. Bowler referred to himself as a carpenter in his long will and bequeathed all his working tools and implements 'belonging to the trade of a carpenter' to his two sons-in-law.[72]

John Mitchell's 1668 inventory (see Fig. 5) gives a detailed list of tools and stock-in-trade 'in the workhouse yard'. Jacob Knowles was one of the three appraisers; he was an experienced Steyning appraiser who was also a joiner, and it is likely that his expertise in both fields was responsible for the individual pricing of over half the trade stock at Mitchell's workshop premises and yard. He valued 12 saws, 18 augers, eight axes, a hatchet, planes, a gluepot and a hold-fast; there were elm boards for coffins, different kinds of planks and boards, sawpit rollers, 'slabbs and old ends' and 'slight quarters', all of which would be familiar to the carpenter of today.[73]

William Kitchener (1709) described by his appraisers as a wheelwright, was also in business as a maltster, growing his own barley. However, his inventory mentions 'a small matter of Timber abroad' and stock in his yard, valued at £40. A piece of his land is (delightfully) described as containing '40 square rods and being in the form of a house-carpenter's square'.[74]

Metal

The blacksmith's trade is well represented in the surviving inventories. The furnace was usually a fixture and therefore not listed, but iron, charcoal and smithying tools were itemised.

John Swift (1618) was an important man in Steyning's social hierarchy in the early 17th century. Only part of his will survives, but it mentions his two houses in Church Street; these are still standing, now combined into one dwelling. Until 1943 they had been used as a forge and blacksmith's premises for 400 years or more. Swift's workshop contained 8 cwt of iron, all his tools, plus coal and charcoal. His inventory, which totals £479 7*s.* 9*d.*, includes all monies owing to him. As well as providing smithying services, he was also acting as a local banker. His shop book of 72 pages showed £92 19*s.* 6*d.* owing by 76 people, and £266 17*s.* 6*d.* due to him on bond and bill by 15 people. Local gentry, such as the Sherleys of Wiston and the Leedes of Wappingthorne, as well as many other local men of substance, and some of the more lowly Steyning inhabitants, were in his debt. Lady Sherley and five Steyning widows were among those recorded. Swift had four household servants; he left his apprentice, Benjamin Newarke, a cauldron of coals 1 cwt of iron and all his shop tools.[75]

Richard Barr's (1666) inventory has disappeared, but his will survives, in which he dictated 'I give to my man Anthony Ashton 10*s.*

and my desire is that he may buy my tooles and take my shopp of my executrixes before any other so that he will gives as much for them as any other will give'. This would seem to be a sensible practice when no son survived to take over the business. Barr also left his daughter Mary a cauldron of coals as well as money. A splendid blacksmith's workshop inventory survives for Benjamin Newarke, (1667) probably a relation of John Swift's apprentice, listing his bellows, anvils, vices, tools, horseshoes, ploughshares and iron in great detail, the valuation being a third of his inventory total. He had £40 in debts, and a good sized house of eight rooms.[76]

In general the smiths' houses contained no refinements, though John Swift had a 'great Bible',[77] some fine sheets and a silver bowl. William Peckham (1714) had a clock, a mirror, pork, bacon and beer. He kept pigs and had nine acres of wheat. By 1771, William Christopher, who had retired, could boast of a writing desk, and a clock with a wooden case in his home.[78]

The clocks may have been made by clocksmith Benjamin Peckham (1728), perhaps a relation of the blacksmith. His workshop contained two new clocks, six suits of clockwork, two old iron jacks, three vices, small tools, a pair of smith's bellows and anvil, one hammer, two sledges, a bick iron, other old iron, small things and sea coals.[79]

The locksmith's trade is easily visualised from Edward Ward's 1697 inventory. Though it is damaged, the tools are carefully itemised: the forge bellows and anvil, 30 files, three vices, tongs and hammers, three sorts of lathes, old and new iron. There were locks for trunks, gates, chests and cupboards, 'one springe locke' and a 'stock lock', different hinges, 'dove tails', iron latches; 'one hoane and three rasers, a spining wheele, a pewter chamber pott' complete his shop contents. A glimpse of some of the uses for locks can be seen in other inventories; yeoman John Bode (1629) had 'Two lock[e]s for barnes' and cordwainer Thomas Longley (1706) 'the Locks of the inner doors'. Longley made a bequest of 'All the Locks on the doors belonging to the house Except the Kitchen door'.[80]

Brazier John Barnes's 1696 inventory displays one and a half pages of pewter, brass, iron, latten, tin and lead wares, plus metal supplies. Both shop and the chamber over it were full. The hall chamber was the best and only sleeping room. Amongst other goods in the shop were 32 pewter chamber pots, six warming pan bottoms and three lids, two watering pots, a lantern, two collanders, 14 mousetraps and 17 alchemy spoons; he had brass nails, old iron, mill brass, fetters and a lock, a frying pan handle, pewter salts and 14 'handles for sawce pans'.[81]

Miscellaneous trades

Several other trades appear, for the most part represented by only one or two inventories. Between 1614 and 1737 there was a welldigger, glazier, thatcher, carrier, postmaster, pedlar, and a salesman. Two millers' inventories survive, Richard White (1701) and John Soale (1704). The latter inventory contains nothing to suggest his trade, but the will of Richard White refers to an unexpired portion of a lease, comprising in 1675 'a tenement and water-corn mill with backside, croft and water courses' in the manor of Charlton. This was Court Mill, sometimes called West Mill, at the west end of the town. There are two inventories for gardeners, David Foster (1712) and Thomas Finch (1722), both including garden tools, Thomas Finch's mentioning four yew trees and a 'Flower tree'.[82]

A single inventory survives for a baker, Mary Flite (or Fleete) taken in 1678. Her premises included a kitchen, bakehouse and shop, with two chambers above, and a yard at the back, situated on the south west side of the High Street. A widow, with two daughters, Mary and Sarah, she supported herself by means of her baking, possibly cooking other people's food, and also by spinning. Wood and faggots for the oven were outside in the yard and there were three spinning wheels in the shop, together with a supply of wool and tire.[83]

CONCLUSION

In view of the range of tradesmen operating in the town and evident prosperity of many of them, there can be no doubt of the local importance of Steyning in pre-industrial times. Before the development of the coastal towns of Brighton and Worthing, Steyning was the largest

centre between Arundel and Chichester in the west, and Lewes in the east, lying on an important east-west route. Horsham was 12 miles to the north in the Weald.

There was travel between Steyning and these larger towns, particularly for legal purposes, but otherwise it became, and remained until the early 20th century, increasingly self-sufficient, attracting population from the surrounding area either as permanent settlers enjoying the work opportunities, charity doles, schooling and marriage prospects, or as regular traders and customers. Weekly markets were held on Wednesdays and Saturdays, and fairs twice a year. These fairs were 'celebrated for the immense sale of cattle . . . seed, wheat . . . every species of traffic was carried' so that Camden commented in 1607 that Steyning's Michaelmas Fair was one of the greatest fairs in Sussex.[84] With such commercial outlets and the surrounding productive farmland, the tradition of sheep farming on the Downs, and water supplies from the chalk springs, there was ample opportunity to make good. Traders and farmers consolidated their wealth, and participated in the running of the town.

This study has revealed a hitherto unknown picture of Steyning from the late-16th to the mid-18th centuries: a busy market town, peopled by industrious and, in many cases, prosperous inhabitants. The tradesmens' inventories and wills examined have opened the doors to their workshops and homes, giving a unique glimpse of family life and the daily round.

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Notes

[1] G. H. Kenyon, 'Petworth Town and Trades, 1610–1760, Part I', *Suss. Arch. Coll.* **96** (1958), 35.

[2] M. W. Barley, *The English Farmhouse and Cottage* (1961); D. Coldicott, *Long Sutton Miscellany* (1979); M. A. Havinden, *Household and Farm Inventories in Oxfordshire 1550–1590* (1965); G. H. Kenyon, 'Kirdford Inventories 1611–1776', *Suss. Arch. Coll.* **93** (1955); G. H. Kenyon, 'Petworth Town and Trades, 1610–1760, Part II', *Suss. Arch. Coll.* **98** (1960); Part III, *Suss. Arch. Coll.* **99** (1961); H. C. F. Lansberry (ed.), *Sevenoaks Wills and Inventories in the Reign of Charles II,* Kent Records (1988); R. A. Milward, *Glossary of Household, Farming and Trade Terms from Probate Inventories* (2nd. ed. 1982); D. Neave (ed.), *Tudor Market Rasen. Life and Work in a Sixteenth Century Market Town illustrated by Probate Inventories* (1985); S. Needham, *A Glossary for East Yorkshire and North Lincolnshire Probate Inventories* (1984); G. Mayhew, *Tudor Rye* (1987), 180–191; E. R. Perkins (ed.), *Village Life from Wills and Inventories, Clayworth Parish 1670–1710* (1979); U. Priestley and A. Fenner, *Shops and Shopkeepers in Norwich 1660–1730* (1985); M. Reed (ed.), *The Ipswich Probate Inventories, 1583–1631* Suffolk Records Society **22** (1981); F. W. Steer (ed.), *Farm and Cottage Inventories of Mid-Essex, 1635–1749* (1969 reprint); G. Trinder and J. Cox (eds.), *Yeoman and Colliers in Telford* (1980); N. Vickers (ed.), *A Yorkshire Town of the Eighteenth century. The Probate Inventories of Whitby, North Yorkshire 1700–1800* (1986); J. West, *Village Records* (1982 reprint), 92–131; J. H. Wilson (ed.), *Wymondham Inventories 1590–1641* (1983).

[3] West Sussex Record Office (hereafter WSRO) EP/1/183 nos. 1–229. Steyning Inventories and Wills, 1587–1787; P(ublic) R(ecord) O(ffice), Prob.2/380A, James Peeres, 1559; Prob.4/7943, Elizabeth Blackfan, 1674; 11783, John Blackfan, maltster, 1672; 10206, George Cogger, 1670; 17222, Joan Covert, 1677; 10161, Henry Dixon, 1685; 10679, Edward Kemp, 1675; 12779, George Withers, 1679; Prob.31, J. Eede, 1731; E. Michell, 1730; J. M. L. Booker (ed.), *The Wiston Archives, Vol. 1, A Catalogue* (1975); S. Freeth (ed.), *The Wiston Archives, Vol. 2, A Catalogue* (1982).

[4] *V.C.H. Sussex* **6**(1) (1980), 220, 236; Arundel Castle MS MD1082 Report (1842) on the origins of markets and fairs in Steyning.

[5] *V.C.H. Sussex,* 226–230.

[6] J. Cornwall, 'Sussex Wealth and Society in the Reign of Henry VIII', *Suss. Arch. Coll.* **114** (1975), 15; *V.C.H. Sussex,* 224; T. McCann, 'The Solemn League and Covenant for Botolphs, 1644', *Suss. Arch. Coll.* **123** (1985), 275.

[7] Kenyon, (1958), 54. Kenyon was only able to link half an existing house to an inventory in his study of 140 Petworth tradesmen. Two houses which he was able to identify had long since disappeared.

[8] N. & J. Cox, 'Probate Inventories: the Legal Background', *Local Historian* **16** (3), (1984); 'Valuations in Probate Inventories: Part II', *Local Historian* **17** (2), (1986).

[9] WSRO EP I/33. We are grateful to Tim McCann for drawing these documents to our attention.

[10] It has been a commonly held assumption that goods in inventories were, if anything, undervalued. For example: D. Vaisey (ed.), *The Diary of Thomas Turner 1754–1765* (1984), 247. Turner and a friend went to the dwelling house of a deceased person in East Hoathly, Sussex, on 2nd April 1762 'where we took an inventory, or rather a list of his effects; the stock-in-trade, utensils, furniture in the house, husbandry tackle, stock etc., debts excepted, amounted to £152 19*s.* 7*d.* And I dare say we valued it at £50 under the real worth, was it to be sold . . .'. N. & J. Cox (1968), however, we feel that an average market value was quoted.

[11] M. Spufford, *Contrasting Communities* (1987 reprint), 320–344.

[12] *V.C.H. Sussex*, 239. The well was called 'Sewyngwell' in 1498.

[13] WSRO EP1/29/183/099.

[14] WSRO EP1/29/183/015. This Sussex smock belonged to Thomas Smyth, mercer, in 1619, and was listed with his own clothing.

[15] PRO Prob.31, J. Eede.

[16] F. Duke and E. W. Cox, *In and Around Steyning* (1954), 12–13. Four acres of ground to the north west of Steyning parish church were known as 'The Howe otherwise Shooting Field' after 1577, because archery was said to be practised there.

[17] *V.C.H. Sussex*, 235.

[18] *V.C.H. Sussex*, 236; WSRO, Add. MS. 40,567, p.147; there were some old tanpits just to the north of Court Mill (West Mill). These seem to have been separate from the main 19th century tanyard. Ex info John Durrant, retired Steyning Tanyard worker; Edward Goffe, WSRO EP1/29/183/037, (1634) had hides and skins 'at westmill in the laines'.

[19] *V.C.H. Sussex*, 235.

[20] C. Brent, 'Urban Employment and Population in Sussex between 1550–1660', *Suss. Arch. Coll.* **113** (1975), 48.

[21] M. Beswick, *Leather and Cloth. Two Rural Trades* (1985); H. A. Carnell, *Leather* (1950); L. A. Clarkson, 'The Leather Crafts in Tudor and Stuart England', *Agricultural History Review* **14** (1966), 25–39; S. Thomas, L. A. Clarkson, R. Thompson, *Leather Manufacture Through the Ages* (1983); R. Thompson, 'Leather manufacture in the post-medieval period with special reference to Northamptonshire', *Post-Medieval Archaeology* **15** (1981); J. W. Waterer, 'Leather, Singer and Holmyard: *History of Technology* **II**, (reprint, n.d.).

[22] PRO Prob.4/12779, George Withers.

[23] These were known as 'fly wings' at Steyning Tanyard before World War I. Ex info John Durrant.

[24] WSRO EP1/29/183/096, STC 111/1 f.71 Edward Fussell; EP1/29/183/110 William Sharpe; the wool was graded into four types at Steyning Tanyard in the early 20th century. Ex info John Durrant.

[25] WSRO EP1/29/183/189, Robert Holden; beaver: as well as the amphibious rodent, the word beaver was also applied to a felted cloth, used for overcoats; J. Thirsk and J. P. Cooper (eds.), *Seventeenth Century Economic Documents* (1972) 296, 560. Beaver skins were imported to England by the Hudson Bay Co., and in 1693 cloth was being traded for beaver furs in Virginia and New England.

[26] WSRO EP1/29/183/179, Thomas Dennett; Par.183/182, John Smith; slinks: skins of premature or aborted calves or sheep.

[27] WSRO EP1/29/183/154 Thomas Askols; EP1/29/183/165 Edward Mills; EP1/29/183/226 John Wheeler.

[28] WSRO EP1/29/183/129, Thomas Lisle; EP1/29/183/150, Francis Willett; EP1/29/183/137, Robert Penfold.

[29] WSRO EP1/29/183/081, Elizabeth Taylor; EP1/29/183/054, S. Dean 3, Richard Washer; nail/nayle: a measure of weight, for wool, beef etc. usually 8 lbs.

[30] *V.C.H. Sussex*, 235; Cornwall, 'Sussex Wealth and Society', 18.

[31] There may very well be others, for example, WSRO EP1/29/106/044, Thomas Wood of Horsham (1632), whose preamble carries no description, but whose stock is instantly recognisable as that of a retailer of a wide variety of cloths. Broadcloth and kersies, cottons and bays, frieze, linens, silk, canvas, cheesecloth, buckram, lockram, ribbon and lace formed the bulk of their wares, together with ready-made items such as stockings, buttons, caps and socks.

[32] Welsh cotton: a woollen fabric of the nature of frieze in 16th century; Wolsey cotton: a mixed cloth of wool and cotton.

[33] Frieze: a kind of coarse, woollen cloth, with a nap, usually on one side only; puke: a superior woollen cloth from which gowns were made.

[34] PRO, Prob.2/380A James Peeres.

[35] WSRO EP1/29/183/015, Thomas Smyth; EP1/29/183/023, John Turner.

[36] WSRO EP1/29/183/219, Elizabeth Martin.

[37] Reverend E. W. Cox, 'The Lucke Family 1628–1734', *Steyning Parish Magazine*, June 1932, no. 150; Duke and Cox, *In and Around Steyning*, 93, WSRO STCI/30 f.844, Samuel Lucke.

[38] WSRO EP1/29/183/175, STCI/30 f.844 Samuel Lucke.

[39] It later became known as the Chequer Orchard; Duke and Cox *In and Around Steyning*, 58, describes John Turner as a shewman, a misreading for shearman; J. Pennington, 'The Turner Family of Steyning. Seventeenth-century clothiers of Sussex', *Sussex Family Historian* **6**(6) (1985) 203–211.

[40] WSRO EP1/29/183/023, John Turner.

[41] WSRO EP1/29/183/136, Richard Clark.

[42] WSRO EP1/29/183/030, STCI/18, f.62 John Hills; EP1/29/183/068, STCI/21, f.166, Francis Thorpe; EP1/29/183/094, STCI/23, f.411, Henry Brown; EP1/29/183/159, STCI/30, f.287, John Hooker.

[43] WSRO EP1/29/183/080, William Benbridge.

[44] WSRO EP1/29/183/099, Thomas Temple.

[45] H. M. and V. E. Lacey, *The Timber-framed Buildings of Steyning* (1975 reprint) 20 *et passim*. Outside staircases would have been a familiar sight in Steyning during this period.

[46] These may have been work planks.

[47] Probably oak pots.

[48] Bowing was the separation of the hair fibres which had to be done before the felt could be made. This may have been rabbit fur, but beaver fur would also have been used.

[49] WSRO EP1/29/183/033, John Cowlstocke; EP1/29/183/146, William Burnett; EP1/29/183/199 Mary Burnett; this may have been a pocket of hops, i.e. 1 and a quarter cwt; WSRO EP1/29/183/180, Ann Bryant; hogshead: a large cask containing 52 and a half gallons.

[50] J. Pennington, *The Chequer Inn, Steyning. Five centuries of innkeeping in a Sussex market town* (1990). Unless otherwise referenced, information about the Chequer Inn is taken from this source; WSRO EP1/29/183/063, William Clarkson; EP1/29/183/146, William Burnett; EP1/29/183/033, John Cowlstocke.

[51] WSRO EP1/29/183/033, John Cowlstocke; EP1/29/183/146, William Burnett; the White Horse burnt down in 1949. It was re-opened in the refurbished stables and the rear of the original inn; WSRO EP1/29/183/199, Mary Burnett.

[52] WSRO EP1/29/183/057, Neville Hearsi; kilderkin: a cask containing 16 to 18 old wine gallons; PRO, Prob.4/10679, Edward Kemp; board-end: a table, for food, especially in a tavern; WRSO EP1/29/183/121, Thomas Pick.

[53] Kenyon, 'Petworth', (1961) 125–131.

[54] PRO Prob.4/9782; East Sussex Record Office, W/INV, 1784, an inn at Ardingly in 1725 had a 'Pantry Chamber or Boardsend Chamber', and the George Inn, Ifield 'One Boards End Table and brass peeces' in the hall, suggesting an imposing dining table. WSRO EP1/29/183/121, Thomas Pick (1679) a tailor, had a 'Bordsend Chamber' listed in his inventory, but did not appear to be an innkeeper.

[55] WSRO EP1/29/183/180, Ann Bryant; the absence of tables is noticeable in several other Steyning inventories. There seems no ready explanation.

[56] WSRO EP1/29/183/180 Ann Bryant; EP1/29/183/199, Mary Burnett; Duke and Cox, *In and Around Steyning*, 93–4. A Mary Burnett was in occupation of the George Inn in 1699, when depositions of witnesses in a law suit were taken there, and also in 1714 when the Sewer Commissioners held a meeting there. Known by that name in 1674, the George Inn was opposite the present White Horse Inn and was formerly known as the Swan. The building (nos. 46–52 High Street) today adjoins Steyning Post Office on its west side. There was another George Inn at a later date at the west end of the town; kettle: at this time a kettle would have been a big open vessel. Tea kettles were always listed as such.

[57] Keeler: a vessel for cooling liquids; stallage: a stand or support for a cask; butt: a cask of wine or ale, 108–140 gallons; pipe: a large cask for wine, 105 imperial gallons; WSRO EP1/29/183/180, Ann Bryant.

[58] WSRO EP1/29/183/033, John Cowlstocke; EP1/29/183/199, Mary Burnett; EP1/29/183/180, Ann Bryant.

[59] WSRO EP1/29/183/035, Margery Fevens; stoup: a pail, bucket or drinking measure.

[60] WSRO EP1/29/183/036, Richard Standing; EP1/29/183/055, John Farley.

[61] PRO Prob.4/11783, John Blackfan; WSRO EP1/29/183/164, STCI/30, f.605, Bartholomew Bowler.

[62] Steelyard: a balance consisting of a lever with unequal arms which moves on a fulcrum; scud: to remove hairs from a skin or hide with a hand-knife; thanks to Rodney Brooks of Steyning, butcher, for useful information.

[63] WSRO EP1/29/183/131, Thomas Lidgitter; EP1/29/183/138, Philip Butcher; EP1/29/183/125, William Aylwin; EP1/29/183/085, William Lidgitter; EP1/29/183/222 Walter Hilman.

[64] WSRO STCI/18, f.248, Richard Christopher; STC 1/27, f.161, William Aylwin; STC 1/23, f.376, William Lidgitter; EP1/29/183/131, STCI/27, f.263, Thomas Lidgitter; EP1/29/183/034, Richard Christopher; EP1/29/183/138, Philip Butcher; EP1/29/183/222, Walter Hilman.

[65] WSRO EP1/29/183/131, Thomas Lidgitter; for further information on furniture in Steyning houses of the period see J. Pennington, and J. Sleight 'Furniture in Steyning, a Sussex Parish, 1587–1766: A study of documentary sources'. *Regional Furniture* **1**, (1987), 41–9.

[66] WSRO STCI/27, f.263, Thomas Lidgitter.

[67] WSRO EP1/33/1682.

[68] WSRO EP1/29/183/066, STCI/21, f.99, John Groome; EP1/29/183/104, STC1/25, f.5, Thomas Groome; specialty: a special contract, obligation, or 'bond' expressed in an instrument under seal; SNQ **29**, p.6; thanks for information from Ron Kerridge.

[69] WSRO EP1/29/183/092, Walter Parson; Wiston MS. 6177; EP1/29/183/155, William Langford; EP I/33, 3rd July 1600, J. Smith.

[70] Healer/healyer/heler: a slater or tiler; WSRO Wiston MSS. 2657–63; 6268–74; 6422–28; 6475–79; EP1/29/183/041, Thomas Burden; EP1/29/183/070, Francis Burden; EP1/29/183/112, Richard Easton.

[71] WSRO EP1/29/183/141, Elizabeth Eversfield; EP1/29/183/007, Richard Constable; whyte hoops: possibly whitebeam or whitehorn, i.e. hawthorn.

[72] WSRO EP1/29/183/053, S.Dean 33, Richard Gray; EP1/29/183/021, S. Dean 6, John Gray; EP1/29/183/116, STCI/27, f.205, Thomas Weeks; EP1/29/183/164, STCI/30, f.605, Bartholomew Bowler.

[73] WSRO EP1/29/183/91, John Mitchell.

[74] WSRO EP1/29/183/190 William Kitchener; Wiston MSS. 6064–6086.

[75] WSRO EP1/29/183/009, 012, S.Dean 51, John Swift; Duke and Cox, *In and Around Steyning*, 5; Lacey and Lacey, *The Timber-framed Buildings of Steyning*, 105–109; *ex info* Harry Ford and Jean Isaacs; chaldron/cauldron (of coal): 36 bushels ($1\frac{1}{3}$ tons).

[76] WSRO EP1/29/183/083, STC1/23, f.334, Richard Barr; EP1/29/183/087, Benjamin Newarke.

[77] WSRO S.Dean 51, John Swift; this was probably a Henry VIII Bible, *ex info* Dr Mary Hobbs.

[78] WSRO EP1/29/183/193, William Peckham; EP1/29/183/228, William Christopher.

[79] WSRO EP1/29/183/208, Benjamin Peckham; sledge: sledgehammer; bick-iron: beak-iron—an anvil with two pointed extremities.

[80] WSRO EP1/29/183/160, Edward Ward; EP1/29/183/027, John Bode; EP1/29/183/173, STCI/30, f.811, Thomas Longley.

[81] WSRO EP1/29/183/158, John Barnes; alchemy: an alloy, like silver, or a metallic composition imitating gold.

[82] WSRO EP1/29/183/005, John Norris; EP1/29/183/046, Philip Turner; EP1/29/183/067, John Ward; EP1/29/183/079, William Woollven; EP1/29/183/177, Anthony Soale; EP1/29/183/186, Thomas Wine; EP1/29/183/217, William Morris; EP1/29/183/163, Richard White; EP1/29/183/167, STC1/30 f.544, John Soale; *V.C.H. Sussex*, 233; WSRO EP1/29/183/192, David Foster; EP1/29/183/200, Thomas Finch.

[83] WSRO EP1/29/183/117, STC1/27 f.38, Mary Flite/Fleet; Wiston MS 6021–6024; tire/tier/tyre, variants of tear; the finest fibre of flax or hemp; flax for spinning.

[84] Arundel Castle MS. MD 1082; *V.C.H. Sussex*, 221, *et passim*.

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POEMS, POSTERS AND POLL BOOKS: EIGHTEENTH CENTURY PRINTING IN CHICHESTER

by Timothy J. McCann

The availability of the 18th Century Short Title Catalogue has facilitated the study of provincial printing. This paper examines the influence of the printers of Chichester in transforming local society in the 18th century by means of the dissemination of information; the furtherance of trade, education, entertainment and local administration; and the widening of cultural awareness. The surviving work of four printers is used to illustrate these themes as well as to reveal their characters and to place them in their local context.

In 1695 the Licensing Act, which since 1662 had restricted printing in England to the towns of London, Oxford, Cambrige and York, was allowed to lapse, and printing began in provincial towns, and by 1800 it had spread to virtually every town in England. Before the Act the control of printing had been in the hands of the Stationers Company which determined who could print and where they could operate their presses, and also Parliament which controlled what could be printed.

The early years of the 18th century witnessed an unprecendented expansion of trade. Trade depended on communication, and printing played its part in the dissemination of information. The first stage in the process was the provincial newspaper, and by 1750 more than 50 towns had their own newspapers. William Andrews, the second Chichester printer, had started as a newspaper printer in the West Country and became agent for the *Hampshire Chronicle* when he moved to Chichester, while Joseph Seagrave started the *County Mirror and Chichester Magazine* in monthly parts in 1796, and the weekly *Sussex Chronicle and Chichester Advertiser* in 1802.

The arrival of a printer in Chichester made it possible for local traders to take advantage of printing for bill-heads, trade cards, advertisements, labels, catalogues of goods for sale, timetables and tariffs. Every section of the community benefited from the introduction of the printing press: schoolmasters, merchants, church vestries, parish councils, courts, parliamentary candidates, local societies and promoters of entertainment.

In 1799 Parliament passed an Act to prevent the spread of seditious literature, requiring all owners of printing presses and types to give notice to the Clerk of the Peace, who then issued a certificate of receipt, and maintained a Register of Printing Presses. The Register preserved among the Sussex Quarter Sessions Records[1] lists six printers in the County at the very end of the 18th century—James Phillips, who had a press at Horsham; Joseph Seagrave, who had two presses in Chichester; William Lee and Arthur Lee, who had three presses at Lewes and one at Brighton; Richard Roe, who had one at Midhurst; James Goldring, who had one at Petworth; and the Reverend James Hurdis, the poet, who had one at Bishopstone.[2] The Register is the only official record of printers in the county, and, with the complete absence of accounts for the City and apprenticeship registers, because of the poor survival of 18th-century records of Chichester City Council, to know more about the development of printing we have to study the surviving products of the presses.

Eighteenth-century printing in Chichester was largely the work of four men—William Lee, William Andrews, Dennett Jaques and Joseph Seagrave. The first, William Lee, was baptised in 1713 in the parish of St Peter the Great in Chichester, the son of Joseph Lee and Mary, nee Coates, his wife.[3] His father's name appears regularly as a marriage licence surety in the volumes of the Sussex Record Society,[4] where he is described as a 'bookbinder', and in 1724 and 1736 as a 'bookseller'. We know that his father supplied books to the Dean and Chapter of Chichester between 1730 and 1749, though the

only books specified in the accounts were 'the singing boys books £1 9*s.* 0*d.*'[5] All the four payments were for similar amounts, probably because the Dean and Chapter bought most of their books in London.

William Lee was apprenticed to James Bettenham for seven years from 1729, and remained in his service until 1744.[6] In 1734 he was approached by John Fuller and Sir Cecil Bishopp, the defeated candidates in the county election, to print the Sussex Poll Book, and agreed to print 1,000 copies for £20, but the job eventually went to William Coles, the London printer, and it was to be another 40 years before the first Sussex Poll Book was printed in the county.[7]

In 1739 William Lee printed Benjamin Martin's *The Description and Use of a new Invented Pocket Reflecting Microscope with a Micrometer*:[8] the first book so far known to have been printed in the city. Martin[9] had run a boarding school in Chichester, presumably in his house in South Street, after he had married a local girl in 1730, and, from 1735 onwards, he was an itinerant lecturer and prolific writer of scientific books and tracts. None of his many other books were printed in Chichester. No other works are known from Lee's Chichester press, and by 1745 he was living in Lewes where he started *The Lewes Journal* in 1745, and where he died in 1786 after founding a printing dynasty that worked in the town until well into the following century.

Children's literature was a feature of the 18th century, and many of the books specifically designed for the education and entertainment of children were produced by provincial printers. Traditional types of schoolbooks, grammars, spelling books, and anthologies of literature were produced in large numbers as well, and schoolmasters contributed their skills to producing texts for local use. Such a book was Thomas Joel's *An Easy Introduction to the English Grammar*: composed for the convenience of children under seven, and printed by William Andrews in 1770.[10] The book was printed 'for the use of Mr T. Joel's school', and has a preface dated, 'Chichester, 16 December 1769'. Coincidentally Joel, like Martin, was a General Baptist. He came to Chichester in 1760 as an assistant to Mr Predden, the pastor of the General Baptist community in the City from 1730 to 1761, and succeeded him as pastor in 1761. He continued to officiate until July 1762,[11] but must have remained in the area because his wife was admitted to membership of the General Baptist Chapel in 1767,[12] and William Andrews printed his *A Letter to Occasional Conformists* in 1771.[13]

THE

DESCRIPTION and USE

Of a New Invented

POCKET REFLECTING

MICROSCOPE,

WITH A

MICROMETER.

The POWER of MAGNIFYING by this *Microſcope*, and the uſe of the *Micrometer* in MEASURING ſmall Objects therein, made plain and eaſy by CALCULATIONS.

The Method of adapting this Microſcope into a WALKING-CANE, or WHIP.

The Deſcription of an UNIVERSAL MICROSCOPE, or the Method of mounting the Microſcope on a BALL and SOCKET that renders it of univerſal Uſe.

The DOUBLE MICROMETER deſcribed, and its Uſe in the univerſal Microſcope explained.

The way of computing the *Power of Magnifying* in TELESCOPES, and of meaſuring the Heavenly Bodies by the *Double Micrometer*, fitted thereto.

Inſtructions for rightly uſing the *Microſcope*, *Teleſcope*, &c.

The whole Illuſtrated with *Copper-Plate Figures*.

By BENJ. MARTIN.

CHICHESTER:

Printed by *William Lee*, and ſold by the Author in *Chichester*, and Mr. *John Noon* at the *White-Hart* in *Cheapſide*, *London*. [Price 1 *s.* 6 *d.*]

Fig. 1. Benjamin Martin, *The Description and Use of a New Invented Pocket Reflecting Microscope*. Printed by William Lee at Chichester, 1739. By permission of the Trustees of the British Library.

In 1763 William Andrews was a journeyman printer employed by Andrew Brice[14] in Exeter, but he quarrelled with his master, set up on his own, and started the *Exeter Mercury and West Country Advertiser*.[15] In 1764, together with R. Trewman he printed the 5th edition of Wellins Calcott's, *A Collection of Thoughts, Moral and Divine*: a substantial volume of some 480 pages dedicated to the Earl of Powis.[16] Sometime before 1769 he moved to Chichester, where he occupied a house in East Street, which remained the property of the printers who succeeded him until 1926.[17] Perhaps appropriately the house had once belonged to William Collins the poet.

The 18th Century Short Title Catalogue lists six books printed by William Andrews, and the West Sussex Record Office hold copies of five of them, together with some precious examples of his more ephemeral printing. The earliest, *A Poll taken by George Peckham, Esq., at the City of Chichester . . . for the Election of two Knights to serve for the said County*, (1774),[18] was also printed, in slightly different form in 1775, by William Lee in Lewes, which suggests that the printing of the Poll Books for the county elections was granted to a printer in each half of Sussex. The account books of Charles Lennox, 3rd Duke of Richmond show that Andrews was employed by the Duke both as a stationer and printer from 1775 until his death.[19]

In 1777 Andrews printed Daniel Foote's *Poems on various occasions*.[20] Foote, a young man in his twenties died of a surfeit of ripe hedge picks shortly after completing the book, and, in the preface it is stated that Foote's father 'very obligingly consented to their publication for the sole Benefit of the Printer'. In 1782 there was a by-election for the City of Chichester, and once again, Andrews printed the Poll Book—*A Poll, taken at the Guildhall of the City of Chichester*.[21] The other two books from Andrews's press represented in the Record Office collections relate to the bequests of John Hardham, the Chichester tobacconist, who made his fortune in London, and left money to his native city in an attempt to alleviate the burden of the poor rate. Andrews printed *An Authentic Copy of the Last Will and Testament of Mr John Hardham, Tobacconist and Snuff Merchant of Fleet Street, London* in 1785,[22] and *A Copy of the Incorporation Act with Copies of Hardham's Will and Decrees relating thereto* in 1787.[23]

The Chichester Reference Library has an unrecorded copy of *Copy of an Act of Parliament Pass'd in the 18th Year of Queen Elizabeth, for paving the City of Chichester* printed by Andrews in 1786.[24] The subject of this eight-page booklet was a compelling one in Chichester, and five years later the Paving Commissioners ordered that 1,000 copies of the penal clauses in the Act of Parliament for paving the City be forthwith printed and dispensed amongst the inhabitants of the City.[25]

Most of Andrews's work was in printed handbills, pamphlets and other ephemeral material required for political, ecclesiastical and business use, and a few examples of this type of work are to be found in the Record Office Collections. In 1783 he printed *A List of the Corporation of the City of Chichester at Michaelmas 1783*,[26] presumably for the 3rd Duke of Richmond, who was High Steward of the city at the time. He also printed a handbill in April 1786 advertising His Grace's horse *Gay* who 'will cover this season at one Guinea a Mare, the Money to be paid at the Stable Door'.[27] An example of his everyday work is *A Table showing the Daily Duty on the Highway* to be found in the front of the Account Book of the Rogate Surveyor of the Highways in 1775.[28] Among the Additional Manuscripts in the Record Office is a delightful advertisement printed by Andrews of *All Sorts of Medicines and Drugs, prepared and sold, on the most reasonable terms, by E. Axford, Practitioner in Physick Surgery, and the Eyes, at Glauber's Head, in the East Street, Chichester*.[29]

The files of the *Hampshire Chronicle* show that Andrews acted as the Chichester agent for the newspaper from 24 August 1772 until 19 April 1773; from 25 October 1773 until 7 February 1774; from 5 May 1777 until 8 June 1778; and together with Dennett Jaques from 27 October 1783 until his death in 1788. The paper carried his obituary: 'March 14. Chichester. This morning died, at his house in East Street, Mr W. Andrews, formerly an eminent Printer in Exeter, but for these last twenty years had carried on that business in this city. His unsullied reputation as an honest man, and a cheerful good-natured companion, gained him the esteem of all his numerous acquaintances'.[30]

ALL SORTS OF

MEDICINES and DRUGS,

Prepared and ſold, on the moſt reaſonable Terms,

By E. AXFORD,

Practitioner in Phyſick, Surgery, and the Eyes,

At GLAUBER's Head, in the Eaſt Street, CHICHESTER,

Where likewiſe are SOLD,

BRISTOL, Spau, Harrowgate, and Pyrmont Waters.
True French Hungary Water.
Double diſtill'd French Lavender Water.
Orange and Elder Flower Water.
Honey Water.
Æther.
Eau de Luce and Arquebuſade.
Fine Spirits of Lavender.
Hartſhorn and Salvolatile. [barb.
Fine Turkey and Eaſt-India Rhu-
Pomfret Cakes, black and white.

Eſſence of:
- Amber.
- Burgamot.
- Muſk.
- Lemon.
- Orange.
- Coltsfoot.
- Balm of Gilead.
- Water Dock.
- Peppermint.
- Flowers of Benzoin.
- Camomile, &c.

Pectoral Balſam of Honey.
Dr. James's Fever Powder.
Daſtey's Elixir.
Baume de Vie.
Dr. Huxham's Tincture of Bark.
Tincture of Sage.
Tincture of Centaury.
Maredant's Drops.
Greenough's Tincture for preſerving the Teeth and Gums.
Ditto for curing the Tooth Ach.
Hemet (Dentiſt to her Majeſty) his Eſſence of Pearl, and Pearl Dentifrice, for preſerving and beautifying the Teeth. [Teeth.
Deliſcot's Opiate for cleaning the
Stomachic Lozenges.
Godfrey's Cordial. Britiſh Oil.
Pectoral Lozenges of Tolu.
Bateman's Drops.
Stoughton's Elixir.
Bardana. Fryer's Balſam.
Turlington's Balſam of Life.
Walker's Jeſuits Drops.
Anderſon's Scotch Pills.
Hooper's Female Pills.
The famous Cordial Cephalic Snuff for the Head-Ach, &c.
Rowley's Cephalic Herb Tobacco and Snuff.
Mr. AXFORD's neat Linament for the Itch, which perfectly cures at a few Times uſing, and perfectly ſafe to the tender Infant.
Alſo his Powder for Worms or Worm Matter in Children.

His univerſal EYE WATER for removing Films, Inflamations, and other Excreſcences on the Horny Coat of the Eye, and for correcting the more internal Evils, without the leaſt Injury to the Sight.
His POWDER for the HEAD, which removes Giddineſs, Sleepineſs, Numbneſs, and Pain of the Head, in a ſhort Time.
His Tincture for curing the Scurvy in the Gums, and faſtening looſe Teeth; which it almoſt infallibly does if the Gums are in the moſt putrid, lax, rotten State. It alſo certainly cures a fœtid, ſtinking Breath: For Mr. Axford thinks that nine out of ten of thoſe People who are troubled with a diſagreeable, & ſtinking Breath, may juſtly conclude it proceeds from the before-mention'd bad State of the Teeth and Gums; therefore by removing the Cauſe the Effect will ceaſe.
Ditto for the Tooth Ach; a Drop or two in general gives immediate Eaſe.
His TOOTH POWDER, which makes the Teeth beautifully white in a few Times uſing, and preſerves the Enamel.
His Chymical Drops for Deafneſs, which cures moſt recent Caſes in a ſhort Time, and removes ſinging and Noiſe in the Ears, which is, oftentimes, a Sympton and Forerunner of the Diſeaſe.
His CORN SALVE, univerſally allowed to be ſuperior to any other Preparation for the Cure of all Sorts of Corns.
His ANTISCORBUTIC DROPS, which cures the moſt inveterate Scurvy, and pimpled Faces of ever ſo long ſtanding; likewiſe the Evil, and every other Diſorder that ariſes from a foul and acrimonious State of the Blood.
Milk of Roſes: This takes away all Spots, Pimples, and Freckles from the Face and Hands, makes the Skin beautifully white and ſoft, and at the ſame Time imparts the agreeable full odoriferous Smell of the ſweeteſt Roſe.
Orange Butter. This makes the Hair grow, ſtrengthens it much, and at the ſame Time diffuſes the agreeable Odour of the Orange.

Troches for the Heartburn.
Iſſue Peas, and Plaiſters that ſtick without filleting.
The Ladies Court Plaiſter.
Lip Salve.
Vermicelli, Sago, and Salloup.
Syrup of Capillaire.
Sal Rochelle
Fine Candy Citron.
Eringo and Angelica.
Orange and Lemon Chips.
Lemon Peel. Orange ditto.
Candy'd Ginger.
Rough Almonds. Smooth ditto.
Colour'd and white Corianders.
Smooth and Rough Carraways.
Colour'd ditto.
Peppermint Drops.
Perfum'd Sugar Plumbs.
Savoy and Naples Biſcuit.
Biſcuit Drops, Maccaroons, and Shapes in Sorts.
Barley Sugar. Ratifia Cakes.
PICKLES, viz Muſhrooms, Cucumbers, Mangoes, Walnuts, Capers, and Anchovies.
French and Spaniſh Olives.
India Soy, and fine Catchup.
Truffles and Morells.
Black and red Currant Jelly.
Cayan Pepper and Baſket Salt.
Fine Durham Flour of Muſtard.
The beſt Poland Starch and Blues.
Fine Scotch, Rappee, and Straſburgh Snuffs.
The genuine Powder for taking Iron Moulds out of all Linnens.
Fine Eating Oil in Flaſks, by Meaſure. Fine Chamber Lamp Oil.
Barbers Oil.
Cold-drawn Linſeed Oil.
Diſtill'd Vinegar. White-Wine ditto
Old Verjuice Spruce Beer.
Hair Powder, plain and perfum'd.
Windſor Soap.
Wax and Spermaceti Candles.
Waſh Balls of all Sorts.
Almond Paſte and Powder.
Fine hard and ſoft Pomatum.
Ivory Black.
Leaf Gold and Silver.
Dutch Metal. Roſe Pink.
Carmine and Vermillion.
Wafer Paper.
Sugar Candy, Brown and White.
The beſt Hampſhire Honey.
Bees Wax, and Virgins Wax.
Cliſter Pipes. Pill Boxes.
Tow and Lint. [Wafers.
The beſt Dutch Sealing Wax and

Piſtacha Nuts, Jar Raiſins, Jordan Almonds, Cinnamon, Cloves, Mace, Nutmegs, &c. &c.

N. B. Mr. AXFORD may be confu ted on all Diſeaſes incident to the Human Body; and preſumes to think he is juſtly allowed to be one of the firſt in the known World for diſplacing the moſt difficult Teeth and Stumps, opening a Vein, and curing a certain Diſeaſe, with all its Symptoms, without the leaſt Hindrance of Buſineſs to the Patient.

CHICHESTER: Printed by W. ANDREWS.

Fig. 2. All Sorts of Medicines and Drugs prepared and sold by E. Axford. Printed by William Andrews at Chichester. W.S.R.O., Add. MS. 2122.

Dennett Jaques was the third important Chichester printer. Like William Lee he was born in the city, being baptised in the parish of St Peter the Great on 17 September 1758.[31] He was educated at the Prebendal School in the city, where he was a fellow student with James Hurdis, who was later to print his own poetry at Bishopstone. In 1774 Jaques was apprenticed to William Lee, who was then of St Michael's parish in Lewes.[32] Later he lived in the same house in South Street, Chichester, where Lee had originally worked,[33] and for a few years printed books and handbills there, before he married in 1785 and moved to London, setting up his press there at 30, Lower Sloane Street. Four of his books printed in Chichester are in the Record Office Library, and a few of the volumes that he printed in London have recently been presented to the office, together with a great deal of family correspondence, by one of his descendants. The only example of his more ephemeral work that has so far come to light is a standard *Settlement Certificate*: one of which, for Westbourne *c*. 1798, is to be found in the appropriate Quarter Sessions Roll.[34]

When he printed William Hayley's *Ode to Mr Wright of Derby* in 1783,[35] Jaques made the first connection between the poet and Chichester printers, which was to last for Hayley's life-time, and which gave great stimulus to the expansion and development of high-quality printing in the city. For towns like Chichester, with a thriving market or which enjoyed a brisk tourist trade, local printers, from the third quarter of the 18th century, were quick to produce guide-books, and in 1783 Jaques printed the first edition of the Rev. Alexander Hay's, *The Chichester Guide*, which was advertised for sale by the printer's son Charles.[36] In its various editions, Hay's guide was to provide a staple diet for successive Chichester printers. Other examples of Jaques's press while he was still in Chichester are Charlotte Smith's *Elegiac Sonnets* in 1784,[37] which proved to be popular as the *Hampshire Chronicle* advertised a third edition containing twenty additional sonnets in May 1786,[38] and *A Poll, taken at the Guildhall of the City of Chichester . . . for the Electing two Citizens to serve in the ensuing Parliament*,[39] also in 1784.

Contested elections were increasingly common in the 18th century, and a group of handbills has survived in the Chichester Assembly Rooms that shows that the printing press was already a useful tool in political contests. Seven handbills from the 1784 Chichester election have survived—five printed by William Andrews and two by Dennett Jaques—and they suggest that the two political factions in the city supported different printers.[40] But although Andrews and his successors in the East Street premises usually printed for the candidates supported by the Dukes of Richmond, the 3rd Duke's accounts show that he also employed Jaques as a printer and stationer.[41]

On 1 January 1778 Dennett Jaques took an advertisement in *The Hampshire Chronicle* as a bookseller, and clearly subsidised his printing press by following his father in the book-selling trade.[42] But he was a man of substance in Chichester and an advertisement in *The Hampshire Chronicle* in 1785 for a meeting in the city about a petition to Parliament was signed by Dennett Jaques as chairman.[43] For one issue of the paper—that of 5 April 1784—he was described as the printer and publisher together with T. Blagden of Winchester,[44] and he acted as the Chichester agent for it between 26 April and 18 October 1773; from 15 June 1778 to 20 October 1783; and thereafter in partnership with William Andrews until the latter's death.

Dennett Jaques was a deeply religious man, especially after his conversion under the ministry of the Rev. Thomas Scott after 1785, but although his surviving correspondence[45] relates to the period after he left Chichester, it includes a silhouette of the printer,[46] and sufficient evidence to give a clear idea of his character. His letters are full of advice and religious instruction to his extended family. He kept a strict watch on all his children to the extent of ordering his married son how to stand, walk, and even how to blow his nose. The British Library has copies of three books that he printed for the Rector of St Pancras, Chichester—the Rev. William Walker —*Meditations and Prayers for private use* in 1780;[47] *Comments on the Ten Commandments* in 1781;[48] and *A Short Comment on St Paul's beautiful description of Charity*,[49] a year later. Jaques continued to print a number of volumes

after he moved to London, mostly of a religious nature, and including at least a dozen by Thomas Scott, by then rector of Aston Sandford in Buckinghamshire.

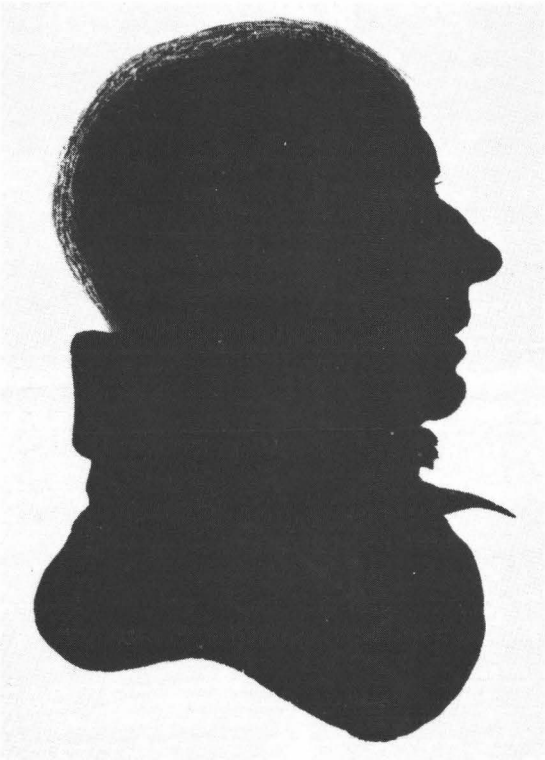


Fig. 3. A silhouette of Dennett Jaques by an unknown artist. W.S.R.O., Add. MS. 18,295.

After Dennett Jaques's death on 26 October 1837, his sons, Charles, John and William all printed books in different parts of the south of England, and his nephew Charles Austen Jaques, who remained in Chichester, was another printer as well as a watchmaker and silversmith, but his business in South Street had no successor. In a brief memoir of Dennett Jaques, one of his sons includes a delightful account of the printer attempting to meet Dr Samuel Johnson, when the great man was staying at the Dolphin Inn in Chichester. 'Being very desirous of seeing the great philosopher, and at a loss for the means of doing so, he ventured on the following expedient: Entering the room of the inn where Dr Johnson was sitting alone at tea, he said 'did you ring, Sir?'. 'No,' replied Dr Johnson, 'but as you are here you may fill the tea-pot'.[50] Jaques would surely be delighted to know that a painting of the great lexicographer by his grandson now adorns Johnson's house in Gough Square, London.

Joseph Seagrave had been apprenticed to William Andrews, and he succeeded to the business on Andrews's death in 1788. He greatly increased the reputation of the press as a result of his close association with William Hayley. The Record Office Library contains copies of 11 books printed by Seagrave, and seven of them were written by Hayley. For Hayley he printed *The Triumph of Temper: A Poem*, in 1803;[51] *The Life and posthumous writings of William Cowper*, in the same year;[52] *The Triumph of Music: A Poem*, in 1804;[53] *Ballads*, illustrated by William Blake in 1805;[54] another edition of his life of Cowper in 1806;[55] another edition of *The Triumph of Temper* in 1807;[56] and *John Milton* in 1808.[57]

Hayley wrote of Seagrave, in his testimonial, now in the British Library: 'if you ever know Seagrave, you will certainly regard him with esteem and confidence, for there does not exist a man, in his line of life, who has a more just and delicate sense of profesional probity . . . most assuredly I shall never desert a printer, who with a very clear and cultivated understanding, has a most upright and benevolent heart'.[58] Hayley's confidence in his ability was not misplaced, for Seagrave's title-page for Hayley's *Life of Cowper*, which he printed in 1802, is reproduced in Stanley Morrison's *The Art of the Printer*[59] as an example of good printing.

Seagrave assured himself a permanent place in history by standing bail for William Blake in £30, when the poet was tried for sedition in Chichester in 1807.[60] Blake referred to him afterwards as 'the generous Seagrave in whose debt I have been too long',[61] and wrote to Hayley, 'I expressed my own respect for our good Seagrave and said I knew your intention chief in employing him were first to encourage a worthy man and second for the honour of Chichester'.[62]

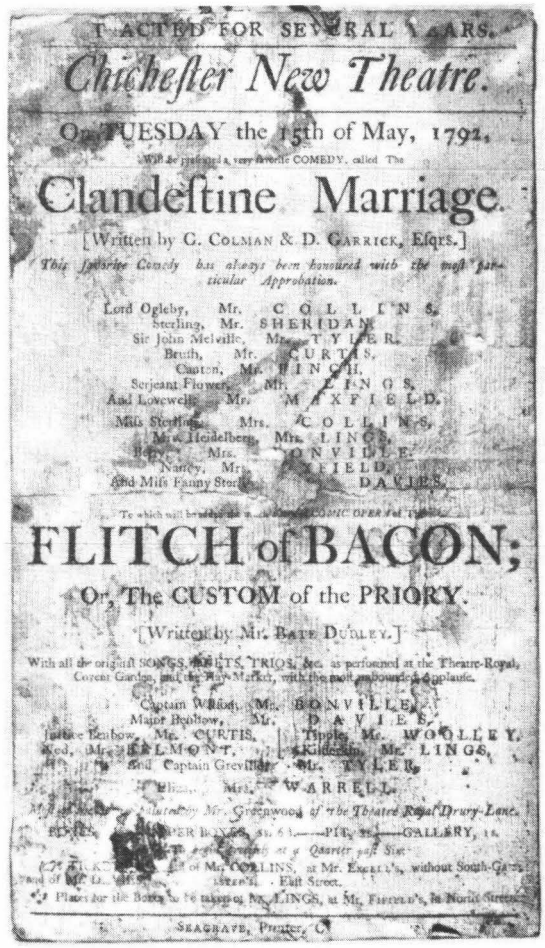
The comments of Blake and Hayley suggest that Joseph Seagrave was regarded as more than a jobbing printer, and, like many provincial printers in the 18th century, he was capable of

producing important and impressive books. He printed William Williams's, *Primitive History from the Creation to Cadmus*, (1789):[63] a very difficult book to print, which is set partly in the Caslon type he inherited from Andrews, and partly in Fry type. The book was so large—a quarto of 595 pages—that the type was insufficient to set up the whole at once; it was therefore printed in three books and bound in one volume.

Other books in the Record Office from Seagrave's press include Robert Hardy's, *An Address to the Loyal Volunteer Corps of Great Britain*, in 1799;[64] Charles Leslie's *A Letter to a Noble Duke on the Incontrovertible Truth of Christianity*, in 1803;[65] and the Reverend Alexander Hay's, *The History of Chichester* in 1804.[66] He printed a second edition of Hay's *Chichester Guide* in 1794,[67] and at least three further editions from his press are known. He provided for the 18th-century demand for anthologies by printing *Will Whimsical's Miscellany* in 1799,[68] and printed Thomas Taveau's, *Compendium des r'egles et des d'elicatesses de la langue francoise* in 1797.[69]

Although handbills are much more numerous by the end of the 18th century, there are few items that can definitely be attributed to Seagrave's press. The Southampton University Library collection includes a playbill for Chichester Theatre advertising performances of *The Clandestine Marriage* and *A Flitch of Bacon* on 15 May 1792.[70] Seagrave was a shareholder in the theatre, contributing £25 of the original £1000 capital,[71] and this is the earliest known playbill of the theatre which was built in the previous year. He also printed a poster relating to *Chichester Prosecuting Society* in 1793;[72] *The Paving Commissioners for the Streets of Chichester* in 1795;[73] a *List of the Corporation of Chichester* in 1792[74] and again in 1798;[75] and Robert Hardy, *The Address of a Curate to his Parishioners*, 24 December 1795[76]—a single sheet for his congregation at Westbourne. There are also a few surviving accounts which give tantalising glimpses of his work. In December 1794 he was paid £9 1*s*. for work done for the Chichester Paving Commissioners;[77] in 1797 he was paid 18*s*. by the Cathedral Communar for printing receipts and paper and for printing bills for the Prebendal School;[78] and in 1798 he was paid a further £4 15*s*. for printing work for the Paving Commissioners.[79]

Hayley described Seagrave as suffering from melancholy, 'had this worthy printer's strength of mind been equal to his exquisite feelings, he would have been one of the best and happiest of them, but he suffered under excess of morbid sensibility which disquieted his life and yet endeared him to his intimate friends, because no man could be more ingenuous in acknowledging his own infirmities. The liberality


T ACTED FOR SEVERAL YEARS.

Chichester New Theatre.

On TUESDAY the 15th of May, 1792,

Will be presented a very favorite COMEDY, called The

Clandestine Marriage.

[Written by G. COLMAN & D. GARRICK, Esqrs.]

This favorite Comedy has always been honoured with the most particular Approbation.

Lord Ogleby, Mr. COLLINS,
Sterling, Mr. SHERIDAN,
Sir John Melville, Mr. TYLER,
Brush, Mr. CURTIS,
Canton, Mr. FINCH,
Serjeant Flower, Mr. LINGS,
And Lovewell, Mr. MAXFIELD.
Miss Sterling, Mrs. COLLINS,
Mrs. Heidelberg, Mrs. LINGS,
Betty, Mrs. BONVILLE,
Nancy, Mrs. MAXFIELD,
And Miss Fanny Sterling, DAVIES.

To which will be added the [illegible] COMIC OPERA of [illegible]

FLITCH of BACON;

Or, The CUSTOM of the PRIORY.

[Written by Mr. BATE DUDLEY.]

With all the original SONGS, ANETS, TRIOS, &c. as performed at the Theatre-Royal, Covent Garden, and the Hay-Market, with the most unbounded Applause.

Captain Wilson, Mr. BONVILLE,
Major Benbow, Mr. DAVIES,
Justice Benbow, Mr. CURTIS, | Tipple, Mr. WOOLLEY,
Ned, Mr. BELMONT, | Kilderkin, Mr. LINGS,
and Captain Greville, Mr. TYLER,
Eliza, Mrs. WARRELL.

Most [illegible] Mr. Greenwood of the Theatre Royal Drury-Lane.

[illegible] PER BOXES, 5s. 6d.——PIT, 3s.——GALLERY, 1s.

[illegible] at a Quarter past Six.

[illegible] of Mr. COLLINS, at Mr. EXCELL's, without South-Gate, [illegible] East Street.

Places for the Boxes to be taken of Mr. LINGS, at Mr. FIFIELD's, in North Street.

SEAGRAVE, Printer, C[illegible]

Fig. 4. Playbill for Chichester Theatre advertising *The Clandestine Marriage* and *Flitch of Bacon*. Printed by Joseph Seagrave at Chichester, 1792. By permission of Southampton University Library.

of his spirit was not inferior to the tenderness of his heart'.[80] He paid further tribute to his worthiness, adding that 'I have an unalterable attachment to my intelligent alert liberal good-hearted printer Seagrave and living or dying I shall ever desire that my publications may be printed by my worthy countryman'.[81] We also know that Seagrave stuttered, Hayley's *Memoirs* recording that 'my good Seagrave is very alert himself, but his pressmen sometimes get drunk, and vex him sadly, not to the improvement, I imagine of his elocution'.[82]

Seagrave died in June 1808, and the *Hampshire Chronicle* recorded that 'On Sunday morning the 10th. instant died, at his home in East Street, Mr. Joseph Seagrave, in consequence of an apoplectic fit. He is much lamented in this city and its neighbourhood having been highly esteemed for the intelligence, integrity and liberality, with which he conducted his extensive business, that will henceforth be carried on, according to his testamentary desire, by William Mason, from Brighton, who received his education as an apprentice in Mr. Seagrave's office'.[83] Seagrave died in spite of Hayley's frenzied attempts to revive him with electricity, leaving the poet to pay tribute to his friend in prose and verse. In his *Memoirs*, Hayley wrote of Seagrave that 'I felt all the excellence of his character, being himself a man of feelings uncommonly acute and delicate, with perfect integrity.[84] In his epitaph book, he wrote:

> Seagrave whose careful Toil in Learning's Aid
> Has Cowper's Wisdom to the World Convey'd
> Heaven seems by Death so painless to declare
> Closing thy Labour it repays thy Care
> Without the Death and Anguish Souls like thine
> May soar to blissful Realms of Grace Divine
> For the prime Features of thy Christian Worth
> Were Trust in God and Charity on Earth
> Here be thy Name still lov'd!—From Mercy Lord
> Thy Sins find Pardon and thy Faith Reward.[85]

A possible explanation for his melancholy is to be found among the papers relating to the proving of his estate, which gives the lie to his reputation for acknowledging his infirmities. When Seagrave died in 1808, no will was found, but among his papers[86] was a letter addressed to his aunts—Miss Jane Seagrave and Mrs Susan Craven—giving instructions for the division of his property. The letter was produced in the Peculiar Court of the Dean of Chichester, accompanied by a signed certificate of authentication by John Weller, auctioneer, and James Farenden, gentleman of Chichester. In the letter, Joseph Seagrave stated that Mason or Baker should have the first offer of his business—and we know that William Mason succeeded his master in the printing business; he left 'my highly respected friend William Hayley Esq., my painting of the children in the Tower by Dudman as a small tribute for the unbounded marks of generosity and friendship which that great, good and amiable man has bestowed upon me'; and he left £100 to Mary Shepherd and also his 'silver table and tea spoons, cream pot, sugar tongs, gold locket, watch and seal'.

The letter then concludes with the following extraordinary lines:

> 'I will not for a moment suppose that my Aunts will refuse to fulfill these bequests as they must be confident, that had I doubted their honour, I had it in my power to dispose legally of every thing I am possessed of, in any way my fancy might incline me to. This considering, I wish also, certain prejudices against a friendless female, to be sunk into oblivion, and to consider that from the beginning of this connection I alone have been to blame. I am very anxious likewise to remove certain shades, which perhaps a censorious world have, or might have, cast upon this poor girl, I therefore Solemnly declare that I believe her to be innocent and virtuous; and that nothing but a rooted aversion to Matrimony prevented me from making her my wife.'

Seagrave made that solemn declaration on 9 July 1804. He died, still unmarried in July 1808. His letter was taken as his will, and was proved on 8 October 1808 on the oath of his aunt Jane Seagrave. An entry in the Baptism Register of the

Church of St Peter the Less in Chichester records that on 'June 25 1809 was baptised Marian Seagrave, bastard of Mary Shepherd'.[87]

William Lee, the first Chichester printer, was succeeded by his apprentice Dennett Jaques, who then moved his press to London. William Andrews was succeeded by Joseph Seagrave, who left his presses to William Mason. Hayley showed the same friendship for Mason that he had for Seagrave, and stood godfather to Mason's son who was christened William Hayley, and who carried on the firm after his father's death in 1865. Five years earlier, William Hayley Mason had entered into a partnership with T. B. Wilmshurst, and Wilmshurst carried on the firm until 1892. He was succeeded by Charles Knight, who handed on the firm to the Willis family in 1909. In 1916 T. G. Willis moved the firm to 16 North Street, Chichester. In 1949 the business was purchased by Chichester Press Limited which today carries on the tradition of local printing on the Chichester Industrial Estate.[88]

Author: Timothy J. McCann, West Sussex Record Office, County Hall, Chichester, West Sussex PO19 1RN

Notes

1 E(ast) S(ussex) R(ecord) O(ffice), QDS/1/EW1.

2 See A. Cecil Piper, 'Private Printing Presses in Sussex', *The Library*, **5** (1914), 70–9.

3 W(est) S(ussex) R(ecord) O(ffice), Par.44/1/1/2, f.53.

4 *Calendar of Sussex Marriage Licences: Archdeaconry of Chichester, 1575–1730*, ed. E. W. H. Dunkin (Suss. Rec. Soc. **32**, 1926), 234, 236.

5 W.S.R.O., Cap.I/24/1, f.15.

6 See D. F. McKenzie, *Stationers' Company Apprentices 1701–1800* (1978), 34.

7 E.S.R.O., SAS RF 15/25, ff.78–80.

8 Benjamin Martin, *The Description and Use of a New invented Pocket Reflecting Microscope, with a Micrometer.* Chichester: Printed by William Lee, and sold by the author in Chichester, and Mr John Noon at the White-Hart in Cheapside London (1739). B(ritish) L(ibrary), 8715 aa. 46(1).

9 See John R. Millburn, *Benjamin Martin: author, instrument-maker, and country Showman* (1976).

10 Thomas Joel, *An Easy Introduction to the English Grammar. Composed for the convenience of children under seven years of age.* Chichester: Printed for the use of Mr T. Joel's school by W. Andrews (1770). B.L., 828 f.35.

11 Rev. John Fullager in a letter to the editor of the *Monthly Repositor*. Chichester. W.S.R.O., NC/GB1/2/3.

12 W.S.R.O., NC/GB1/2/3.

13 Thomas Joel, *A Letter to Occasional Conformists . . .* Chichester: Printed by William Andrews, and sold by G. Pearce; and J. Fuller, London (1771). B.L., 274.2 J59.

14 T. N. Brushfield, 'Andrew Brice and the early Exeter Newspaper Press' *Transactions of the Devonshire Association*, **20** (1888), 163–214.

15 R. N. Worth, 'The History of Printing in Devon', *Transactions of the Devonshire Association*, **11** (1879), 497–515.

16 Wellins Calcott, *A Collection of Thoughts, moral and divine, upon various subjects, in prose and verse. Dedicated . . . to the Right Honourable Earl of Powis.* Exeter: Printed for the author by William Andrews and R. Trewman (1764).

17 21 East Street, Chichester. See Rev. A. C. Crookshank, *Two Centuries of Printing at Chichester* (1970).

18 *A Poll, taken by George Peckham, Esq., (Sheriff of the County of Sussex) at the City of Chichester, begun on Thursday the 20th of October, and finally closed on Wednesday the 16th of November, 1774, for the election of two Knights to serve the said county in this present Parliament. Candidates: The Rt. Hon. George Henry Lennox, Sir Thomas Spencer Wilson, Bart., Sir James Peachey, Bart. To which is added an index to the Parishes, and a table of every day's poll. Each rape alphabetically digested.* Chichester: Printed by Authority, and sold by W. Andrews, Printer, and P. Humphrey, Bookseller (1774). W.S.R.O., Crookshank Library 418, and Fuller Lib. 93.

19 W.S.R.O., Goodwood MSS. 241–245.

20 Daniel Foote, *Poems on Various Occasions. To which are added, by particular desire, three letters on moral subjects, and four speeches delivered at a literary society.* Chichester: Printed by and for W. Andrews, and sold by G. Robinson in Pater-noster-Row, London (1777). W.S.R.O., Crookshank Library 276.

21 *A Poll taken at the Guildhall of the City of Chichester, in the County of Sussex, the 11th, 12th, and 13th days of March, 1782, before the Worshipful Richard Halsey, Esq., Mayor of the said City, for the electing a citizen to serve in the present Parliament in the Place of the Hon. William Keppel, deceas'd; the candidates being the Hon. Percy Cha. Wyndham, Brian Edwards Esqr.* Chichester: Printed and sold by W. Andrews (1782). W.S.R.O., Lib. 4473.

22 *An Authentic Copy of the Last Will and Testament of Mr. John Hardham, Tobacconist and Snuff Merchant, of Fleet Street, London, written with his own hand. Extracted from the Registry of the Prerogative Court of Canterbury. To which is added a Copy of a Decree of the High Court of Chancery relating to the said Will.* Chichester: Printed by W. Andrews (1785). W.S.R.O., Lib. 5111.

23 *A Copy of the Incorporation Act with Copies of Hardham's Will and The Decrees relating thereto; and Copies of Cases submitted to Counsel with their Opinions thereon.* Chichester: Printed by W. Andrews (1787). W.S.R.O., Par.44/7/7.

[24] *Copy of an Act of Parliament, Pass'd in the 18th Year of Queen Elizabeth, for the Paving of the City of Chichester.* Chichester: Printed and sold by W. Andrews (1786). West Sussex County Library, Chichester.

[25] W.S.R.O., Archives of Chichester City Council. E1, p.5.

[26] W.S.R.O., MP 453.

[27] W.S.R.O., Goodwood MS. 257, f.3.

[28] W.S.R.O., Par.159/40/1.

[29] W.S.R.O., Add. MS. 2122.

[30] *Hampshire Chronicle*, 14 March 1788.

[31] W.S.R.O., Par.44/1/1/6, f.2v.

[32] W.S.R.O., Add. MS. 18,295.

[33] W.S.R.O., Add. MS. 34,235.

[34] W.S.R.O., QR/W 623, f.10.

[35] William Hayley, *Ode to Mr. Wright of Derby*. Chichester: Printed by Dennett Jaques (1783). W.S.R.O., Crookshank Library 289.

[36] [Rev. Alexander Hay], *The Chichester Guide: containing an Account of the antient and present State of the City of Chichester and its Neighbourhood; interspersed with Historical Events relating to the original inhabitants, the Belgians, the Romans and the Saxons, together with the Establishment of the Kingdom of South Saxony, now called Sussex*. Chichester: sold by C. Jaques; and by S. Crowder, Pater-noster-Row, London (1783). W.S.R.O., Fuller Lib. 49. See Edward Heron-Allen and Harriett K. James, 'The First Chichester Guide', *Sussex County Magazine*, **14** (1940), 162–5.

[37] Charlotte Smith, *Elegiac Sonnets, and other essays*. Chichester: Printed by Dennett Jaques. And sold by Dodsley, Gardner, Baldwin and Bew, London (1784). W.S.R.O., Crookshank Library 290.

[38] *Hampshire Chronicle*, 15 May 1786.

[39] *A Poll, taken at the Guildhall of the City of Chichester, in the County of Sussex, the 1st and 2d Days of April 1784, before the Worshipful Charles Buckner Esqr. Mayor of the said City, for the electing two Citizens to serve in the ensuing Parliament, persuant to a Precept by the said Mayor received from Thomas Dennett Esqr. Sherriff of the County of Sussex, the candidates being Tho. Steele Esqr. Wm. Smith Esqr. Geo. White Thomas Esqr.* Chichester: Printed sold by D. Jaques in South Street (1784). W.S.R.O., Lib. 4473 and Fuller Lib. 57.

[40] The originals still hang in the Assembly Rooms in Chichester. For photocopies, see W.S.R.O., Add. MS. 27,481.

[41] W.S.R.O., Goodwood MS. 241.

[42] *Hampshire Chronicle*, 1 January 1778.

[43] *Hampshire Chronicle*, 7 June 1785.

[44] *Hampshire Chronicle*, 5 April 1784.

[45] W.S.R.O., Add. MSS. 18,285–18,297.

[46] W.S.R.O., Add. MS. 18,295.

[47] Rev. William Walker, *Meditations and prayers for private use*. Chichester: Printed and sold by Dennett Jaques (*c*.1780). B.L., 4401 c.19(3).

[48] Rev. William Walker, *Comments on the Ten Commandments*. Chichester: Printed by Dennett Jaques. Sold by S. Crowder in London (*c*.1781). B.L., 4401 c.19(2).

[49] Rev. William Walker, *A Short Comment on St. Paul's beautiful description of Charity*. Chichester: Printed for the author; and sold by Dennett Jaques (*c*.1782). B.L., 4401 c.19(1).

[50] *Some Account of the late Mr Dennett Jaques, of Chelsea: With an Appendix, containing extracts from his letters*. London: Printed by C. Jaques and Son (1846).

[51] William Hayley, *The Triumphs of Temper. A Poem: in six cantos. The twelth edition, corrected. With new original designs by Maria Flaxman*. Chichester: Printed by J. Seagrave; for T. Cadell and W. Davies, Strand, London (1803). W.S.R.O., Crookshank Library 324.

[52] William Hayley, *The Life, and posthumous Writings, of William Cowper Esqr. with an introductory Letter to the Right Honourable Earl Cowper*. Chichester: Printed by J. Seagrave; for J. Johnson, St Paul's Church-yard, London (1803–4). 3 vols. W.S.R.O., Crookshank Library 30–32.

[53] William Hayley, *The Triumph of Music: A Poem: in six cantos*. Chichester: Printed by and for J. Seagrave; and sold by T. Payne, Mew's Gate, J. Johnson, St Paul's Church-yard, R. H. Evans, Pall-Mall and Longman, and Co., Paternoster Row, London (1804). W.S.R.O., Crookshank Library 326.

[54] William Hayley, *Ballads . . . founded on anecdotes relating to animals with prints, designed and engraved by William Blake*. Chichester: Printed by J. Seagrave; for Richard Phillips, Bridge-Street, Blackfriars, London (1805). W.S.R.O., Crookshank Library 327.

[55] William Hayley, *The Life and posthumous writings of William Cowper* (1806). 4 vols. W.S.R.O., Crookshank Library 38–41.

[56] William Hayley, *The Triumph of Music* (1807). W.S.R.O., Crookshank Library 330.

[57] William Hayley (ed.), *Latin and Italian Poems of Milton translated into English verse, with a fragment of a commentary on Paradise Lost by the late William Cowper, Esqr. With a preface by the Editor, and notes of various authors*. Chichester: Printed by J. Seagrave, for J. Johnson, Saint Paul's Church-yard, and R. H. Evans, Pall-Mall, London (1808). W.S.R.O., Crookshank Library 333.

[58] B.L. Add. MS. 29,300X, f.139.

[59] Stanley Morrison, *The Art of the Printer* (1925), Plates 226 and 227.

[60] W.S.R.O., QR/W 643, f.92. The trial documents are printed in G. E. Bentley, *Blake Records* (1969), 122–45.

[61] Blake to Hayley, 11 December 1805. See A. G. B. Russell, (ed.), *The Letters of William Blake* (1906), 189.

[62] Blake to Hayley, 19 January 1805. see G. E. Bentley, *ibid.*, 157.

[63] William Williams, *Primitive History, from the Creation to Cadmus*. Chichester: Printed and sold by J. Seagrave (1789). W.S.R.O., Crookshank Library 226.

[64] Robert Hardy, *An Address to the Loyal Volunteer Corps of Great Britain. In Two Parts*. Chichester: Printed by J. Seagrave, and Sold by F. and C. Rivington, London (1799). W.S.R.O., Crookshank Library 266; Fuller Lib. 45.

[65] Charles Leslie, *A Letter to a Noble Duke on the Incontrovertible Truth of Christianity*. Chichester: Printed by J. Seagrave, for J. Robson, Bond-Street, J. Hatchard, Piccadilly; and Messrs. Longman and Rees, Paternoster Row, London (1803). W.S.R.O., Lib. 5889.

[66] Alexander Hay, *The History of Chichester: interspersed with various notes and observations on the early and present state of the City, the most remarkable Places in its vicinity, and the County of Sussex in general: with an Appendix*

containing the Charters of the City, at three different times: also an Account of all the Parishes in the County, their Names, Patronage, Appropriations, Value in the King's Book, First-Fruits, Etc. Chichester: Printed and sold by J. Seagrave the Booksellers in the County, and by Longman and Co., Paternoster-Row, London (1804). W.S.R.O., Crookshank Library 392. For Hay, see Hilda Johnstone and Francis W. Steer, *Alexander Hay, Historian of Chichester*. (*Chichester Papers*, **20**, 1961).

[67] Alexander Hay, *The Chichester Guide: Containing, An Account of the antient and present State of the City, Interspersed with Historical Events relating to the original Inhabitants and of the Establishment of the Kingdom of South Saxony now called Sussex. Together with all that's worthy of Notice in the neighbouring Places, Noblemen and Gentlemen's Seats, And the fashionable and elegant Watering Place of Bognor. Corrected to the present year.* Chichester: Printed and sold by J. Seagrave, in East Street; and may be had of the other Booksellers (1794). B.L., 10351. dd. g. (1).

[68] Will Whimsical, *Will Whimsical's Miscellany*. Chichester: Printed by J. Seagrave for Longman and Rees, London (1799). B.L., 11632 d.43.

[69] Thomas Taveau, *Compendium des r'egles et des d'elicatesses de la langue francois ou remarquer sur chaque partie du discours en cete langue . . . Avec une idee de la versification francois*. Chichester: Printed and sold by J. Seagrave; G. Watts, Gosport; and B. and J. White, London (1797). B.L., 1568/3976.

[70] Southampton University Library, AO/283, no. 48.

[71] W.S.R.O., Raper MSS. 256–262. See Francis W. Steer, *The Chichester Theatre* (*Chichester Papers*, **9**, 1957).

[72] W.S.R.O., Add. MS. 1004. For a second copy, see MP 1388.

[73] W.S.R.O., Add. MS. 1003.

[74] W.S.R.O., MP 47.

[75] W.S.R.O., Add. MS. 1618.

[76] W.S.R.O., Par.206/7/1.

[77] W.S.R.O., Archives of Chichester City Council, E1, p.92.

[78] W.S.R.O., Cap. I/25/2, f.126.

[79] W.S.R.O., Archives of Chichester City Council, E1, p.217.

[80] W.S.R.O., Add. MS. 2758, f.37v.

[81] Hayley to Phillips, 25 January 1805. See G. E. Bentley, *ibid.*, 158.

[82] J. Johnson, (ed.), *Memoirs of the Life and Writings of William Hayley Esq.*, 2 vols. (1823), 55.

[83] *Hampshire Chronicle*, 16 June 1808.

[84] J. Johnson, *ibid.*, 56.

[85] W.S.R.O., Add. MS. 2758, f.38r. See Rowlands S. Coldicott, 'Siste Viator! Choice Epitaphs from the Pen of William Hayley', in *Cornhill Magazine*, **37** (1914), 399–408.

[86] W.S.R.O., STDII/ 1809.

[87] W.S.R.O., Par.45/1/1/1, f.13v.

[88] Chichester Press Limited, *Twenty-one today* (1970).

Sussex Archaeological Collections **130** (1992), 200–212

'SPIRITED AND INTELLIGENT FARMERS': THE ARTHUR YOUNGS AND THE BOARD OF AGRICULTURE'S REPORTS ON SUSSEX, 1793 AND 1808

by John H. Farrant

The General view of the agriculture of the County of Sussex, *by the Reverend Arthur Young, best known in the reprint of 1813, had a long gestation. The original report to the Board of Agriculture, printed in 1793 and based mainly on a tour earlier that year, was extensively rewritten in 1796–98 under the patronage of the Earl of Egremont. In 1806–7 the author's father, the famed Arthur Young, finalised the manuscript for publication in 1808; he had strongly influenced the original report and the revised report drew on his tours in Sussex in 1788–92. The reports are placed in the context of the Board's history; the farmers whose practices were cited are identified; and the reports' shortcomings are discussed.*

On no work have historians of Sussex agriculture placed more reliance than the *General view of the agriculture of the County of Sussex*, by the Reverend Arthur Young, in the edition of 1808 reprinted in 1813. No comparable account of Sussex agriculture, so apparently comprehensive yet accessible, has been published at any other period. Historians have used it to serve both as direct evidence of agricultural practice around 1800 and as a bench mark against which practice in earlier and later periods can be assessed.[1] The facsimile of 1970 has brought it to a wider audience but alas lacks an introduction—which this article attempts to provide.[2]

SIR JOHN SINCLAIR'S PLAN

The genesis of the work was in July 1793. Sir John Sinclair, wealthy Scottish landowner, M.P. and moving spirit of the *Statistical account of Scotland* (21 volumes, 1791–7), fulfilled a long-standing ambition by setting up, under his presidency, the Board of Agriculture and Internal Improvement—which combined characteristics of a learned society with the happy chance of Government funding. For him its initial task was to lay before Parliament in March 1794 a report on the state of British agriculture. This would be based on county surveys by 'intelligent farmers' who, armed with standard heads of inquiry on a visit of six or so weeks, would point out in what respects there was room for improvement. The original (quarto) reports were to be printed with wide margins for comments by local residents, to be returned to the Board which would then publish a revised and fuller (octavo) report. Even before the Board first met on 4 September 1793, Sinclair had commissioned surveyors, to be paid expenses only, for nearly every county in Britain.[3]

He secured as Secretary of the Board Arthur Young who was 'the most famous authority on agriculture in the English-speaking world', through his farming manuals, his accounts of tours through England, Ireland and France and the journal he had started in 1784, the *Annals of Agriculture*. Though, many years later, critical of the surveyors' competence, Young endorsed Sinclair's choices at the time. He himself surveyed his home county of Suffolk—and Sussex was placed in the hands of his son, the Reverend Arthur Young who toured Sussex from August to October 1793. The diary of the tour was published in the *Annals* early in the following year; the original report for Sussex was in print before the end of 1793, one of only seven to bear that date. By late July 1794 74 reports had been received; 70 were dated that year and 90 in all were printed.[4]

Although behind Sinclair's original timetable, that was a considerable output. But the original reports were widely criticised, and in May 1794 there was an attempt within the Board to slow the pace and give surveyors more time. Probably late in that year the Board drew up a common plan of chapters and sections to impose some order on the revised reports of which the

first was in print by July 1795. Sinclair had intended the author of each original report to prepare the revised one, but the Board presumably assessed each report and in May 1796 if not before was seeking new surveyors for some counties. Sinclair continued to make arrangements with the surveyors without informing the Board or its staff; and when he was ousted from the presidency in March 1798, the Board temporarily suspended all survey work and printing of the revised reports, while the chaotic finances were sorted out and new policies established.[5]

Sinclair's three successors as President did not share his enthusiasm for the county reports and the Board's efforts were channelled in new directions, such as prize essays and premiums. But Sinclair was re-elected in March 1806 and returned to the county reports with gusto; the task completed, he stood down in 1814 and the Board again suspended surveying and publishing to allow its finances to recover. The dates on the first editions of the revised reports bunch around his presidencies, with the revised reports written by the original authors appearing first:

	Revised reports published	By the same author as original report
1795–1800	20	15
1801–1806	6	0
1807–1812	42	2
1813–1816	9	0
Total	77	17

Only five of the revised reports were dated 1799 and 1800 and these were commitments from Sinclair's presidency, well advanced to completion; as were the three dated 1815 and 1816.[6]

With the original reports having been printed over three years, but the revised reports over some 21 years, the relationship between a county's two reports was bound to differ from county to county. To take the three counties bordering Sussex as examples, the Kent reports were the most straightforward. John Boys, a highly esteemed Kentish farmer and contributor to the *Annals*, produced the original report in 1794 and completed the revised report so that it appeared in 1796, well ahead of the 1798 moratorium; he submitted a second edition in 1804 and it appeared in 1805. The Hampshire volume printed in 1794 comprised Abraham and William Driver's report on (mainland) Hampshire, the Reverend Richard Warner's on the Isle of Wight and Arthur Young's 'Postscript' on a visit to Stockbridge. In May 1796 Warner agreed to write the revised report; but in May 1800 and again a year later the Board authorised the President to commission an author. In 1803 Anthony Bell submitted an unsolicited report on the Isle of Wight on the strength of which he was commissioned for the whole of Hampshire; in January 1805 the resulting report was referred for an opinion. In July 1807 Bell or his son was paid £100 out of £300 allowed for a report commissioned of Charles Vancouver in May and published in 1810. As to Surrey the original report by James William and Jacob Malcolm appeared in 1794. The Board held a revised report in manuscript in May 1801 and perhaps considerably earlier because Mr Dillon was preparing such a report in April 1796; yet in June 1803 the President was authorised to commission one. The following year Mr Malcolm was informed that he might submit a report and, if it very greatly exceeded the original, the Board would be ready to treat. His report was received in February 1805, but when he demanded a fee of £300 it seems to have been returned to him. In May R. Parkinson was asked to consider surveying Surrey but soon afterwards agreement was reached with J. Middleton. Yet as published in 1809 the revised report carried the name of W. Stevenson whose commission the Board's minutes did not record.[7]

THE MAKING OF THE SUSSEX REPORTS

The history of the Sussex reports, as to authorship, compares with Kent but, as to timing, with Hampshire and Surrey. The original report was one of the first to appear, in 1793. But the revised report of 1808, four times the length and bearing Arthur junior's name, was one of but two published after 1800 which were by the authors of the original reports. It was reprinted with a reset title-page in 1813. The agricultural writer with a standing second only to Arthur senior, William Marshall, was very critical of it in 1817. First, 'Had the younger Young been

initiated into the practice of the sovereign art, on which he has been induced to write, while his mind was sensible to practical impressions; instead of being, reluctantly perhaps, led into the labyrinth of imagination, by the study of "dead tongues,"—the bane of active life and practical knowledge,—he might, by a Survey and Report of the Agriculture of Sussex, "have done the State some service".' Secondly, 'when the octavo edition . . . was printed and published does not, in any part of it appear. Certainly not in 1813!—What is of more consideration, the time when the additional materials were *collected* is not declared. The *latest date* which incidentally appears, in the body of the Work, is 1799 [in fact, 1806] . . . But that does not fix the time of publication.' Thirdly, 'Regarding the MODE OF SURVEY that was pursued by this Reporter, we have no direct information. The materials would seem, from what appears in the work at large, to have been collected during repeated visits, at the residencies of some men of rank and fortune . . . particularly, the EARLS OF EGREMONT and SHEFFIELD.—Some professional occupiers, of ability, have likewise contributed their share of information. And . . . many notes, some of them of length, which were written, or supposed to have been written, on the broad margins of the original Report,—are inserted;—with replies to some of them.' Fourthly, 'In very truth, a more "slovenly" written book I have rarely read: not even in toiling through the learned and unlearned Reports to the Board of Agriculture. A want of appropriate arrangement of ideas, and of clearness, ease, and simplicity of expression, is observable in every part of the body of the work.'[8]

With this critique in mind we may turn to the father of the Sussex reports' author, Arthur Young senior (1741–1820). He came of minor gentry stock from Bradfield Combust in Suffolk, had been educated at the local grammar school, served an apprenticeship to a wine merchant and came to farming by default in 1763, finally settling at Bradfield in 1779. By 1793 his reputation as agriculturalist was well established and he had an extensive acquaintance with the ennobled advocates of progressive farming. But his friendships with the two earls named by Marshall—both founder members of the Board—were particularly strong and may have determined his securing the Sussex survey for his son. Arthur senior's first recorded visit to Sussex, in 1770, was just when John Baker Holroyd was starting to improve his newly-purchased estate of Sheffield Place in Fletching—from which he took, in 1781, his title as Baron Sheffield. The other visits on that tour were to the Hon. George Venables Vernon at Newick Park Estate; William Poole of the Hook, Chailey (d.1779); Richard Nash near Walberton; Nicholas Turner at Bignor Park; Robert Bull in the Chichester area; and Easton Farm near Sidlesham. A shared interest was Ireland, and in 1777, while editing notes of his 1776 tour there, Young was asking Holroyd how he managed his Irish estates.[9]

Their principal common interest, however, was Southdown sheep. Around 1773 Sheffield was achieving good results by cross-breeding Southdown and Dishley sheep. He was an early and influential purchaser of improved Southdowns from the breeder John Ellman of Glynde, from 1786 at latest, having bought from Ellman's father in 1775. Encouraged, he concentrated on Southdowns, which by 1790 comprised over three quarters of his flock. He was instrumental in starting the annual Lewes sheep fair in 1786. Sheep were the main activity of the farm at Bradfield and at Sheffield's instigation Young began stocking with Southdowns in 1784 by importing 20 ewes and a ram. He bought from Ellman in 1786, 1789 and 1790, and writing from Nantes in September 1788 commissioned Sheffield to buy 40 full-bred Southdown ewes at the Lewes fair; in 1791 his flock was Southdown with only a slight mixture of Bakewell and Spanish. Thomas Coke's large purchases in 1792–93 for the home farm at Holkham in Norfolk were arranged by him.[10]

Returning from France in October 1788 he stayed at Sheffield Place; he visited again, particularly to look at sheep and cattle, in December and January; and to Lady Sheffield he wrote that 'the Library circle at Sheffield Place is among the chosen spots that figure in my recollection where conversation flourished because everyone does something'. He received an introduction to Ellman and met other farmers in and around Glynde. He then went east to

Battle, Beauport Park and Hastings.[11] His presence excited comment: a Glynde parishioner sighted him in church on Christmas Day, 'the celebrated Arthur Young Esqr, Editor of the "Annals of Agriculture" . . . appears to be between 50 and 60, rather tall and thin of a swarthy complexion, hollow eyes, nose a little hooked, the lower part of the face projecting a little, and of a keen, studious aspect'. For his part Young drummed up contributions to the *Annals* by encouraging farmers to described their innovations and observations: five such from eastern Sussex appeared in 1789. Probably early in 1790 he stayed at Sheffield Place while buying cattle (particularly from William Kenward of Fletching) and visited Glynde and Beddingham again, and in October 1791 he was Ellman's guest at Lewes sheep fair where he met more of the progressive Sussex farmers and travelled as far west as Applesham in the Adur valley. Ellman visited Bradfield in July 1792 and, with Thomas Davies of Beddingham, in May 1793.[12]

Young was in Sussex again in December 1792. Not only did he see Ellman and Sheffield, but the latter accompanied him to Petworth and introduced him to George, 3rd Earl of Egremont (1751–1837). Egremont was extremely wealthy and, showing little interest in London political and social life, was all the better placed to spend heavily on improvements to his estates, philanthropy and artistic patronage. Young met several tenant farmers in the neighbourhood, as well as two other noble proprietors, Lord Montague at Cowdray and the Duke of Richmond at Goodwood.[13]

In contrast to his own upbringing, he set his only son Arthur (1769–1827) on the same track as his own father and his brother, for all three went to Eton, thence to Cambridge and ordination—as he came to regret. Alas the brother—who would have provided for Arthur junior in the Church—was killed in 1786. But, as he informed readers of the *Annals,* 'to break off his education at Eton . . . would have been in effect to ruin him—for *that education had unfitted him for any other pursuit in life than a profession.* I kept him on therefore, miserably as I could afford it, and he is now at Cambridge.' Recounting his 1788 visit to Sussex, he felt moved to note that the Rev. Thomas Davies of Glynde had 'wisely fixed his son in a good farm (a conduct much more commendable than that of farmers educating their sons clergymen).' About to enter Trinity College in 1789, Arthur junior received a long letter of advice from France. Studying the classics would do nothing for him unless he was brilliant enough to win a fellowship. 'A couple of wretched curacies or a lousy living will clothe you but for God's sake have ambition to do better than that.' However, 'there is no branch of useful science that has not conducted men to fortune provided there is excellence and superiority.' Further, 'I wish to God you would pick up a knowledge of agriculture, by the time I die the world will find out that they might have made a better use of my knowledge & make me offers when too late for me to take them, but it may afford opportunities for a son if he has nothing better, that may be of importance.'[14]

Arthur junior graduated in 1793, was ordained deacon in May and found a curacy at Cockfield, near the family home. In August he embarked on the Sussex *General view*. His father's tours and contacts clearly moulded the route he took. Setting out from Bradfield, he viewed Mr Clutton's farm at Cuckfield and reached Sheffield Place on 11 August 1793. 'Young Arthur Young came on Sunday evening, stayed one Night. He is in the Church; but travelling about to pick up farming Intelligence for the "Society of Agriculture"', wrote Sheffield's daughter to a friend. 'He was very much approved of here & was thought very much like you in voice & other particulars', Sheffield told Young senior, but 'I am not yet quite reconciled to your putting him in this line if you mean to push him in the Church—I revolted against it since the beginning, & I find others think as I do.' As Arthur junior's arrival clashed with a militia review he was recommended immediately to Thomas Kemp of Conyboro in Barcombe and George Allfrey of Friston, as well as Ellman. He also visited Sir John Bridger at Hamsey and five other sheep farmers on the Downs between Lewes and Eastbourne. Proceeding eastwards through Westham and Hellingly, he included (as had his father in 1789) visits to Mayo at Battle, Murray of Beauport Park and Milward of Hastings. Going as far as

Winchelsea he collected data on flocks on Romney Marsh, then doubled back through Robertsbridge to visit Carr and Davies of Beddingham and more farmers in that vicinity. His next stop was some 20 miles west with Thomas Ellman (cousin of John) at New Shoreham and Francis Gell nearby. He called on William Frankland at Muntham, Findon; and though failing to find Sir Richard Hotham at Bognor he visited several farms on the coastal plain and Selsey peninsula, at Shripney, Bersted, Selsey and Chidham. After an excursion to Portsmouth and the Isle of Wight, he visited Bosham, viewed the Duke of Richmond's farm at Goodwood and met several tenants before making a brief visit to the Earl of Egremont at Petworth which he left for home on 15 October.[15]

His published account of the tour was dated five days later at Bradfield and ran to some 75,000 words or equivalent in tables. It 'seems thorough and competent and is as well written as most of his father's purely agricultural tours. It contains many statistics and farming accounts of profits and losses so typical of his father's work. He could not forbear from exhibiting his classical training by including excerpts in Latin and Greek from classical authors on agricultural subjects.'[16] The original report, arranged by topic, extended to around 31,000 words and incorporated information probably sent after his tour as well as general introductory material. His informants were rarely identified and only a little more often the localities on which generalisations were based. The map however hinted at the report's slender basis. The places named did not correspond precisely with those in the tour but were in the localities visited; they did not include the main settlements so, for example, 'Peringdean' featured, presumably in error for Pangdean, a hamlet three miles north of Brighton—which was not marked! The aspects of the county's agriculture were unevenly treated. About a quarter of the report (pp. 47–71) was devoted to Southdown sheep, while the section on the Weald was padded out by two descriptions of lime burning (pp. 31–37) and an account of its corn production probably supplied by Sheffield (pp. 30–31). The statistical data were not always used with understanding. For instance, he asserted that the average weight of a Southdown fleece had increased by a quarter in the previous few years (p. 49). The statement is not substantiated by the following four pages of flock statistics—but only by reworking a table 12 pages later, intended to make a different point (p. 61). A note by John Ellman printed in the revised report (at pp. 35–37) brought out the point.

The original report may have encouraged thoughts of reviving a county agricultural society (unfulfilled until 1796) and was to the Board's satisfaction as Arthur junior was among the surveyors who set to preparing the revised report.[17] He was sufficiently far advanced for Sinclair in May 1796 to authorise him to have 1,000 copies printed at the Board's expense as soon as his manuscript was ready for the press. His father was also authorised in respect of his Suffolk report which duly appeared the following year. But Arthur junior at this point must have been seduced into collecting more evidence and delaying completion. A year later, in May/June 1797, however he was in negotiation on printing, for his father advised him to write 'to the Lewes bookseller [William Lee, the leading Sussex printer?] that the Board buys two hundred copies and finds the plates, that is the copper, so that it must be to him not a hazardous speculation.' A year further on plates had been engraved—but printing had not begun before the moratorium of May 1798 when he was owed £28 in expenses and the engraver (S. J. Neele, Strand, London) had not been paid.[18]

The new line of enquiry took him to where he had left off in 1793, to Petworth. He was at Petworth in June 1796, preparing, so his father recorded, the revised Sussex report which would describe Egremont's farming experiments; he visited Glynde in January 1797 and published at least two unctious pieces on Egremont early that year; he attended the Petworth cattle show in November 1797.[19] He seems to have been one of those frequent (or long-stay) guests to whom Egremont was so generous and of whom (20 years later) the painter J. M. W. Turner was only the most famous. William Marshall had been one such in 1791. Receiving an unexpected invitation he spent several months based at Petworth making excursions to the near parts of Sussex, Surrey and Hampshire; these he wrote up in 1797

and published in 1798, with effusive tributes to Egremont.[20] Another farming guest may have been J. H. Campbell of Charlton, Kent, whose letters to Egremont were quoted several times in the revised report.

As Arthur junior put it in January 1797: Egremont's 'ardent mind, ever on the wing for improvement, prompts him to send to distant counties for men versed in any of the branches of husbandry, who are likely to enlarge the sphere of agricultural knowledge. His residence at Petworth is the levee of whatever is either intimately or remotely connected with the cause of the plough.' In November 1795 Egremont had first offered prizes at the Petworth cattle fair. A year later he seized on proposals for a stock show at Lewes and, offering 50 guineas a year, encouraged the farmers to more ambitious plans which led to the Sussex Agricultural Society's first show in Lewes in July 1797—at which he announced the Prince of Wales' intention to subscribe. The timing was his suggestion: a day between the Brighton and Lewes races would attract 'a great concourse of people from every part of England'.[21]

Arthur junior was enlisted to promote Egremont's schemes and to draw in his more eminent father—who on one point feared lest Egremont's influence should be too strong, advising his son (in November 1797) to attend church constantly and keep clear of Egremont's want of piety. In August 1794 the father visited both Sheffield and Egremont and stayed a couple of days with the Rev. Ralph Sneyd, rector of Jevington, near to Glynde; in June 1796 he was at Petworth (and was entertained by the Duke of Norfolk at Arundel), and again in November 1797, over Christmas into the New Year and in April 1798. Between times he was in constant correspondence with Egremont: 16 surviving letters from Young date from July 1796 to January 1798. These show an easy relationship founded on strong mutual interests. Young pressed Egremont, without success, to take over the presidency of the Board; he also vented his grief at the death of his own beloved daughter in July 1797 and helped 'Mrs Wyndham', Egremont's resident mistress, to equip her laboratory and conduct her experiments. And, having plunged in the bath fed from the lake at four o'clock one freezing morning, 'I . . . walked into the shrubbery, and rolled myself in the snow as an experiment to see the effect on my body; it had none, except that of increasing strength and activity, and was not at all disagreeable'![22]

Arthur junior's manuscript was well advanced to completion around the end of 1797. At two points in the report as printed, 'this year (1797)' appears and at one 'now (January)', clearly meaning 1798 (pp. 109, 205, 112). One date of 1799, 'to the present moment' (p. 155), appears to be a late addition. When the moratorium was imposed, he may have put the manuscript aside; returned after an interval and made a few amendments without checking for consistency; and, no longer authorised to put it to press, submitted it to the Board in 1799. The Board had postponed the claim for expenses until the report was received; it seems to have been paid in the year beginning March 1799.[23]

Although admiration for Egremont's management of his estates was well justified, both Youngs were also motivated by hope of ecclesiastical patronage. It was probably to Egremont that Arthur senior was writing in March 1794, seeking a living for his son, adding that his report and tour 'shew that he will make a good farmer'; and in late 1797 Egremont said that he was seeking for Arthur one of the preferments of the newly elected Bishop of Chichester. But in May 1798 Arthur junior blighted his chances for the time being. He wrote a fictitious letter, about his tampering with grand jurors in advance of the trial of Irish revolutionaries for treason; it was read out in court and reported in the newspapers. Egremont and his father worked to extricate him, but relations do seem to have cooled thereafter.[24] It was perhaps Arthur junior winning third prize in the Board's competition for essays on converting grassland into tillage which finally led Egremont, in 1802, to present to a living—in the west of Ireland. Within a month of arriving in County Clare, while acknowledging the opportunities for a farmer there, Arthur junior was arranging with his father to return home and take on the family farm as, in effect, manager. Probably he also helped with editing the *Annals*, and did at least one editorial job for the Board. In April 1805, he left for Russia, nominated by his father to survey

some provinces on the English model; later he farmed in the Crimea. He was away from England in 1805–14, 1815–20 and for a few months before his death in 1827. His biographer has concluded both that he was never a religious man except in a purely formal sense and that 'the father expected too much of his son who probably suffered from an inferiority complex which manifested itself in aggressiveness and extreme impatience'.[25]

The two years' delay in completing the revised report led to twelve years' delay in publication. The report was probably among the 14 manuscript reports which the Board was told were in hand in May 1800; it was listed as such in May 1801. In 1800 the President had been instructed to collect an opinion on each of the manuscript reports; in March 1802 the Secretary was impatient at the lack of progress, feeling that higher priority should be given to the county surveys, and obtained an instruction to report the current situation. Another year passed before, in May 1803, the Board went through the list of unprinted reports and the Sussex report was assigned to the President, now Lord Sheffield, to read and give his opinion.[26]

This he evidently neglected to do, and only after Sinclair had resumed the chair did matters move forward. In June 1806, the Board 'resolved that the Secretary be requested to correct and improve the Sussex report, drawn up by his son [now in Russia], & that he be allowed £50 for his trouble.' The payment was ordered to be made, and the manuscript to be printed in the following April; it was published by June 1808. The revised report was therefore finalised by Arthur Young senior between June 1806 and April 1807. Arthur senior had revised his own original report on Suffolk. He also took on five other counties, each of which he toured between 1797 and 1807 before writing up. He confided to his diary that he could write the report on Essex from materials before him and his long knowledge of the county, but to do so would not be honest, so he must tour.[27] By contrast, he did not visit Sussex while revising his son's report. After early 1798—and failure to secure Egremont as President of the Board—his contact with Sussex tailed off. He revisited Glynde probably for the October 1799 Lewes sheep fair and Petworth perhaps for Christmas 1799; in the autumn of 1800 he passed from Petworth through Horsham and Worth to Buxted and Mayfield collecting material on the effects of enclosure. He continued to have contact, though, with Egremont and Sheffield through the Board and by correspondence. In 1803 he asked Egremont for a wooden model of his piggery to illustrate some lectures; and a marble bust of Young at Petworth is dated 1804.[28]

The manuscript of the revised report probably left Arthur junior in 1799; his father 'corrected and improved' it for the press in 1806–7. His editing can confidently be identified at a few points. The footnotes signed 'A.Y.' seem to be his. The sentiments in the section on the 'Poor', at pp. 436–7 and 443–4, are found in his *Inquiry into the propriety of applying wastes to the better maintenance and support of the poor* (1801)—which, having almost forgotten, he reread with satisfaction in July 1806. The Appendix, 'The Weald of Sussex', is a complimentary account of Sheffield's farming, perhaps added to compensate for the attention to Egremont in the main text; it included plans of Sheffield's model farm which was being designed in 1805 and built in 1806.[29] John Ellman may have been asked to read the section on sheep, as the weight of his clip was given up to 1806 (pp. 354, 357) and some notes do seem to be new text (e.g. pp. 307–8, 326). An article in the *Annals* for 1804 was the source for George Allfrey's footnotes; and 'Liming in Sussex' from the *Annals* of 1802 reappeared at p. 201. Given his continued contact with Sussex and their joint involvement with Egremont, Arthur senior is likely to have influenced his son's work as it progressed and to have had little reason for recasting it, though the reliance on his 1788/9 tour was extensive and at one point the 'I' of the tour was not changed (p. 130).

'SPIRITED AND INTELLIGENT FARMERS'

William Marshall probably well knew that the revised Sussex report was a 'scissors and paste' compilation of observations which had been published during the 1790s. Arthur junior had to rearrange his material according to the standard

plan of chapters and sections—from which arose the great divergence in chapter lengths. Neither II, 'State of property', nor IX, 'Orchards', filled two pages but XIII, 'Live stock' ran to 178. The pattern was set also for revised reports to be much longer, though he seems to have had little material sent in by recipients of the original report. The revised report recounted much more fully the experiences, observations and experiments of individual farmers without the cloak of anonymity of the original report. He therefore reverted as much to the account of his 1793 tour as to the text of the original report; but he also drew heavily on his father's tours and on articles in the *Annals* by Sussex farmers.

Below therefore are listed the farmers and others who received more than passing reference in the revised report, with evidence of when the information was collected. While not every observation was credited to a particular farmer or locality, the observations which were must provide a good indication of the localities on which the Youngs based general statements. The names are arranged in five districts: the High Weald; the Low Weald; the eastern South Downs between Lewes and Eastbourne; the coastal plain and the western South Downs; and Petworth and the Rother valley (and neighbouring parts of the Arun valley). The length of each section, relative to the area covered, emphasises that the third and last received disproportionate attention.

The list is in the nature of an index of personal names in the revised report—to which page numbers refer unless stated, being grouped by the earlier publication on which the text draws. These cross-references to earlier publications are not comprehensive but provide examples of how material was incorporated in the revised report. *A.A.* stands for *Annals of Agriculture*. Farmers were usually referred to only by surname; Christian names have been added from *A.A.*, record office indexes, etc., without citing sources. Which Arthur visited when is stated at the end of entries.

The High Weald

ASHBURNHAM, George Ashburnham, 3rd Earl of (1760–1830), 168; 205–12, account of limekiln and mine from original report, 33–7 (but without the engraved plan), and *A.A.* **22** (1794), 266–8. Arthur senior had another account from Adam Walker, his limeburner, in 1788 (*A.A* **11** (1789), 259).

CLUTTON, William (1736–1821), Ockenden in Cuckfield, timber merchant and surveyor, founder of the still flourishing firm,[30] 108, 121, 218, 279 (*A.A.* **22** (1794), 209–11); 116, 171 (*A.A.* **11** (1789), 190, 194, where Clutton rather than Sheffield is named). Arthur senior, 1788 and early 1790, and Arthur junior, 1793.

DIXON, Marcus, Handcross, tenant of Mr Aldridge, 9, 199. Arthur senior possibly visited on route from Sheffield Place to Petworth in December 1792 (*A.A.* **20** (1793), 276); Arthur junior failed to meet in 1793.

FULLER, Rev. Thomas, Heathfield, 116, 118, 120, 318&n (from his 'Use of potatoes in feeding sheep', 10 Mar. 1789, *A.A.* **12** (1789), 265–7, replying to Arthur senior's letter, *A.A.* **11** (1789) 250); 401n.

KENWARD, William, Fletching, 88 (*A.A.* **15** (1791), 432–3). Arthur senior bought cattle in early 1790.

MAYO, John, Battle, 71, 115–18, 120, 123–4, 238, 244, 284 (*A.A.* **11** (1789), 248–53); 218 (*A.A.* **22** (1794), 256). Arthur senior, 1788, and Arthur junior, 1793.

MILWARD, Edward, Hastings, 212, 219, 239, 262n, 314, 393 (*A.A.* **22** (1794), 278–80); the account of limeburning at 203–5 was also from him. Arthur senior, 1789, and Arthur junior, 1793.

MURRAY, General James, Beauport Park, 'the late arbitrary and tyrannical governor of Quebec' (1719?–94), 118–19, 124, 198–9, 303–4, 315–19, 349 (*A.A.* **11** (1789), 262–87); 330 (*A.A.* **15** (1791), 294–5). Arthur senior, 1788/89, and Arthur junior, 1793.

PENNINGTON, Joseph, steward to Lord Ashburnham and innovative tenant farmer, 91; 220–1 (*A.A.* **22** (1794), 265–6); 280–2 (probably sent in after Arthur junior's visit in 1793).

POOKE, John, Salehurst, 131–2 (*A.A.* **22** (1794), 300); 132–7 (reprints his 'Expenses of hop cultivation', *A.A.* **21** (1793), 280–6); 49–54 may be his work (from *A.A.* **22** (1794), 301–7). The costs of hops at 129–31 are from *A.A.* **11** (1789), 254–67. Arthur junior, 1793.

SEATON, William, Tilgate Forest, 57, 199; 189–90 (from his account which won a gold premium, *Trans. Soc. Arts* **17** (1799), 160–5). Arthur senior, *c.* 1797 and the autumn of 1800 (*A.A.* **43** (1805), 209–18).

SHEFFIELD, John Baker Holroyd, Baron (created 1st Earl, 1816) (1735–1821), Sheffield Place, Fletching, 18, 93, 171 (but see CLUTTON above), 430, 466, 473–80; 223, 290–4 (referring to 1791 tour of Sussex by William Pitt of Pendeford, Staffs.); 69, 169 (*A.A.* **11** (1789), 302, 194); 330 (*A.A.* **15** (1791), 294–5); 309, 356, 362–4 (from his reply to the Editor's circular letter, 5 Dec. 1790, *A.A.* **14** (1790), 433–5); 453–7 (probably based upon his published pamphlets on the poor law). Sheffield probably provided the account of Wealden corn production in the original report (pp. 30–31), some of which reappeared at 92, 100–1, 103. The Youngs probably made more visits than have been identified above.

WEBSTER, Sir Godfrey, Battle, 31, 435, who gave introductions to Arthur senior in 1788 and whose communication on tithes to the Board in 1796 was referred to Arthur junior.[31]

Low Weald

CALVERLEY, Joseph, Esq. (1721–97), The Broad in Hellingly, 118 (*A.A.* **11** (1789), 243). Arthur junior, 1793.

EVERSFIELD, Sir Charles, Denne Park in Horsham, 120 (*A.A.* **11** (1789), 250).
KEMP, Thomas, (1745?–1811), Conyboro in Barcombe, 139–40; 353 (*A.A.* **22** (1784), 214). Arthur junior, 1793.

The Eastern South Downs between Lewes and Eastbourne
ALLFREY, George, Friston, 274, 328 (*A.A.* **22** (1794), 241–2); 308–9n, 325–6n, 353–4n (from his 'Description of the Southdown sheep', *A.A.* **41** (1804), 511–15). Arthur junior, 1793.
CARR, Thomas, Cobb Place in Beddingham, 76–7, 460–1 (*A.A.* **22** (1794), 504–11, 223 and 323); 93 (see his 'Account of a farm', *A.A.* **12** (1789), 30–34); 102, 121 (*A.A.* **11** (1789), 232, 223–4); 111, 314 (*A.A.* **15** (1791), 433), Arthur senior, 1788 and early 1790, and Arthur junior, 1793.
DAVIES, Thomas, Preston Court Farm, Beddingham, 102, 121–2 (*A.A.* **11** (1789), 232, 223–4); 104, 461 (*A.A.* **22** (1794), 320, 323); 138–9 (based on his 'Account of the culture of cabbages', 2 October 1791, *A.A.* **17** (1792), 109–11); 284 (*A.A.* **15** (1791), 432); 128, 337. He was bankrupt early in 1794 and should not be confused with his namesake, steward at Longleat, Wilts. (294–5).[32] Arthur senior, 1788 and early 1790, and Arthur junior, 1793.
DAVIES, Rev. Thomas (1717/8–89), vicar of Glynde, father of Thomas Davies of Beddingham, 213–14, 231, 240, 278–9, 461–2n (wrongly attributed to John Ellman): all from his 'On working oxen in harness. On marl and particulars relating to Glynd', dated 6 Feb. 1789, *A.A.* **11** (1789), 137–43. Arthur senior, 1788.
ELLMAN, John (1753–1832),[33] Glynde, 83 (from his 'Steeping wheat seed', *A.A.* **32** (1799), 192–4); 86n, 155, plates following 226 and 286, 231, 237, 261, 284, 285n, 295–6, 300, 305–10, 312n, 314, 323, 326n; 328–9 and 333 (from his 'On sheep', *A.A.* **20** (1793), 172–77); 332, 336; 338–46 (reprints his 'An account of the expense and produce of a flock of 560 Southdown ewes . . . ', *A.A.* **11** (1789), 345–57); 347, 349–57, 359n, 361–2; 375–7n (a comment on data in the original report, 53–55, and *A.A.* **22** (1794), 526); 378–9n; 467–8 (*A.A.* **27** (1796), 631). He made other contributions to *A.A.* from 1789 onwards and probably provided the anonymous reports on the Lewes wool fair and some of those on the Sussex Agricultural Society. See above for the Youngs' visits.
GILBERT, Nicholas, Eastbourne, 99, 107, 121, 336 (*A.A.* **11** (1789), 243–5); 100, 106, 118 (*A.A.* **22** (1794), 234–5). Arthur senior, 1788, and Arthur junior, 1793.
HICKS, William, Laughton; SAXBY, Thomas, Northease; SHARP, Richard, Laughton, 122 (*A.A.* **11** (1789), 224).
HURDIS, C., Bishopstone, 93–5, reprints his 'Extraordinary crop of wheat', 1 Dec. 1796, *A.A.* **29** (1797), 445–7.
KING, William, Lord Hampden's gardener, Glynde, 257 (*A.A.* **11** (1789), 221–2).
MORRIS, Anthony, Ranscombe in South Malling, 302 (*A.A.* **11** (1789), 197), 310 (*A.A.* **17** (1792), 133). Arthur senior, 1788 and 1791.
SNEYD, Rev. Ralph, Rector of Jevington 1781–1808, 2n, 3n, 4–7n, 31n, 324, seem to be comments on the original report; he hosted Arthur senior in August 1794.

The Coastal Plain and the Western Downs
CATHERY, late Mr, agent and superintendent, Stansted Forest, 170–1 (*A.A.* **22** (1794), 585–6). Arthur junior, 1793.
DURNFORD, Rev. Thomas, vicar of Bersted, 1776–1801, 144.
ELLMAN, Thomas, Shoreham, 20–1, 87?, 89–90, 102?, 107–11, 120, 221?, 222, 236–7, 240?, 252?, 273?, 276?, 309, 314, 321, 328, 350, 355; 105–6, 247 (March 1787: *A.A.* **17** (1792), 143–4). The ?s are where the reference may be to his cousin John. Arthur senior, 1791 and Arthur junior, 1793.
GELL, Francis, Egremont's tenant, Applesham in Coombes, 81, 86; 85, 199–201, 331n (*A.A.* **17** (1792), 148–9, 151); 117, 218–9 (*A.A.* **22** (1794), 532, 530); 285. Arthur junior, 1793. Arthur senior, October 1791 after they travelled from Lewes and called on Mr GATES, butcher and grazier, Steyning, 331n.
HALSTEAD, Mr, Goodwood tenant, Lavant, 104 (*A.A.* **22** (1794), 610). Arthur junior, 1793.
HOTHAM, Sir Richard, Bognor, 90, 92. Arthur senior, 1796.
LICKFOLD, Mr, North Chapel, 201, reprints 'Liming in Sussex', *A.A.* **38** (1802), 660.
MURREL, Henry, Walberton, 100.
NEWLAND, Charles, wool importer, Chichester, 371 (*A.A.* **22** (1794), 592). Arthur junior, 1793.
PEACHEY, Mr, near Chichester, 118 (*A.A.* **22** (1794), 593), 199. Arthur junior, 1793.
PINNIX, Edward, Upmarden, 143, 279 (*A.A.* **22** (1794), 619, 622); 360–61. Arthur junior, 1793.
RICHMOND, Charles Lennox, 3rd Duke of (1735–1806), 17; 64 (*A.A.* **20** (1793), 289–90); 253–7 (*A.A.* **22** (1794), 600–603); 279, 355. Arthur senior, 1792; Arthur junior viewed his farm in 1793.
SHELLEY, Sir John, Michelgrove in Clapham, 400.
WOODS, Edmund, Chidham, 45–49, 57, 67, 80, 82–86, 97–99, 102–3, 222 (*A.A.* **22** (1794), 568–80). Arthur junior, 1793.

Petworth and the Rother Valley
With small exceptions, all this material seems to have been collected in 1796–99, particularly the first two years, and little of it was previously published.
ANDRE, William (d. 1807), domestic surgeon and apothecary at Petworth House, 141–2, 448.
BIDDULPH, John, Burton Park, 225, 394–99.
BRIDGER, Mr, Tillington, 240; EDSAW, Mr, Fittleworth, 154, 246–7; FAWKNER, Mr, Petworth, 122. Arthur senior, 1792 (*A.A.* **20** (1793), 285–7).
DALE, William, miller, Petworth, 244, 382–4.
EGREMONT, George Wyndham, 3rd Earl of (1751–1837), Petworth, 172 (*A.A.* **20** (1793), 281); 7n, 11, 17, 56, 58–60, 65, 78–9, 91, 93, 95–7, 101, 112–14, 125–8, 140–1, 144–5, 152–5, 162, 166, 169, 188, 192–7, 202, 214, 219, 231, 234, 236, 240–4, 249–54, 259–60, 262–73, 275, 282, 287, 323, 328–9, 331–2, 356; 364–71 (based on Rev. Nicholas Turner, 'Experiments on lambs', *A.A.* **30** (1798), 425–35); 374–5, 382–3n, 385–90, 392, 400–1, 407–10, 413, 422–7, 432, 436; 445–7 (*Sussex Weekly Advertiser*, 23 Jan. 1797); 448–53 (for Eastbourne, read Easebourne poorhouse), 466–8. Ten of the 21 plates relate to Egremont's improvements. See above for visits.
ELKINGTON, Joseph, drainer at Petworth, 191–7 (and plate following 57 or, in 1970 facsimile,66). Arthur senior, as Secretary of the Board, was involved with Elkington in 1796/97 in disseminating his methods.[34]

FERRYMAN, Rev. Robert, Petworth, 230.
ISLIP, Mr, Stedham, and WILLIAMS, Mr, Woolbeding, 445.
MARSHALL, William (1745–1818), agricultural writer, 213–17. This soil analysis was made during Marshall's stay at Petworth in 1791; the Youngs seem not to have used his account published in 1798.
SALTER, John, Fittleworth, 468, and, with BISHOP, Mr, West Burton, 282.
SHERWIN, Mr, Petworth, 155.
TURNER, Mr, tenant of Lord Egremont, North Chapel, 391.
TURNER, Rev. Nicholas, Fittleworth, Rector of Sutton juxta Petworth, 57, 225. Met Arthur senior, Dec. 1792, and contributed several articles to *A.A.* e.g., 'Experiment on sheep, made by the Earl of Egremont', **28** (1797), 70–73; and 'Great use of fern' for hogs, **36** (1801), 346–9.
UPTON, John, Lord Egremont's timber surveyor, 175 and two plans, dated 1795, of a barn which won him a gold premium (*Trans. Soc. Arts* **14** (1796), 299–307).

The great majority of Sussex farmers whose husbandry or stock received favourable comment on one of the Youngs' tours in or after 1788 were named in the 1808 report; the most significant omissions were Styleman of Peasmarsh and Richard Denne of Winchelsea—because they were primarily graziers on Romney Marsh in Kent. So, if as was likely the Youngs' network of contacts was reliable, the list above should be fairly comprehensive as to the innovating farmers of Sussex in the 1790s.

'The real work of experimentation and innovation was the province of lesser country gentlemen, enlightened tenants and forward-looking agents. Small owners were usually considered to be too insubstantial to make any real contribution, and absentee owners were seldom in the forefront of progress, except on their home farms.' This assessment fits well with the evidence provided by the report. The Earl of Egremont was the only Sussex grandee who featured prominently; the Duke of Richmond appeared only for his quickset hedges and dairy, the Earl of Ashburnham for his limeburning, the Abergavenny, Cavendish, Gage, Pelham and Trevor families not at all, even though they were large landowners on the eastern Downs. Sheffield was not of the same class, having unexpectedly received an inheritance which allowed purchase of an estate, and can be grouped with General Murray, also an incomer, at the upper end of the country gentlemen, followed by Thomas Kemp, Edward Milward and Nicholas Gilbert, who each likely employed a steward to manage their home farm. Probably the rest of those whose farming attracted the Youngs' attention were owner occupiers or substantial tenants who were themselves working farmers. But it was farming on which they were reporting and not landownership, not on whether the owners were creating conditions which encouraged progressive farming. Arthur junior however made an interesting point on how the two were bridged by Egremont's patronage: 'By associating the rich and the great with yeomanry and farmers, eminent in their profession, who by their unremitting attention to business, have acquired a high degree of experience, a valuable store of knowledge is circulated among the great, which has no inconsiderable effect on the improvement of other districts.'[35]

THE *GENERAL VIEW* AS HISTORICAL SOURCE

In conclusion, the soundness of William Marshall's criticism of the Sussex report may be assessed. First, as to the qualifications of the author, Arthur senior must have agreed with Marshall's sentiments! However, though the son lacked experience, the report in the event contained a good deal of the father, and we can safely assume that the judgements made carried the father's concurrence.

Secondly, as to lack of evidence as to when it was compiled, Marshall was fully justified in his criticism. As we have seen, the observations recounted were made by or reported to the Youngs throughout the period 1788 to 1806, yet the text contained only incidental references to fix a minority of them. Arthur senior added a few dates to acknowledge the delay in publication, e.g., the price of meat 'has lately declined (written in 1797)', p. 183. But more often sloppy editing compounded the problem. For example, Gilbert at Eastbourne lost 80 or 90 lambs by the ewes aborting, 'two years ago' in the 1788 tour but 'some few years ago' in the report (p. 336); in 1788 Mayo of Battle had been alternating potatoes and wheat for 16 years—as the report said at p. 244 or for 20 years at p. 116; the lime kiln at Hastings was built 25 or 26 years ago (23

in the original report, p. 32), but the price of lime 'this year (1797)' was in fact the 1793 price (pp. 203, 205); and the increase in timber sent to Portsmouth 'twenty-five years back' (p. 165) was based on a comparison of 1763–7 and 1788–92 (in the original report, p. 85).

The vagueness about dates would have mattered less had the period not been one of such rapid change in agriculture. Prices and costs escalated in the 1790s and 1800s, and landowners and farmers were thereby encouraged to invest, reorganise and innovate. Young senior was well aware of what was happening and wrote extensively on the consequences for the poor. He justified the revised report for Norfolk coming from a different author by the county's agriculture being so changed by a new breed of sheep (the Southdown) and the practice of drilling that all former works were necessarily deficient. Arable farmers' costs, on data which the Board collected and he analysed, increased by at least a third in Sussex between 1790 and 1803—probably by around a half between the dates of the two Sussex reports. Yet one reference to a 1793 wage rate having since advanced (p. 90) is more than offset by so much attention to costs and profits without reference to inflation—and by a note (1806) to Mr Mayo's cost of an acre of potatoes (1788) that it was half what he would expect (p. 123). Further, he must have been aware that in the very area of Sussex in which he had most interest, the eastern South Downs, landowners were very active in consolidating estates and reorganising farms between 1780 and 1810.[36]

Thirdly, Marshall indicted Young for not explaining (as Marshall was always careful to do) how the information for the report was collected—and rightly so. Fourthly, Marshall criticised the 'want of appropriate arrangement of ideas, and of clearness, ease, and simplicity of expression.' These two criticisms emphasise that neither Young nor Marshall was easy with the format of the county reports, for they agreed that natural features, rather than administrative boundaries, provided a framework within which rural economies could be examined. Marshall did not contribute to the Board's surveys and persevered with his own. He identified districts, either natural with similarity of soil and surface or agricultural with similarity of practice, and then described the general system of farming in each, within a systematic structure of topics. Though in 1804 commending soil districts, irrespective of county boundaries, for any further national survey, Young was critical in reviewing Marshall's work: 'Every question relating to [livestock] must be ascertained by close, strict, and decisive experiment . . . a whole volume of reasoning, assertion, opinion, and idea, in short of everything . . . except experiment. I regret the time, attention, and talents that are thus employed.'[37]

Young was interested above all in what the leading farmers were doing: as he wrote in 1805, '. . . in the large experience of all our own reports we see that very few are well executed; the object has either been ill understood or poorly done, the surveyors deal in reflections instead of giving the experience of individuals, yet the husbandry of a county is made up of nothing else but private exertions.' His accounts of tours were the natural vehicle for what he was trying to do; they allowed what each progressive farmer was doing to be described coherently within its context. Though he did tabulate data from the several localities visited, he was nevertheless inclined to pile fact upon fact and had difficulty in generalising, failings which were compounded when descriptions of individual farms had to be fragmented to fit the given structure of topics for the county reports. Furthermore traditional practices and the farming systems of small farmers were given scant attention. 'General view', in a sense of a comprehensive account, is a misnomer for the Youngs' county reports. That does not exonerate father and son from their many errors and confusions in assembling the revised Sussex report; but neither is it as bad as an embittered William Marshall found it.[38]

The moral for the historian using the 1808 *General view* for Sussex is to proceed with caution, recognising that, despite the given authorship, it was written under the guidance of and using material collected by the foremost agricultural commentator of the time, and finally was edited by him; and, on any particular point, seeking for its previous appearance in print.

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Notes

I am grateful for the help of John Creasey (University of Reading), Alison McCann (W.S.R.O.) and Christopher Whittick (E.S.R.O.). Abbreviations used below include:

A.A. *Annals of Agriculture*
B.A University of Reading, Institute of Agricultural History, old Board of Agriculture archive.
B.L. British Library
E.S.R.O. East Sussex Record Office, Lewes
G.L. University of London, Goldsmiths' Library (which had many printed items from Lord Sheffield's library)
W.S.R.O. West Sussex Record Office, Chichester

[1] See for example C. E. Brent, 'Rural employment and population in Sussex between 1550 and 1640', *Suss. Arch. Coll.* **114** (1976), 27–48, and **116** (1977–78), 41–55.

[2] The 1813 reprint was published in facsimile by David & Charles of Newton Abbot in 1970. The 1808 and 1813 printings are from the same type, except for resetting of the title-page and correction of page numbers after p. 464.

[3] R. Mitchison, 'The old Board of Agriculture (1793–1822)', *English Hist. Rev.* **74** (1959), 48–9; *Agricultural Sir John. The life of Sir John Sinclair of Ulbster 1754–1835* (1962), 137–49. B.L., Add. MS. 35,127, ff.283, 287. Two variants of the questions are in *A.A.* **21** (1793), 351–4, and (probably the final version) Sir J. Sinclair, *Account of the origin of the Board of Agriculture and its progress* (1796; copy in G.L. 16645), 47–8. The most recent assessment of the Board is by N. Goddard in G. E. Mingay (ed.), *The agrarian history of England and Wales, VI, 1750–1850* (Cambridge, 1989), 379–83.

[4] J. G. Gazley, *The life of Arthur Young 1741–1820* (Philadelphia, PA, 1973), 306–25; quoted passage at 306. Mitchison (1962), 149. W. F. Perkins, *British and Irish writers on agriculture*, 2nd ed. (Lymington, 1932), 165–7.

[5] Mitchison (1959), 49–51; (1962), 173–4. Gazley (1973), 393–8. G.L., MS. 423. Sinclair (1796), 61, 71–3. B.A., B/XIII, 24 May 1796. The archive includes minutes of Board and committees from December 1797 (B/I–VII) and an out-letter book for September 1793 to December 1800 (B/XIII).

[6] Mitchison (1962), 207–11; (1959), 54–9. Perkins (1932), 165–7.

[7] B.A., B/I to B/VII, B/XIII. Bell's MS. reports are B.A., X/I and II.

[8] W. Marshall, *The review and abstract of the county reports to the Board of Agriculture* **5** (1818), 455–6.

[9] Gazley (1973), 2–6, 13, 129. A. Young, *The farmer's tour through the east of England,* **3** (1771), 117–77; summarized in G. E. Fussell, 'Four centuries of farming systems in Sussex, 1500–1900', *Suss. Arch. Coll.* **90** (1952), 77–79. F. W. Steer, 'A Sussex mansion in the eighteenth century', *Suss. Arch. Coll.* **94** (1956), 14. J. Brent, 'The Pooles of Chailey and Lewes: the establishment and influence of a gentry family, 1732–1779', *Suss. Arch. Coll.* **114** (1976), 76–9. M. Betham-Edwards (ed.), *The autobiography of Arthur Young* (1898), 58. G.L., AL 120.

[10] Lord Sheffield in *A.A.* **14** (1790), 433. A. Young, 'Experiment on the introduction of South Down sheep into Suffolk', *A.A.* **15** (1791), 289–90, 298. E.S.R.O., SAS/HC 323, ff.25, 48, 70, 73, 83–84; SPK, lot 270 (uncat). R.A.C. Parker, *Coke of Norfolk* (Oxford, 1975), 119–22. See also S. Farrant, 'John Ellman of Glynde in Sussex', *Agric. Hist. Rev.* **26** (1978), 77–88, which makes much use of the Youngs' writings on Sussex.

[11] A. Young, *Travels during the years 1787, 1788 and 1789 . . . Kingdom of France* (1793), 209–10. E.S.R.O., SPK, lot 270. A. Young, ' A tour through Sussex by the Editor', *A.A.* **11** (1789), 170–304. Gazley (1973), 223–5.

[12] A. Lusted (ed.), *The book of [William] Wisdom*, 2 (Glynde, 1992), 76, from E.S.R.O., PAR 347/7/1. A. Young, 'A few notes taken in Sussex', *A.A.* **15** (1791), 427–34; 'Gleanings in an excursion to Lewes Fair, 1791' *A.A.* **17** (1792), 129–78. *A.A.* **19** (1793), 89–90, and **20** (1793), 509–11. Gazley (1973), 260, 273, 292.

[13] A. Young, 'Some farming notes in Essex, Kent and Sussex', *A.A.* **20** (1793), 276–96. Gazley (1973), 302–4. I. Warrell, '"Lord of the soil": a re-appraisal of Turner's Petworth patron', in M. Butler, M. Luther and I. Warrell, *Turner at Petworth. Painter and patron* (1989), 105–23.

[14] Gazley (1973), 2–3. J. G. Gazley, 'The Reverend Arthur Young, 1769–1827: traveller in Russia and farmer in the Crimea', *Bull. John Rylands Library* **38** (1955–6), 361–3. A. Young, 'Memoirs . . .', *A.A.* **15** (1791), 171–2; 'A tour through Sussex by the Editor', *A.A.* **11** (1789), 236. B.L., Add. MS. 35, 126, f.478.

[15] J. A. Venn, *Alumni Cantabrigienses*, pt. 2, **6** (Cambridge, 1954), 619. Rev. A. Young, 'A tour through Sussex 1793', *A.A.* **22** (1794), 171–334, 494–631; 'Management of woodland in Sussex', 383–88. J. H. Adeane (ed.), *The childhood of Maria Josepha Holroyd . . .* (1896), 230–1. B.L., Add. MS. 35127, f.289.

[16] Gazley (1955–56), 364.

[17] *Sussex Weekly Advertiser*, 16 Dec. 1793. In July 1795, Charles Vancouver (who had written the original Essex and Cambs. reports) was at Sheffield Place, 'making an agricultural Tour through Sussex', but no other evidence suggests that he was preparing the revised report: Adeane (1896), 326.

[18] B.A., B/XIII, 24 May 1796. Betham-Edwards (1898), 275. Lord Somerville, *Address to the Board of Agriculture . . . 8th of May 1798* (copy in G.L., 17265).

[19] A. Young, 'A farming tour in the south and west of England, 1796', *A.A.* **28** (1797), 109; Rev. A. Young, 'To the printers of the Lewes Journal' [*Sussex Weekly Advertiser*, 6 Feb. 1797], 202–6; 'Relief of the poor in Sussex' [also in *Sussex Weekly Advertiser*, 23 Jan. 1797], 255–7. A. Young, 'Petworth prize-meeting, November 20, 1797', *A.A.* **29** (1797), 505–20. Also W.S.R.O., PHA 91/14, Dec. [1797].

[20] W. Marshall, *The rural economy of the southern counties . . .* **1** (1798), 45–6; the Sussex reports are in vol. **2**.

[21] *Sussex Weekly Advertiser*, 6 Feb. 1797, 1 Nov. 1796. E. Scott, *Proceedings of the Sussex Agricultural Society from its inception to 1798*, 2nd ed. (Lewes, 1801). E.S.R.O., AMS 276, for the society of 1772–78, with Holroyd as its Secretary.

[22] *A.A.* **29** (1797), 78–89 (footnotes), 271–7; **23** (1795), 376–9. A. Young, 'A farming tour in the south and west of England, 1796', *A.A.* **28** (1797), 109, 113–29. Betham-Edwards (1898), 299, 314–7, 111. B.L., Add. MS. 35127,

ff.335, 407. W.S.R.O., PHA 91 (91/7 of 26 Jan. 1798 shows Young to have played a more active role in ousting Sinclair from the presidency than he admitted in his autobiography). A. McCann, 'A private laboratory at Petworth House, Sussex, in the late 18th century', *Annals of Science*, **40** (1983), 635–41. Gazley (1973), 336, 352–3, 390.

[23] B.A., B/I, 18 May 1798; A/II, cash book.

[24] B.L., Add. MS. 35127, ff.315, 456 (undated: John Buckner was elected Bishop on 27 Oct. 1797). Gazley (1973), 398–400.

[25] Gazley (1955–56), 360–6. B.L., Add. MS. 35,128, ff.490, 500, 506. B.A., B/II, 28 May, 12 June 1801. Rev. A. Young, 'Essay on the conversion of grass lands into tillage', *Communications to the Board of Agriculture* **3** (1802), 99–172. W.R.S.O., PHA 91/4. Betham-Edwards (1898), 352, 363–4.

[26] B.A., B/II, 13 May 1800, 22 May 1801; B/III, 8 Apr. 1802, 20 May 1803. Betham-Edwards (1898), 378–9.

[27] B.A., B/VII, 6 June 1806, 17 and 28 Apr. 1807. Sir John Sinclair, *Address to the Board of Agriculture . . . 7th June 1808*, appendix (copy in G.L., 19611). Gazley (1973), 376, 445, 469, 493, 509.

[28] B.A., B/XIII, 24 Jan. 1800. A. Young, 'Some notes at Glynd in Sussex, 1799', *A.A.* **33** (1799), 447–54; 'An inquiry into the propriety of applying wastes to the better maintenance and support of the poor', *A.A.* **36** (1801), 599–606; 'New information on paring and burning', *A.A.* **43** (1805), 209–18, 308–9. W.R.S.O., PHA 91/17, 18, 22.

[29] Betham-Edwards (1898), 433. K. Coutin, 'Lord Sheffield's model farm', *J. Hist. Farm Buildings Group* **4** (1990), 3–13.

[30] F. M. L. Thompson, *Chartered surveyors* (1968), 31–2. Surrey Record Office, 257/5/26; 13/2.

[31] B.A., B/XIII, 19 Apr. 1796.

[32] *Sussex Weekly Advertiser*, 3 March 1794.

[33] Farrant (1978), 77–88.

[34] Gazley (1973), 348–50.

[35] J. V. Beckett in Mingay (1989), 570. *Sussex Weekly Advertiser*, 6 Feb. 1797. Compare the influence of Coke of Norfolk: Parker (1975), 114–25.

[36] A. Young, *General view . . . Norfolk* (1804), xv, 504–28. 'Comparison of the expenses of arable land in 1790 and 1804', *Communications to the Board of Agriculture* **5** (1806), 18–32 (also additional information from Rev. N. Turner at 68–73). S. P. Farrant, 'The changing structure of land ownership in the lower Ouse valley, 1780 to 1840', *Suss. Arch. Coll.* **116** (1978), 261–8.

[37] H. C. Prince in Mingay (1989), 11–13. *A.A.* **41** (1804), 163–6; **14** (1790), 250–1.

[38] Betham-Edwards (1898), 408–9; on Marshall, 427. G. E. Mingay (ed.), *Arthur Young and his times* (1975), 15–19, 29–30.

Sussex Archaeological Collections **130** (1992), 213–231

THE FIRST FORTY YEARS. EARLY MORTGAGES AND MORTGAGORS OF THE HAYWARDS HEATH BUILDING SOCIETY[1]

by Wyn Ford

The Haywards Heath Building Society traces its foundation from the first meeting of its directors on 21 November 1890. To commemorate its centenary, the Society published The Story of the Haywards Heath Building Society, 1890–1990 *by the present writer, which gives an account of its organization and officers. The present article is concerned with the Society's mortgaging activities during the first forty years of its existence.*

Home ownership symbolized status and respectability to the more able and ambitious among artisans and labourers. These aspirations were fostered by the building society movement, which became a principal source of finance for new building, although at least in earlier years small speculative builders seem perforce to have depended on private sources.

The societies originated as a type of 18th century labourers' friendly society known as 'terminating' societies; these were wound up when the last of the contributors received the share for which they had saved, either as a house or in cash. An example is the Walkley Land and Building Society, founded in Sheffield in 1849, which had a membership drawn almost entirely from the working classes, and for which the appearance and hygiene of properties was a primary concern. This required an entrance fee of 72*s*. and a weekly subscription of 5*s*. a week for 14 or 15 years.[2]

These organizations eventually disappeared, and were succeeded by the 'permanent' societies which invited the middle classes to open share accounts attracting interest. Unlike the earlier societies, these offered loans secured on property which were available for longer periods than those obtainable from banks, not only to house owners but also to landlords and builders.

Whether an individual could afford to buy a house depended on the level of rent that could be afforded, which is reckoned to have amounted in the period 1905 to 1938 to between 13 and 15 per cent of the income gained by the head of a household; mortgage repayments generally exceeded rent liabilities for the same type of housing. Although the more prosperous workers were beginning to buy houses late in the 19th century with the help of the building societies which proliferated in some parts of the country, there seems generally to have been some reluctance among the lower classes to own their own homes, and most of the lending was to those who were 'slightly superior in station'. But the position varied.[3]

When the formation of a building society in Haywards Heath was first mooted in the summer of 1890, the movement was already well established in Sussex. The Hastings and Thanet Building Society had been founded in 1849, and the Rye Benefit society in 1850. In central Sussex the Horsham Permanent Benefit society had been established in 1856, and by 1879 its business was sufficiently established to justify agents in Bognor, Chichester, Henfield, Shipley and Steyning, as well as in Crawley and Cuckfield and in Surrey and Hampshire.[4] To the south the Lewes Co-operative Benefit society had been established in 1870 and incorporated in 1876, and the Brighton and Shoreham society in 1867, being incorporated in 1883.

The *Mid Sussex Times* was enthusiastic over the prospects for the new society, and boldly proclaimed:

> Similar societies have proved highly beneficial elsewhere, and as a proof we have but to allude to that existing at Burgess Hill. Every man his own landlord is a most excellent idea, and these societies present an excellent opportunity of this being accomplished.[5]

The slogan 'Every man his own landlord' echoes a note in an undated handbill of the Crawley Permanent Building Society, apparently the predecessor of the Horsham and Crawley society: 'By a small increased monthly payment

beyond the sum now paid as rent, a subscriber may buy a house to live in, and so become his own landlord'. The qualification was important. The level of rents was rising steeply, causing especial hardship to the poorer sections of the population.[6] Membership of the new society thus would hardly be available to 'every man'. Perhaps, indeed, that was never intended, for building societies were apt to favour those in secure employment. Moreover, house ownership would appeal only to those who intended to settle.

The newspaper's optimism reflected its comments when the Burgess Hill and Hurstpierpoint Permanent Building Society commenced operations at the beginning of 1881. This society evidently had influential local support: the first vice-chairman was Simeon Norman, one of the most prominent businessmen and 'a true founding father' of the town, and the first secretary was Henry Burt, who had been a builder's foreman. The society had already attracted 60 members at its opening meeting.[7] The new society eventually supplanted the St John's Savings Investment Permanent Building Society, which had been established in Burgess Hill in 1875. Its secretary was Thomas Sinnock, an auctioneer and valuer with numerous local interests.[8] However, the St John's society had disappeared by 1891, but the newer society continued to flourish as the Mid-Sussex Permanent Building Society, which continued to survive after 1945.

Thus the Haywards Heath society already faced competition when its formation was discussed at a public meeting on 16 July. Nevertheless, the meeting was attended by some 30 men, both professional men and tradesmen, who were typical of those who were to support the society, whether as directors, investors or mortgagors. They included solicitors, shopkeepers, innkeepers, builders and even a private schoolmaster whose successor was to become a mortgagor. From the outset the society was felt to meet a need.

BEFORE THE FIRST WORLD WAR[9]

In the period after 1874 the housing market was depressed, and there was insufficient demand for the funds available from the societies. The criteria for security on loans were relaxed in the search for business, the societies themselves became less secure, and investors' confidence was shaken. A number of societies failed in consequence. The situation had eased slightly by 1914, but the number of societies continued to decline, although the number of share accounts increased.[10]

Some time elapsed after the formation of the Haywards Heath society before it entered into any mortgage contracts, despite the enthusiasm expressed when it was proposed. Doubtless the initial shortage of capital reserves was partly responsible for the delay. On 8 September 1893 and again on 16 April 1894 the board accepted loans from its chairman, Major T. Astley Maberly, of £300 and £200 respectively at 3½ per cent interest. But another possible influence is suggested by the report on the 1891 Census, where it was noted that the lowest levels of overcrowding occurred in the south-east of England, which included Sussex.[11] This may well have depressed the need for more inexpensive housing in the area, since there would have been less inclination than elsewhere for younger members of families to leave home prematurely.

Haywards Heath

Naturally the earliest mortgage business of the new society was concerned with property in the vicinity. Although the London to Brighton railway had opened 50 years previously, the town itself was barely 30 years old. The map attached to the enclosure award shows that there was little road development in 1861. Two roads crossed the heath from the north southwards. One was the Newchapel turnpike leading to Brighton through Sussex and Wivelsfield Roads. At the point where the 'Sussex Hotel' later appeared it was crossed by another turnpike passing from Cuckfield past Butlers Green, and on towards Newick and Buxted. There were a few minor roads: in the north New Sydney Road is shown, and further south those that later became St Wilfrid's Road and Triangle Road. Haywards Road and Ashenground Road were as yet no more than footpaths. There were signs of commercial activity in the timber yard shown beside the railway and the inn on Muster Green.

Thereafter development had been rapid, but it is clear from the O.S. map reproduced here (Fig. 1) that in 1874 there was plenty of scope for expansion, even in the central area around South Road.[12]

The first mortgagor, in 1892, was a builder named Samuel Jerred. He borrowed £200 on two houses, one of which was his own dwelling, in Sydney Road, close by the railway station. Twelve years earlier he had submitted plans for two houses in the same road, and in 1890 he had planned a substantial workshop on two floors, with a storage 'shed' at ground level.[13] But thereafter the Society seems to have had no dealings with him.

Involvement with the south-eastern part of the town, eastwards of Haywards Road towards the Brighton lunatic asylum is indicated by the numbers of mortgages granted in 1898 on properties in Gower Road (*Gow*) and Western Road (*W*) in Table 1. This was a developing area of small artisan houses, ranging upwards from the type of through-terrace housing designed by Thomas Bannister for Triangle Road in 1878;[14] however no properties in this road were mortgaged to the Society. These units consisted of two floors: a living room and wash house with a copper and sink and outside water closet were at ground level, with three bedrooms instead of the more usual two on the upper floor. The type of milieu is indicated by the Congregational and Primitive Methodist churches and the Jireh Baptist chapel in Sussex and Wivelsfield Roads.

Another area that was attracting the attention of speculators at this time was New England Fields, west of the agricultural colony founded by Willliam Allen early in the century.[15] On the O.S. map of 1874 it is shown merely as a path running up beside Petland House from Hazelgrove Road; but by 1879 Stephen Kent and others were planning to build in the road, and in 1882 it attracted a shop, together with a mission church that soon required extension.[16] In 1893 Robert Inglis, probably a builder, who was an investor with the Society from its earliest days, obtained £200 to develop land there, but in 1897 Edward James Kent, another builder who had been active in the area for several years,[17] sought £500 unsuccessfully for the same purpose. The directors' minutes do not enter into details. Probably the security he offered was inadequate.

By this time the Society's interests were already focussing on the area between the 'Sussex Hotel' and Asylum Road (now Colwell Road). As early as 1893 James Fox had borrowed £450 on two houses in Sussex Road, but in the following year the Society refused an application by A. Kent, probably a relative of the builder, for a mortgage on property in Wivelsfield Road leading southwards from the town.

From its earliest days, however, the Society was prepared to help more modest borrowers. William Gater, the sub-postmaster in Sussex Road, mortgaged to the Society his own house, Kentville Cottage in Wivelsfield Road, for £200 in 1893. In 1898 the number of mortgages increased dramatically. The pair of cottages next to the Jireh chapel were mortgaged to two bricklayers, Thomas Muzzell and Frederick Gasson, for £180 each, their estimated value being £220. George Sweetman bought land for his house in Ashenground Road, where he later established himself as a jobbing gardener, and Ambrose Upton similarly acquired property in Gower Road, where he worked as a carpenter.

Another who was less fortunate in dealings with the Society was Mrs Sarah Burt. In 1904 she mortgaged a house in Franklynn Road together with land on which she built a laundry. By the end of 1907 she had fallen more than three months in arrears with her repayments, and in the following March the Society resolved to take the property over with the intention of selling it. Eventually it was sold to Mrs Louisa Moore, who was already operating a similar business in New England Road.

Others besides artisans and shopkeepers sought the help of the Society at this period. In 1903 Fraulein Sophia Wedler, who taught music and German in the town, borrowed £300 for her house and land in Haywards Road, and in the same year Bertram Hyde Tugwell, a photographer who had set up business in 1897, was investing in property in the town. Unfortunately Mr Tugwell's dealings with the Society had an unhappy outcome, for after his death his widow defaulted on the mortgage repayments.

Llewellyn Button was another serving the leisured classes who was trying to establish himself in the town at this period. In 1907 he was

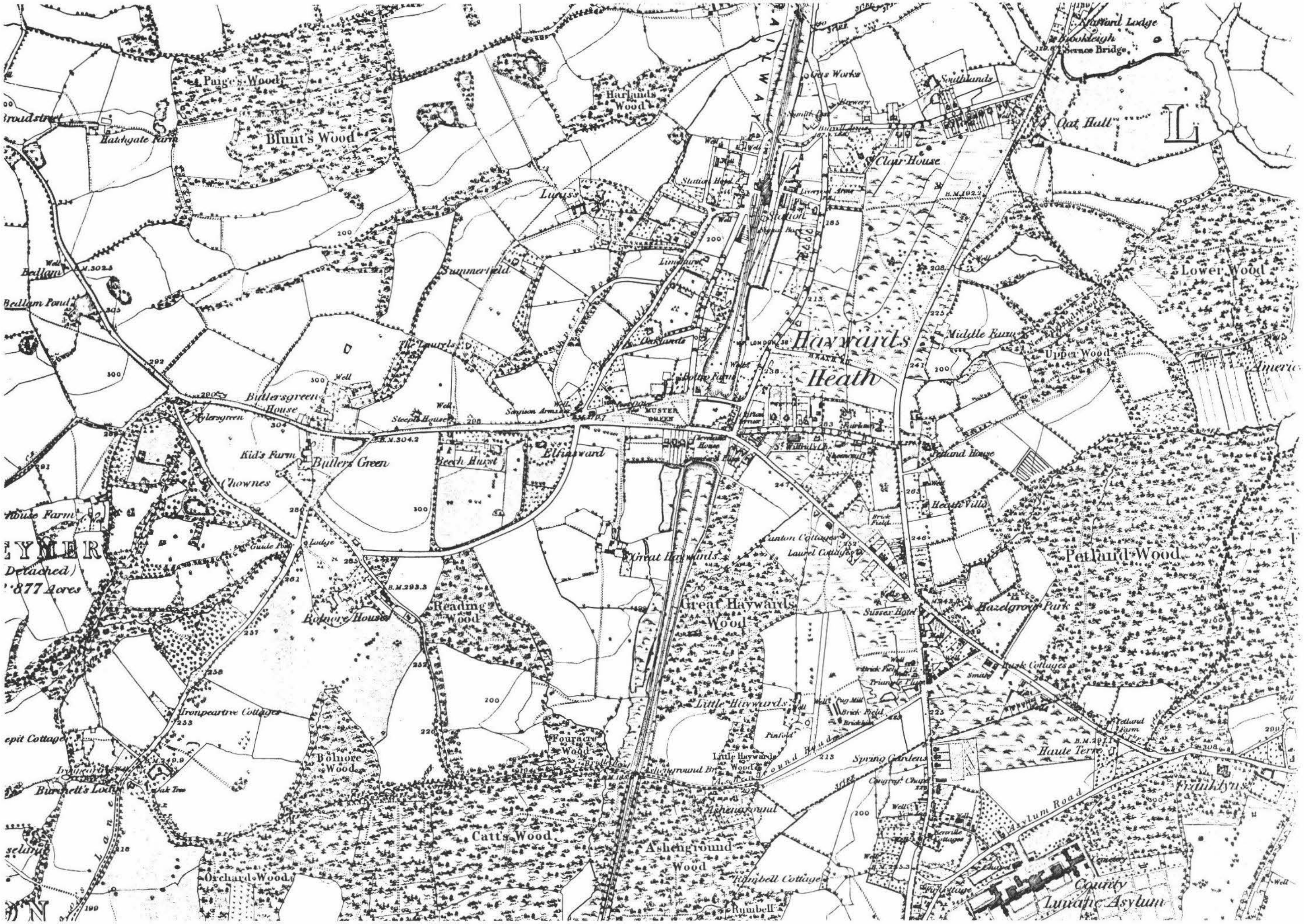

Fig. 1. Haywards Heath as depicted on the O.S. survey of 1874 on the scale of six inches to the mile (sheet XXVI). At that date most of the roads that appear later in the Building Society records had yet to appear; even Haywards Road (originally Little Haywards Road) was unfinished at its northern end. The road is shown alongside Little Haywards farm.

described as a job and riding master in Gower Road who kept livery stables, and by 1915 he had extended his activities to South Road. *Kelly's Directory* does not list him in 1899. Thus he seems to have been a new arrival when he applied for a mortgage of £400 on a house and land in New England Road in March that year, and a further £350 in the following October. His business prospered from relatively humble beginnings in the town. By 1924 he had moved to Mill Green Road near the station, where he was running a riding school.

Table 1 is concerned with the less prosperous area in the south east of the town. Within the period to 1914 the greatest number of mortgages for the area was granted in the year

TABLE 1
Early mortgages in the South of Haywards Heath

	Fkl	*Gow*	*Haz*	*Knt*	*NEn*	*Pet*	*StJ*	*Sx*	*W*	*Total*
1897	–	2	–	1	–	–	–	2	–	5
1898	–	4	–	–	–	2	1	–	4	11
1899	–	–	–	2	2	–	–	–	–	4
1900	–	1	1	2	2	–	–	–	1	7
1901	–	–	–	–	–	–	–	3	1	4
1902	1	–	–	–	1	–	1	1	1	5
1903	2	2	–	–	2	–	–	–	2	8
1904	1	–	–	–	1	–	–	–	2	4
1905	–	–	–	1	–	–	–	–	–	1
1906	–	–	–	–	–	1	–	–	–	1
1907	–	–	–	–	–	2	–	–	–	2
1908	1	–	–	–	–	–	–	–	1	2
1909	–	1	–	–	–	–	–	–	–	1
1910	–	3	–	–	–	–	–	–	2	5
1911	–	–	–	–	1	1	–	–	–	2
1912	–	1	–	–	–	–	–	1	–	2
1913	–	–	–	–	–	–	–	1	1	2
1914	–	1	–	–	–	–	–	1	–	2
Total	5	15	1	6	9	6	2	9	15	68

TABLE 2
Early mortgages in the Centre of Haywards Heath

	Ashenground	*Bolnore*	*Broadway*	*Haywards*	*South*	*Total*
1897	–	–	–	1	1	2
1898	4	–	–	–	1	5
1899	–	–	–	–	–	0
1900	1	–	–	–	–	1
1901	–	–	–	1	–	1
1902	1	–	–	–	–	1
1903	–	–	–	3	2	5
1904	–	–	–	–	–	0
1905	–	–	–	–	–	0
1906	–	–	–	–	–	0
1907	–	–	–	–	–	0
1908	–	–	1	–	–	1
1909	–	–	–	–	–	0
1910	1	–	–	–	1	2
1911	–	–	–	1	–	1
1912	–	–	–	1	–	1
1913	–	1	–	–	–	1
1914	–	–	–	1	–	1
Total	7	1	1	8	5	22

1898. In the November it was reported that 'the district was growing very fast', although specific mention was made only of developments in the north of the town, where roads for about 200 houses were under construction. Further evidence of expansion is provided by the increase of membership of the Urban District Council from nine to 12 members at that time. Earlier in the year six building plots at Clevewater farm, to the south of the town, had been sold to Major Hardman, of Hurstwood nearby, with as frontage on to Colwell Lane.[18]

In 1899 land became available in Ashenground, Haywards and Heath Roads as well as in Gower Road.[19] Table 2 shows that the Society became interested in Ashenground Road during 1898, but the growth of interest in Haywards Road was more evenly distributed over the period to 1914. The development of the community in the town is demonstrated by the acquisition of a recreation ground at Victoria Park at this time.

Even members of the Society's board speculated in a development in the east of the town. In June 1898 Arthur Pannett, the Society's surveyor, and Frederick Herbert Beeny, a prominent local tradesman and a director from the Society's earliest days,[20] together with Stephen Kent and the innkeeper George Austen, took out mortgages on a housing development in Western Road (*W*), which runs north from Franklands Road (*Fk1*). Four tenders were received by Mr Pannett for six pairs of model cottages, from three builders in the town and one in Ardingly.

One director who applied unsuccessfully was the auctioneer and estate agent Scott Pitcher, a director from 1903 until 1926, who in 1902 was refused an advance of £1,000 on a house and land in Lucastes Avenue, the more prosperous residential area extending from Lucas's to Limehurst near the station. The proposal seems to have been premature. The O.S. map of 1912 shows a few houses, but it was a further ten years before the Society granted a mortgage in this area.

At this period most advances were for houses in roads adjacent to the main thoroughfares: Gower Road (*Gow*) between Sussex Road (*Sx*) and South Road, New England Road (*NEn*) running east from Hazelgrove Road (*Haz*). Kents Road (*Knt*), and Petlands Road (*Pet*) run east from Wivelsfield Road, and St Johns Road (*StJ*) is little more than a lane running up beside 'The Ugly Duckling' public house in the same thoroughfare.

The distribution of mortgages over the period to 1914 around the principal trading area of the town in South Road and The Broadway, together with the middle-class residential areas of Ashenground, Haywards and Bolnore Roads, is indicated in Table 2. The number of mortgages granted by the Society is only a third of those represented in Table 1, but fewer roads are included, and the density of the housing in them was lower. It is clear that mortgages were more in demand for residential areas (Ashenground and Haywards Roads) than for commercial property (South Road and The Broadway), and that mortgages were more in demand for the former of those, although the latter was developing at this period. However, it should be noted that no mortgages were taken out for these roads in 1904–7, and that in the same period only one (in Sydney Road) materialized in the roads covered in Table 3, although the Society was continuing to mortgage property in the south-east part of the town.

One tradesman who speculated more ambitiously at this period was Arthur George Cook. In 1897 he mortgaged building land in Little Haywards Road for £300, a sum reduced to £250. By 1899 he was established there at Goodwood House[21] as a coal merchant and contractor, and at first he may have needed finance for his business. But his arrears in repayments on this and other advances on property in the road were to cause endless trouble in later years.

John Edward Piper was another who found himself in difficulties. Formerly he had been in business in Cuckfield as a grocer and draper, and latterly in Haywards Heath, first in South Road for twenty years, and in later years at Stamford House close to Muster Green.[22] In 1908 he turned to the Society for help in acquiring a fresh shop and other premises nearby in The Broadway; but within a few years he had fallen in arrears with repayments on his loan of £750, and the Society threatened to foreclose early in 1914.

The situation was finally resolved a year later when his trustees paid off the mortgage, but not before the Chairman, Thomas White, a local builder, had agreed to take over the property. By then Mr Piper evidently had ceased to trade, for no longer does he appear in *Kelly's Directory*.

A couple of straightforward transactions involving business premises concern Laurel Cottages, a pair of houses still to be seen on the south side of South Road south-east of the junction with Haywards Road (Fig. 1). In 1897 these houses and shops were mortgaged for £300 by Charles Watts, a boot and shoe maker. The following year a mortgage on part of the premises for £150 was granted to George Albert Watts, a fruiterer, on condition that Charles sold him the property. Both men are shown as trading in South Road in 1899, when George was still at Laurel Cottages. The position seems clear enough: Charles bought both premises, and later sold one of the houses to George, when the men continued in business side by side. Charles disappeared by 1907; but George had redeemed his mortgage in 1905, and was still trading in 1924. Mrs E. Watts, probably his widow, was running a similar business in South Road as late as 1938.

The innkeepers seem to have been the most enterprising speculators at this period, however. In 1898 Stephen Sexton, of 'The New Inn' (now 'The Ugly Duckling') in Wivelsfield Road, took out a mortgage of £600 on five properties in Gower Road, South Road and close by in Wivelsfield and St John's Road, valued at £900. George William Austen, a name that appears both in connection with the hotel in Station Road (now Clair Road), and as a beer retailer and shoe maker in 1899 who by 1907 had moved to the Heath Hotel in Sussex Road, took out a series of mortgages between 1898 and 1923 concerning properties in Western Road, Sussex Road and the main trading area in South Road. Mr Austen was of sufficient standing in 1907 to be acceptable as a guarantor for a mortgage jointly with the Society's secretary, Harry Plummer.

There were other smaller speculators. They included in 1897 Henry Edward Fisher, a grocer in Gower Road, a keen musician and an active member of the Congregational church in Wivelsfield Road, who in 1897 was granted a mortgage of £220 in instalments on building land for houses in Gower Road. Each instalment became payable when the soundness of a house was certified. There followed in 1899 and 1900 further advances of £400 secured on land in the same road, and a final £300 was granted in 1905. The mortgages were paid off in 1911 and 1918. Another was Frederick Knight, a music teacher in Cuckfield, who between 1906 and 1926 borrowed a total of £1,200 on houses in Little London Lane, Cuckfield, and Franklynn Road, Haywards Heath.

A less ambitious mortgagor at this period was Mrs Anslie Jones, who lived in St John's Road beside the 'New Inn'. She is no doubt to be identified with Miss Anslie Olive Jones, who was a small investor with the Society from 1903. Between 1900 and 1919 Mrs Jones raised mortgages on property in Kents Road and Gower Road, and in the latter year she purchased no. 32 Gower Road from an existing mortgagor. Another was Mrs Martha Wellbelove, whose address was given as Abbotsleigh, a large house on the Lewes Road, In 1898 she was granted £250 on two houses in Gower Road, together valued at £550, and in 1907 she obtained a further £450 on two houses in the more comfortable Ashenground Road.

The Society's interests in property on roads in the north of the town were not extensive at this period. No mortgages were advanced before 1902, and only in 1913 was there any significant activity during this period (Table 3). Not unexpectedly, the greatest number of mortgages was advanced on houses in Queens Road, which runs parallel to Sydney Road. The absence of the more modest Gordon Road from the table is to be noted; the road had been recently constructed, and the O.S. map shows that in 1912 it was in process of development. There is a single entry for Church Avenue, a short road connecting Sydney Road with Queens Road. The entry for Balcombe Road in 1903 relates to a house in Bordehill Lane, the former name for that section extending northwards from Old Wickham Lane. This is an early indication of the Society's interest in good middle-class housing, away from the areas of commercial activity occupied by the lower classes.

TABLE 3
Early mortgages in the North of Haywards Heath

	Balcombe	*Church Ave*	*Perrymount*	*Queens*	*Sydney*	*Total*
1902	–	–	–	1	–	1
1903	1	–	–	4	–	5
1904	–	–	–	–	–	0
1905	–	–	–	–	–	0
1906	–	–	–	–	–	0
1907	–	–	–	–	1	1
1908	–	–	1	1	–	2
1909	–	–	–	–	–	0
1910	–	–	–	–	–	0
1911	–	–	–	–	–	0
1912	–	–	1	–	–	1
1913	1	1	1	1	3	7
1914	–	–	–	1	–	1
Total	2	1	3	8	4	18

TABLE 4
Early mortgages in the area around Haywards Heath

	Ardingly	*Balcombe*	*Burgess Hill*	*Crawley*	*Cuckfield*	*Lindfield*	*West Hoathly*	*Wivelsfield*	*Total*
1893	–	–	–	–	2	–	–	–	2
1894	–	–	–	–	–	–	1	–	1
1895	–	–	1	–	–	–	–	–	1
1897	–	–	1	–	1	–	–	–	2
1898	–	1	–	–	1	3	–	–	5
1899	–	1	–	–	–	–	1	–	2
1900	–	2	2	–	1	1	–	–	6
1901	–	–	–	–	3	1	–	–	4
1902	–	–	1	–	–	–	–	–	1
1903	–	3	1	–	2	–	–	–	6
1904	–	–	–	–	1	1	–	–	2
1905	–	1	1	–	3	1	–	–	6
1906	1	–	1	–	–	1	–	1	4
1907	–	1	1	–	–	–	–	1	3
1908	–	–	1	1	2	–	–	1	5
1909	–	2	1	–	3	1	–	–	7
1910	–	2	1	–	1	–	–	–	4
1911	–	–	1	–	1	–	–	–	2
1912	–	–	–	–	1	1	–	–	2
1913	1	1	–	–	1	1	–	–	4
1914	–	–	–	1	1	1	–	–	3
Total	2	14	13	2	24	12	2	3	72

Mortgages in the Surrounding Area

Almost from the outset, the Society advanced money on property outside the town, and extended as far as West Hoathly before the turn of the century, as Table 4 shows. There the Society treated as 'urgent' the application of Miss Whitmore in 1894 for 'only' £150 on the security of her own house on a 20-year mortgage. There is a hint that the Society had funds more readily available than had other building societies; the duration of the mortgage indicates that this type of advance met a need.

In 1913, the year in which it was most active in the hinterland, the Society granted its only mortgage in Horsham at this period when it advanced £450 on two houses in Crawley Road

to Mrs Amelia Elizabeth Wood. This transaction is omitted from the table as a solitary case; but it is not without significance. There were two local building societies at the time, the Horsham and Crawley and the Horsham Permanent Benefit, and a third in East Grinstead; yet the mortgage was effected with a more distant society. Another lady who effected a mortgage with the Society was Mrs M. Munnion, perhaps the wife of Ernest Henry Munnion, of the family of builders who later provided two of the Society's directors. In 1906 she took out a mortgage of £100 on a plot of land at Ardingly; this was paid off in a little more than two and a half years.

One feature is the interest shown in property outside the town by Haywards Heath tradespeople. Mr Beeny's interests were particularly extensive, for they covered property in Lindfield, as well as a shop in Cuckfield and considerable investments in Haywards Heath. He also had property in Brighton—in Dyke Road and his own house in Tivoli Crescent North; we know of this last mortgage only from the record of its redemption by his executors after his death. In 1911 Mrs Hester Tomlin Beeny, perhaps his wife, took out a mortgage with the Society on a house in Parklands Road, Hassocks. Later, in 1923, Ernest John Beeny, probably his son, the landlord of the 'Burrell Arms' near the railway station at Haywards Heath, was to mortgage a row of houses in College Road nearby.

In 1903 William Toye had raised £400 on a house and shop in South Road, apparently to set up in trade as an ironmonger. In 1910, after he had paid off the first mortgage, he became more enterprising. He raised a similar sum on a house and land in Sussex Road and on land in Heathfield, and, evidently encouraged by prospects there, obtained a further £400 on a house and shop in Heathfield a couple of months later. His venture evidently was justified, for he was able to pay off his debts promptly and to obtain further mortgages on property in Uckfield and elsewhere. Some men took out substantial mortgages. At Balcombe, for example, the nurseryman C. F. Waters took out mortgages totalling £2,050 on houses and other property in Station Road and elsewhere in 1903, and Henry Mills, a signalman, entered into a series of smaller commitments in 1909–10; and at Wivelsfield Joseph Wood, a poultry dealer, secured a total of £525 on Ivy Cottage in Plumpton Road.

Outside Haywards Heath the Society's principal concern at this period was with Cuckfield, where a series of mortgages with members of the Norris family was started as early as 1893 with a permanent mortgage from Edward Norris, who had been in business as a builder in the village since the mid-1860s, and with one from Miss S. A. Norris for £50 over a period of 12 years.

The subsequent history of these mortgages is not without interest. Edward seems to have died in the early 1890s, and in 1896 Mrs Esther Norris, apparently his widow, had fallen into arrears with her repayments. In June 1897 she notified the Society of her intention to redeem her mortgage; but the board instructed the Secretary to advise her that interest rates to borrowers were to be lowered, and that repayment of the principal might be deferred. Clearly her decision to redeem was influenced by her difficulties in meeting the full repayments, but the board wished to encourage her to continue. Nevertheless, the redemption of the mortgage was completed during the following month. How she raised the necessary funds is not known; but in August Miss Norris also redeemed her mortgage, well within the 12-year period. Neither lady was content to be burdened with such a commitment longer than was necessary; Miss Norris, like other mortgagors, seems to have regarded her mortgage in the nature of a conventional loan over an extended period, such as banks were unwilling to contemplate.

The markedly greater interest in Cuckfield in contrast to the neighbouring village of Lindfield is to be noted. Both communities were growing at this period, but the differential between the two populations remained fairly constant. Perhaps the larger community in Cuckfield offered more scope to potential mortgagors; but in 1898 the Society granted the first of a long series of mortgages in Lindfield to the Rev. J. P. Bacon Phillips, who had been Rector of Crowhurst since 1889. It also granted £150 in 1899 on a leasehold house and land to William Philps, a baker at Walstead Common, Lindfield, who however died shortly afterwards.

A more substantial mortgagor was Mrs Agnes Warnett, the wife or widow perhaps of a wheelwright in the village, but more probably of Dennis Warnett, the grocer and draper who had a shop beside the Station Inn at Haywards Heath. In 1901 she raised £850 on land and two houses to be built there. She was already a considerable landowner, for she offered Bedford House and 5 Pelham Place in South Road, Haywards Heath, as additional security. Clearly she was investing in property for renting, for in 1904 it was noted that James Wood of Cuckfield was collecting her rents. But it seems that by the beginning of 1909 she had run into financial difficulties.

The statistics for Burgess Hill are distorted by the financial difficulties of the Gates family, an affair suggesting that in its early days the Haywards Heath society was less discriminating than other local societies. As we have seen, there was already a well established society in Burgess Hill before the Haywards Heath society was formed, and the Society attracted comparatively few mortgagors there. Yet one of its earliest clients outside Haywards Heath was Thomas Ernest Gates.

He had been trading as a butcher in Fairfield Road, Burgess Hill, since 1890. In November 1895 he applied for a mortgage of £270 on his property, and in the following January the Society's solicitor expressed himself satisfied with 'the title of the land that Mr Gates was going to buy'. By the end of the year, however, Mr Gates was already in arrears with his repayments; but he was not deterred from applying for further advances over the following years. In 1900 he was offered £150 against an application for £200, when the tiling in his shop was finished. In 1901 he was again in arrears, and this situation continued. Later applications understandably were refused, and his wife Emily became involved in the attempts to raise cash, after a peremptory demand for settlement of his account with the Society, with property in Slimbridge Road as security.

Finally the Society implemented its frequent threats to foreclose his mortgages in 1908, and instituted legal proceedings to gain possession of his property; but he continued trading throughout the first World War. From the details of this affair in the board minutes it would seem that Mr and Mrs Gates were simply inept at managing their finances—a strange situation for one who traded in the town for 30 years.

Other tradesmen in the town fared better in later years. Elkanah Marchant, a carpenter and pig butcher, raised small sums on various houses between 1902 and 1909, and Alfred Hole, a gas fitter,[23] mortgaged property in Mill Road together with property in Southampton for £550 in 1909 and £650 in 1926.

The Society had trouble also with the repayments on the mortgage of G. C. Newington in Balcombe. In 1900 he took out a mortgage for £800 on houses and land, and four and a half years later he increased his indebtedness by a further £500. By September 1907 he had died. Later his widow defaulted on the repayments, and the matter was not finally resolved until the mortgage was paid off in 1918.

DEVELOPMENTS AFTER 1914

After 1918 the character of owner-occupation changed. The inflation in the property market caused by the demand for a scarce resource immediately after the War rapidly subsided, and from the summer of 1920 prices fell sharply. The total number of houses built in England and Wales during the five years 1925–9 was 150 per cent greater than the number in the immediate post-War period 1919–24, and the share of the private sector increased from 55.6 to 67.4 per cent. The idea of home ownership began to appeal to people lower in the social scale, and their aspirations were fostered by the emergence of builders' pools, by means of which builders offered guarantees against borrowers who might default on their repayments. From 1923 building schemes proliferated, but their success depended on the support of building societies. In 1920 the total advanced by the societies exceeded the 1910 sum by 213 per cent, and the amount in 1930 had risen by a further 205 per cent over the 1920 figure. Low costs led to the lowering of interest rates, but the societies favoured the purchase of new property by families in secure employment.[24]

It was at this time that the Haywards Heath society joined the main stream of the movement.

It became affiliated to the National Building Societies Association, and thereafter the Society's secretary regularly attended the annual general meetings.

Brighton

Even before the First World War the Society had become involved with property in the Brighton area through the interests of residents in Haywards Heath. In 1914 £800 was raised on premises in Edward Street, Brighton, by Ernest Dudney, who may well have been related to the Mrs Dudney who was living in Church Road, Haywards Heath, at the time. Early in 1911 Charles J. A. Watts, the boot and shoe maker in South Road who had sold part of his premises in 1898, mortgaged for £660 three business premises in Cowper Street, Hove. But, although he seems to have left Haywards Heath about this time, he is not to be found in Cowper Street. He is perhaps to be identified with Charles Watts and Son, fruiterers, who were to be found in Blatchington Road in 1915. By 1924 the business had disappeared from Hove, and Mr Watts had mortgaged another shop in South Road, Haywards Heath. In August 1926 he mortgaged 23 Portland Villas, Hove, and perhaps went to live there.

Other tradesmen in Haywards Heath who mortgaged property in Brighton at this period were F. H. Beeny, one of the Society's directors whose extensive interests we have already noticed, and Percy Rowland, the fishmonger in South Road near Sussex Square. He mortgaged a house in Osborne Road for £250 in 1919, and followed this by obtaining £250 on 84 Waldegrave Road in 1921 and £200 on 39 Hythe Road in 1923. In 1921 he had mortgaged another house in Haywards Heath; but this seems to have been a further investment, for by 1924 he was in business at yet another address in Brighton, 146 Preston Drove.

The next mortgagor to involve the Society with property in Brighton seems to have been a Brighton resident. In 1921 Mr H. R. Edwards mortgaged 33 Clifton Terrace for £200. By 1924 the property was unoccupied; but there was a confectioner named Harold Robert Edwards at 147 Montgomery Street, Hove, who may have been the same as the mortgagor.

The largest mortgagor of all was A. J. Brown, on whom little definite information is available. In 1923 he took out a mortgage for £1,200 on a house and business premises at 178 Ditchling Road, in the angle of the junction with Upper Hollingdean Road. In 1924 the buildings were occupied by a tobacconist and a firm of house agents. Within two years Mr Brown had sold the property and had leased back part of it, to take out a fresh mortgage in October 1925. In 1924, a 'Mr Brown', probably the same man, is recorded as taking out a mortgage for £650 on a house in Hollingdean Terrace. *Pike's Directory* for Brighton lists two entries for businesses under A. J. Brown in 1925, at 30 Henry Street, which ran between Edward Street and Carlton Hill, and 76 Rose Hill Terrace; neither address was shown as occupied in the previous year. But we have seen the early interest of Haywards Heath residents in property in Brighton, and a more likely candidate is J. Adam Brown, who was living in Perrymount Road, Haywards Heath, between 1924 and 1938; occasionally the Society's records mistake the initials of mortgagors.

The 1920s was a period of great expansion in Brighton. There was 'the exclusive development at Kemp Town', but expansion was greatest in the north and west of the borough, which itself was enlarged in 1928 to encompass Patcham, Ovingdean and Rottingdean.[25] The impact on the Society of these changes is shown by a board minute of 9 August 1928 which records a resolution that new houses in Brighton on which mortgages were sought should be inspected by one or more directors. This indicates a need for closer scrutiny by the Society of proposals relating to the conurbation, and suggests that the capital resources at the Society's disposal were insufficient to cope with the potential volume of business.

The extent to which the Society was committed is shown in Table 5. An asterisk in the first column denotes a road not included in the street guide of *Kelly's Directory* in either 1915 or 1924. It is clear from the bottom line that the Society's involvement in the Brighton property market reached its peak in 1924, and that thereafter the call on the Society's resources fell off sharply, to recover some lost ground in the

TABLE 5
Mortgages in Brighton and Hove

	Years													
	14	18	19	20	21	22	23	24	25	26	27	28	29	Total
CENTRAL BRIGHTON														
Edward Street	1	–	–	–	–	–	–	–	–	–	–	–	–	1
Kensington Gdns	–	–	–	–	–	–	–	1	–	–	–	–	–	1
Ship Street Gdns	–	–	–	–	–	–	–	–	–	–	1	–	–	1
Southover Street	–	–	–	–	–	–	–	–	–	–	–	–	1	1
West														
Clifton Terrace	–	–	–	–	1	–	–	–	–	–	–	–	–	1
Temple Street	–	–	–	–	–	–	1	–	–	–	–	–	–	1
Waterloo Street	–	–	–	–	–	–	–	–	–	–	–	–	1	1
Preston														
Beaconsfield Villas	–	–	–	–	–	–	–	1	–	–	–	–	–	1
Dyke Road	–	1	–	–	–	–	–	–	–	–	–	–	–	1
Hampstead Road	–	–	–	–	–	–	–	–	–	–	1	–	–	1
Round Hill														
Coombe Road	–	–	–	–	–	–	–	–	–	–	–	1	–	1
Dudley Road	–	–	–	–	–	–	–	2	1	–	3	2	–	8
Edburton Road	–	–	–	–	–	–	–	–	–	–	–	1	–	1
*Hartington Place	–	–	–	–	–	–	–	–	–	–	–	1	–	1
Hollingbury Road	–	–	–	–	–	–	1	1	–	–	–	1	–	3
Hollingdean Road	–	–	–	–	–	–	–	4	–	–	–	–	–	4
Ladysmith Road	–	–	–	–	–	–	–	–	–	–	–	–	1	1
*Mafeking Road	–	–	–	–	–	–	–	–	–	–	–	1	–	1
Roedale Road	–	–	–	–	–	–	–	–	–	–	1	–	–	1
U Hollingdean Rd	–	–	–	–	–	–	1	–	–	1	–	–	–	2
Vere Road	–	–	–	–	–	–	–	–	–	–	–	–	1	1
Queens Park														
Cobden Road	–	–	–	–	–	–	–	–	–	–	–	–	1	1
*Ryde Road	–	–	–	–	–	–	–	1	1	–	–	–	–	2
*Seville Street	–	–	–	–	–	–	–	–	1	–	–	–	–	1
KEMP TOWN														
Freshfield Road	–	–	–	–	–	–	–	–	–	–	–	–	1	1
WITHDEAN AND HOLLINGBURY														
*Barnet Road	–	–	–	–	–	–	–	1	–	–	–	–	–	1
Ditchling Road	–	–	–	–	–	–	–	1	–	–	–	–	–	1
*Dover Road	–	–	–	–	–	–	–	1	–	–	–	–	–	1
Hollingbury Crescent	–	–	–	–	–	–	–	1	–	–	–	–	–	1
*Hollingbury Rise	–	–	–	–	–	–	–	–	–	–	–	3	–	3
Hollingdean Terrace	–	–	–	–	–	–	–	4	2	–	2	–	2	10
Hythe Road	–	–	–	–	–	–	–	1	–	–	–	–	–	1
Loder Road	–	–	–	–	–	–	–	1	–	–	–	1	–	2
Lowther Road	–	–	–	–	–	–	–	1	–	–	–	–	–	1
Osborne Road	–	–	1	–	–	–	–	–	–	–	–	–	–	1
Sandgate Road	–	–	–	–	–	–	–	–	–	–	–	1	–	1
*Stanmer Park Road	–	–	–	–	–	–	–	4	–	–	1	1	1	7
*Stanmer Villas	–	–	–	–	–	–	–	–	1	2	1	1	–	5
HOVE														
*Aldrington Avenue	–	–	–	–	–	–	–	–	–	–	–	1	2	3
Blatchington Road	–	–	–	–	–	–	–	–	–	–	–	–	1	1
*Bolsover Road	–	–	–	–	–	–	–	–	–	–	–	–	1	1
Chanctonbury Road	–	–	–	–	–	–	–	–	–	–	–	–	1	1
College Road	–	–	–	–	–	–	–	–	–	–	–	–	1	1
*Hallyburton Road	–	–	–	–	–	–	–	–	1	–	–	–	–	1
Lansdowne Road	–	–	–	–	–	–	–	–	–	–	–	–	1	1
*Lincoln Road	–	–	–	–	–	–	–	–	–	–	–	–	1	1
*St Leonards Gardens	–	–	–	–	–	–	–	–	–	–	–	1	–	1
Total	1	1	1	0	1	0	3	25	7	3	10	16	17	85

last three years of the period, when we have suggested that the demand on resources was becoming severe.

For the most part these mortgages appear to concern private houses, but there were exceptions. In 1924 Sidney Hall took out a mortgage for £450 on the house and shop at 19 Kensington Gardens where he was to remain until the Second World War, and in 1928 a paperhanger, Harry Short, and his wife, who had been living at 88 Sandgate Road, mortgaged for £495 no. 37 in the same road. At this period the road was being developed, and the couple probably wished to move to better premises. Further evidence of development in the area is provided by a mortgage granted in the next year to F. C. Harris of £650 for a house and land in Aldrington Avenue together with a house in Sydney Road, Haywards Heath.

The Hinterland of Haywards Heath

Table 6 indicates the surge in demand for mortgage finance in the area around Haywards Heath in the late twenties. The marked involvement in Burgess Hill at this time suggests that finance from the Haywards Heath society was more readily available than from other sources locally; this increased activity extended as far as Crawley to the north. There the most substantial of the Society's mortgagors at this period was resident in Haywards Heath. P. H. Diplock, who sought a mortgage of £600 for ten years on property at Goffs Oak but was offered only £500, had an address in Balcombe Road. Finance for properties in Lindfield in relation to Cuckfield had also increased, although the population had remained stable since 1911. However, the small populations of the two neighbouring parishes of Balcombe and Wivelsfield increased slightly during this period, but the number of mortgages remained small; the number in Wivelsfield, indeed, was almost the same as for Ardingly, whose population at this period was declining.

Table 7 shows the number of mortgages effected on properties in fresh areas of Sussex. The most active period was the late 1920s, and the greatest numbers of mortgages were effected on properties in Hassocks, between Burgess Hill and Brighton, and at Portslade, on the coast. The most interesting are the series taken out by J. W. Dinnage. He was probably related to Arthur Dinnage, who appears as the sub-postmaster at Ridgewood, near Uckfield, after the First World War, for it was there that he mortgaged a house and shop in 1925, to increase in the next year his commitment on property in the area. In 1933 he succeeded in gaining a mortgage on a garage at Uckfield; but in the following year the Society agreed that F. B. Walton should lease his

TABLE 6
Later mortgages in the area around Haywards Heath

	Ardingly	*Balcombe*	*Burgess Hill*	*Crawley*	*Cuckfield*	*Lindfield*	*Wivelsfield*	*Total*
1915	–	–	–	3	1	3	–	7
1916	–	–	–	–	2	1	–	3
1917	–	–	–	–	1	–	–	1
1918	–	–	–	–	–	3	–	3
1919	–	–	1	–	1	1	–	3
1920	–	–	1	–	1	3	–	5
1921	–	–	–	–	2	5	1	8
1922	–	–	1	1	3	–	–	5
1923	–	1	1	–	4	2	–	8
1924	–	–	1	–	2	2	3	8
1925	–	1	–	–	–	3	–	4
1926	2	1	6	1	4	4	–	18
1927	1	–	4	–	6	4	–	15
1928	–	1	7	3	3	5	–	19
1929	1	5	2	1	3	6	1	19
Total	4	9	24	9	33	42	5	126

TABLE 7
Fresh areas mortgaged (outside Brighton)

	Bolney	*Handcross*	*Hassocks*	*Horsted Keynes*	*Hurstpier-point*	*Keymer*	*Lewes*	*Portslade*	*Slaugham*	*Southwick*	*Uckfield*	*Worthing*	*Total*
1914	–	–	–	–	–	–	1	–	–	–	1	–	2
1915	–	–	–	–	–	–	–	–	–	–	–	–	0
1916	–	–	–	–	–	–	–	–	–	–	–	–	0
1917	–	–	–	–	–	–	–	–	–	–	–	–	0
1918	–	–	–	–	–	–	–	–	–	–	–	–	0
1919	–	–	–	–	–	–	–	–	–	–	–	–	0
1920	–	1	1	–	–	–	–	–	–	–	–	–	2
1921	1	–	–	–	1	–	–	–	–	–	–	–	2
1922	–	1	1	–	1	–	–	–	2	–	–	–	5
1923	1	–	1	1	–	–	–	–	–	–	–	–	3
1924	–	–	1	1	1	–	1	–	1	1	1	–	7
1925	–	1	1	–	–	1	–	1	–	1	1	–	6
1926	–	1	–	–	1	1	2	–	–	4	–	–	9
1927	1	–	6	–	2	–	1	–	–	–	–	1	11
1928	–	–	–	1	–	1	1	4	–	–	–	1	8
1929	1	–	2	1	2	1	–	7	–	–	1	–	15
Total	4	4	13	4	8	4	6	12	3	6	4	2	70

showroom and workshops to Dinnage's Garages Ltd. Thereafter Mr Dinnage ceased trading at Uckfield, and raised a series of mortgages on premises in Wivelsfield Road, Haywards Heath, where his business survives to the present day.

The Town of Haywards Heath

Table 8 shows the Society's continuing concern with houses for the less prosperous families in the town (Queens and Sydney Roads and the short Church Avenue). Between them these secured almost as many mortgages in the same period as all the 12 fresh roads in Table 8. The principal roads leading into the town were less favoured, although Perrymount Road, terminating southwards in The Broadway, was more in demand by mortgagors.

This trend is confirmed in Table 9, which covers roads in the northern part of the town not previously mortgaged to the Society. By far the largest number of mortgages appear in Gordon Road (*Gor*), a road of modest semi-detached houses running parallel to Queens Road. Clearly this was developing rapidly in the later 1920s; the overwhelming majority of its mortgages were advanced in 1928, at a period when demand in Queens Road itself was falling off. Apart from this, only a handful of roads are represented by more than one advance in any year; Lucastes Road and Avenue and the neighbouring Paddockhall Road in 1922; Scrase Bridge in 1925; and the area of mixed housing in College Road and Gander Hill in 1928.

At this period members of the middle and professional classes were showing interest in the facilities offered by the Society. In 1921 a local doctor secured a mortgage on the house in which he had been living for several years. Another example is provided by the case of Ebenezer William Pannell, a photographer who was active in both Burgess Hill and Heathfield during the War. In 1913 he had raised £500 on 'Heathfield', a house in Perrymount Road, a comfortable middle-class residential area. In 1919 he raised a further £1,200 on unspecified property in Perrymount and Boltro Roads, and the following year he sold 8 Boltro Road to Edith Jolly, a tobacconist. In 1921 he undertook to pay off the mortgage on 'Heathfield', but in the next year he was refused a further £1,800 on property in Church Road, Hove. This presumably was no. 75, where he carried on business between 1924 and 1938.

Table 10 shows that the modest houses in Gower Road (*Gow*) were still attracting many mortgages, but Western Road (*W*), running

TABLE 8
Later mortgages in the North of Haywards Heath (see Table 3)

	Balcombe	*Church Avenue*	*Perrymount*	*Queens*	*Sydney*	*Total*
1917	–	1	–	–	–	1
1918	–	–	–	–	–	0
1919	–	–	1	–	–	1
1920	–	–	–	6	1	7
1921	2	–	1	–	2	5
1922	–	–	3	–	–	3
1923	–	–	1	2	1	4
1924	2	1	–	2	–	5
1925	–	–	–	1	1	2
1926	–	–	–	–	1	1
1927	–	1	–	–	4	5
1928	–	2	1	1	5	9
1929	–	–	–	1	2	3
Total	4	5	7	13	17	46

TABLE 9
Fresh areas mortgaged in the North of Haywards Heath after 1918

	Btr	*Col*	*Gor*	*Luc*	*MGr*	*OtA*	*OtR*	*Pad*	*Pts*	*Scr*	*Stn*	*Sum*	*Total*
1919	1	–	–	–	–	–	–	–	–	–	–	–	1
1920	–	–	–	–	–	–	–	–	–	–	–	–	0
1921	–	–	–	–	–	–	–	–	–	–	–	–	0
1922	–	–	–	2	–	–	–	2	–	–	–	–	4
1923	1	1	–	–	1	–	1	–	–	–	–	–	4
1924	–	–	–	–	–	–	–	–	–	–	–	–	0
1925	–	–	1	–	1	–	–	–	–	2	–	–	4
1926	1	–	–	1	1	–	–	1	–	–	–	–	4
1927	–	–	1	1	–	–	–	–	–	–	1	–	3
1928	–	3	10	1	–	1	–	–	1	–	1	–	17
1929	–	1	1	–	–	–	–	–	–	–	–	1	3
Total	3	5	13	5	3	1	1	3	1	2	2	1	40

TABLE 10
Later mortgages in the South-East of Haywards Heath

	Fkl	*Gow*	*Haz*	*Knt*	*NEn*	*PtR*	*StJ*	*Sx*	*W*	*E*	*Lew*	*N*	*PtG*	*Total*
1915	–	–	–	–	–	1	–	–	–	–	–	–	–	1
1916	–	–	–	–	–	–	–	–	–	1	–	–	–	1
1917	–	–	–	–	–	–	–	–	1	–	–	–	–	1
1918	–	–	–	–	–	–	–	–	–	–	–	–	–	0
1919	–	1	–	–	1	1	1	3	1	–	–	–	–	8
1920	1	2	1	–	–	–	–	1	–	–	–	–	1	6
1921	–	1	–	1	1	1	–	3	1	–	–	–	–	8
1922	1	1	–	1	1	–	–	2	–	–	–	–	–	6
1923	–	1	–	1	–	–	–	–	–	–	–	–	–	2
1924	–	1	–	–	–	–	–	1	1	–	1	–	–	4
1925	–	1	–	–	1	–	–	–	1	1	–	–	1	5
1926	–	3	–	–	–	1	–	1	2	–	–	–	–	7
1927	–	2	–	–	1	2	1	1	9	–	–	–	–	16
1928	–	2	–	3	2	–	–	1	5	–	–	–	1	14
1929	1	2	–	1	3	1	–	6	4	1	–	6	–	25
total	3	17	1	7	10	7	2	19	25	3	1	6	3	104

TABLE 11
Later mortgages in the Centre of Haywards Heath

	Ash	*Bln*	*Br*	*Hay*	*Sth*	*ChR*	*Mus*	*Prk*	*Stf*	*WdR*	*Total*
1918	–	–	–	1	–	–	–	–	–	–	1
1919	1	–	–	1	–	–	–	–	1	–	3
1920	–	–	–	–	–	–	–	–	–	–	0
1921	–	–	–	–	1	–	–	–	–	–	1
1922	–	–	–	2	–	–	–	–	–	–	2
1923	–	–	–	–	–	–	–	1	–	–	1
1924	–	–	–	1	1	–	–	–	–	–	2
1925	1	–	–	1	1	–	1	–	–	–	4
1926	–	–	–	–	–	–	–	–	–	–	0
1927	–	–	–	–	–	–	–	–	–	–	0
1928	1	–	–	11	–	1	–	–	–	–	13
1929	–	–	–	–	–	–	–	–	1	1	2
Total	3	0	0	17	3	1	1	1	2	1	29

northwards from Franklynn Road (*Fkl*), was even more popular. An interesting feature is the low number of mortgages on houses in roads represented for the first time, appearing to the right of the vertical line: Eastern Road (*E*) attracted only three, but North Road (*N*), which connects it with Western Road, attracted six in 1929.

Table 11 relates to the more substantial part of the town. The comfortably middle-class Haywards Road (*Hay*) attracted the most advances, especially in 1928. The business areas of South Road (*Sth*) and Stanford Place (*Stf*) attracted little interest, and The Broadway (*Br*) none at all. The entry for Wood Ride (*WdR*) is of little significance, since the road was in the very early stages of its development. The same cannot be said for Muster Green, but this was an area of villa development for those with private resources, and thus attracting little mortgage interest at this period.

At this period the Society began to extend its interests outside Sussex. For example, in 1929 it granted mortgages on three of Pearson's Cottages at Snodland, Kent. Such mortgages, however, have been excluded from the present discussion, as have places within Sussex represented by single mortgages.

CONCLUSION

This brief survey is concerned solely with the mortgage business transacted by one building society in Haywards Heath over the first 40 years of its existence. The motives behind mortgages are not always explicit, but frequently these are clear enough. Although the principal aim of building societies was to supply funds for owner-occupiers, there are many instances in which the funds clearly were sought for other purposes. Sometimes builders raised mortgages on the houses they were building on behalf of their prospective purchasers. The mention of land or prospective housing suggests an intention to develop. There are also cases in which mortgages were effected on houses where a mortgagor of the professional classes had already been living for some years.

Domestic mortgages were concerned mainly with lower middle or working class housing, especially in the earlier years. This is shown clearly by comparing the statistics displayed in Tables 1–3. During the same 18-year period a mean of 3.5 mortgages per annum were granted in the nine roads in the south-east of the town; but over the five roads shown in each of the other two better class areas the mean is 1.2 and 1.0 per annum respectively. For the post-war period the differences are no less marked: over 15 years the south-east of the town attracted a mean of 6.9 mortgages over the earlier nine roads with an additional four, whereas the other two areas attracted means of 2.4 over ten roads over 12 years, and 4.5 over the earlier five roads and 3.6 over a further 12 roads over 11 years (Tables 8–11).

A feature of this study is the entrepreneurial flair shown by traders and others in Haywards

Heath in securing properties outside the town that they appear never to have occupied themselves. Mortgagors who were not involved directly in the building trades clearly were investing in property for renting, as the case of Agnes Warnett demonstrates. Other mortgagors of this kind included the Reverend J. P. Bacon Phillips and Harry Plummer, the Society's secretary from 1897 to 1938, as well as less prominent people such as Thomas Pattenden, a bootmaker in Sussex Road, and his wife Mary Ann, who was in business as a laundress in Triangle Road, who mortgaged land in Ashenground Road as well as a pair of houses in Gower Road at the turn of the century. Others were Samuel Gasson, a shopkeeper in Triangle Road, who invested in property in Kents Road nearby early in the twentieth century, and women such as Mrs Wellbelove and, a little later, Mrs Emma Boarer, probably the wife of a farmer at Leigh Manor, Cuckfield. But not all these speculations were successful, and even tradesmen whose businesses appeared to be thriving sometimes ran into trouble.

However the reasons for many mortgages remains obscure. In the material collected for this study there is a hint that some of the more active mortgagors were in contact with more than one agency. Mortgages were also available privately. An interesting case occurred in 1895, when Edward Waugh, the Society's solicitor, entered into a mortgage agreement with the Chairman, Major T. Astley Maberly, for £1,500 on his house and offices in Boltro Road, where the Society held its early meetings. Nevertheless even in the earliest years the services of the fledgling society were sought in connection with property over a wide area, both inside and outside the county.

The Society sometimes experienced difficulty with mortgagors who defaulted over repayments; in more recent times the Society required guarantees for part or all of the loan. On the other hand, several mortgagors settled their liabilities promptly. Table 12 relates to mortgages involving property in Haywards Heath. Column 3 shows that eight of the 17 mortgages in the sample were redeemed within two years, and that there was a dramatic decrease in the duration of mortgages over the period (column 1).

By far the largest mortgage was taken out by Horace Finch in 1923. He was a local builder, who had taken over his father Jesse's business in 1906. Jesse became a director of the Society in 1909, but he never became a mortgagor of the Society, although he had been active in the town since 1879.[26] Horace repaid his mortgage in only

TABLE 12
Specimen redemptions of mortgages

Date mortgage commenced	*Date mortgage redeemed*	*Length of mortgage*	*Occupation of mortgagor*	*Amount of mortgage*
1892	1909	17 years	Builder	£ 200
1898	1910	12 years	Bricklayer	£ 180
1898	1905	7 years	Shopkeeper	£ 150
1900	1912	11.5 years	Postman and Gardener	£ 420
1900	1911	11 years	Carpenter	£ 120
1902	1909	7 years		£ 400
1903	1909	6 years	Ironmonger	£ 400
1903	1912	9 years	Sergeant-Major	£ 300
1907	1909	2 years		£ 150
1910	1913	3 years		£ 450
1910	1911	2 years		£ 300
1910	1911	2 years	?Dairyman	£ 200
1918	1919	2 years	?Housewife	£ 150
1920	1920	1 year	Builder	£ 150
1923	1923	3 months	Builder	£1,800
1924	1924	8 months		£ 300
1927	1927	1 month	Surveyor	£ 600

three months. The amount he borrowed was three times greater than the next in order of size. When Finch's loan is eliminated, the mean amount is £279.38, and half of the sample are for £200 or less.

Such sums clearly were insufficient to meet the cost of the property involved, especially the later ones, and it is clear that mortgages were used at this period as a means of raising money for a short-term loan with appropriate security. Finch's mortgage was clearly of this type, since this was the first of a series of substantial mortgages executed within a few months of each other.

The Society successfully met competition from local societies when it extended its operations outside Haywards Heath. Burgess Hill provided mortgages from the Society's early days, despite the strength of the flourishing local society, and by 1914 its activities had extended to Crawley. In 1915 *Kelly's Directory* listed 30 building societies in Sussex, within an area extending from Crowborough and Horsham in the north to Hastings (where there were two societies) and Rye in the east to Worthing (where also there were two societies) and Littlehampton in the west; but by 1924 the number had fallen to 28. Nine of these societies had their offices in the Brighton and Hove areas, and a further two were to be found in Shoreham. Various approaches from other societies regarding a merger were made from time to time, such as that from the East Grinstead Building Society in 1917; but none materialized.

Tables 4 and 6 outline the development of this business. It expanded from a total of 72 transactions up to 1914, giving a mean of 3.4 over a period of 21 years, to 126 in the following 15 years, with a mean of 8.3. The greatest increases occurred at Lindfield and at Crawley, where business commenced in earnest only after the War. To the figures in Table 6 have to be added those in Table 7, showing the 12 fresh places from which business was attracted in the post-War period. Over 11 years the 70 mortgages give a mean of 6.3, with the greatest number in Hassocks and Portslade.

To these statistics for the post-War period have to be added the figures in Table 5, showing the extent of the Society's business in Brighton and Hove. The increase in this business occurred in the middle and late 1920s, a tendency reflected in the other tables. It was at this time that the Society's business gathered momentum, at a time when the chairmanship of the last of the Society's original stalwarts, the builder Thomas White, was drawing to its close.

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Notes

[1] I am grateful to Robert Owen, the Society's General Manager (Operations), for his support in writing this article, and in revising it I have benefited particularly from the comments of Brian Short and the help of Hugh Matthews.

[2] Vanessa Parker, *The English House in the Nineteenth Century* (1970), 31–3.

[3] *Trends in British Society since 1900*, ed. A. H. Halsey (1972), 296; Martin Boddy, *The Building Societies* (1980), chapter 1; John Burnett, *A Social History of Housing, 1815–1985*, 2nd edn (1986), 24–5, 146–7; M. J. Daunton in *The Cambridge Social History of Britain, 1750–1950*, ed. F. M. L. Thompson (1990), **2**, 242–4. See also David Rubinstein, *Victorian Homes* (1974), 215–19.

[4] *Clarke's Local Directory and Year Book* (1879), 12.

[5] *Mid Sussex Times*, 16 July 1890.

[6] John Lowerson (ed.), *Crawley: Victorian New Town* (1980), 15; Burnett, 150. The level of rents was discussed in 1909 by George H. Wood in 'Real Wages and the Standard of Comfort since 1850', reprinted in *Essays in Economic History*, ed. E. M. Carus-Wilson, **3** (1962), 135–6; cf. 142–3.

[7] *Mid Sussex Times*, 12 January 1881.

[8] *Clarke's Local Directory*, 97. Sinnock's later prominence in local government is shown in Brian Short (ed.), *'A Very Improving Neighbourhood': Burgess Hill, 1840–1914* (1984), chapter 6.

[9] The main source for this study is the minutes of the board of directors; additional details have been taken from various editions of *Kelly's Directory* for Sussex, principally those for 1899, 1907, 1915 and 1924.

[10] Boddy, 115.

[11] Rubinstein, 142–4. For a definition of overcrowding, see Burnett, 144–5.

[12] Wyn K. Ford and A. C. Gabe, *The Metropolis of Mid Sussex* (1981), 39–58.

[13] Cuckfield Urban District Council records, West Sussex Record Office (hereafter W.S.R.O.), UD/CU 16/1, 34, 143.

[14] Ibid, 5.

[15] Cf. Wyn K. Ford, 'William Allen and the Lindfield Agricultural Colony', *Sussex History*, 22 (1986), 24–36.

[16] W.S.RO., UD/CU 16/1, 16–17, 48–50; Ford and Gabe, 63.

[17] W.S.R.O., UD/CU 16/1, 177; 151, 216.

[18] *Mid Sussex Times*, 29 November and 29 December 1898.
[19] *Mid Sussex Times*, 26 April and 3 May 1898.
[20] For a photograph of his large store, the 'Sussex emporium' at the end of Sydney Road, see Judy Middleton, *Around Haywards Heath in Old Photographs* (1989), 10.
[21] W.S.R.O., UD/CU 16/1, 306, is the plan (1898) of his four-bedroomed villa at the junction of Ashenground and Haywards Roads.
[22] *Clarke's Local Directory*, 20. An illustrated advertisement for Piper's 'South Road Post Office' is in Middleton, 15.
[23] For other members of the family, see Short, 43.
[24] Daunton, loc. cit.; Burnett, 252–3; *Trends*, tables 10.24, 10.34.
[25] Peter Brandon and Brian Short, *The South East from A.D. 1000* (1990), 293; Edmund M. Gilbert, *Brighton, Old Ocean's Bauble* (1954), 222–3.
[26] W.S.R.O., UD/CU 16/1, 18; cf. 31–3 (1880).

The Society is grateful to the Haywards Heath Building Society for a grant towards the cost of publishing this article.

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 publications 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.

Flintwork from Wolstonbury Hill, West Sussex.

During visits to Wolstonbury Hill over a number of years, the writer has collected examples of worked flint. The flint has come to the surface on the trackway on the east side of the hill (TQ28601387), and during scrub clearance on the top of Wolstonbury Hill itself (TQ28401385). In addition, other flints were found elsewhere on the hill. The items recovered are summarised in Table 1.

TABLE 1
Flintwork from Wolstonbury Hill.

Type	*Number*
Flakes	17
Blades	2
Shattered piece	1
Retouched piece	1
Scraper	1
Notched flake	1
Total	23

The flint collected from the ground surface had a white patination, whilst those flakes and blades exposed during the scrub clearance were various shades of grey. Almost half the items recovered with a bulb remaining had been removed with a soft-hammer and retouch, where present, was abrupt or semi-abrupt. There is nothing in this small assemblage, or indeed on other flints observed, that would be out of place in a Neolithic/early Bronze Age context.

The excavation carried out by Curwen at Wolstonbury Hill in 1929 sectioned the enclosure features on the summit of the hill. No worked flint, and only a 'number of small flint flakes' was recovered during this excavation (Curwen 1930, 244). However it seems from the items recovered here, and from a cursory examination of a field adjacent to Wolstonbury when it was ploughed, that there is a large amount of flintwork present.

Drewett (1988) suggests that Wolstonbury is possibly a ceremonial or ritual enclosure rather than a fortified settlement enclosure. This flintwork cannot, by itself, provide any further clues as to the function of this site. Further fieldwork here, as on East and West Hills less than 2 km to the south-west of Wolstonbury (Butler, forthcoming), may reveal more evidence for very extensive activity in this area during Neolithic and Early Bronze Age.

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References

Curwen E. C. 1930, 'Wolstonbury' *Suss. Arch. Coll.* **71,** 237–45.

Drewett P 1988, 'Farming Communities c. 3000–1400 BC' in Drewett P, Rudling D, and Gardiner M, *The South-East to AD 1000*, 70.

Some flintwork from Church Hill, Findon and Cissbury.

A small quantity of flintwork which appears to originate from J. H. Pull's excavations of flintmines at Church Hill, Findon and Cissbury has recently been brought to my attention by John Funnell of the Brighton and Hove Archaeological Society. The material was passed to John by Ken Goodchild who had found it, along with other material, in a collection held by the late Charles Yates who had dug with Pull.

The flintwork comprises the following items.

1. *Church Hill, Findon.*
(a) Shaft 4, L5: 1 Blade fragment.
L8: 1 Blade, 1 Flake.
(b) F10 : 1 Blade.
(c) ? : 1 Blade.

Shaft 4 at Church Hill was excavated by Pull in 1946–47, the flints from shaft 4 appear to come from layers 5 and 8. The provenance of F10 may relate to working floor 10; however, there is no record of Pull having investigated this working floor although he did investigate eight others of the 15 identified. It is therefore possible that the blade from F10, together with the unprovenanced blade, was collected from the ground surface.

2. *Cissbury.*
(a) Floor 2: 3 Blades, 4 Flakes.
(b) Floor 4: 1 Blade.
(c) ? : 2 Flakes.

Floors 2 and 4 probably relate to flint working floors 2 and 4. Floor 2 was excavated by Pull in 1952, however as most of the flints here are marked 1945 or 1946, they may have come from earlier surface collection.

Discussion

Most of the flints in this small collection are marked with the years 1945 or 1946 and the letters J. H. P. or A.V.; these, presumably, are the initials of J. H. Pull and his son in law A. R. Voice.

Although some of the finds from Pull's work are in Worthing Museum (Pye 1968), it appears that quantities of material were, and still are, in other peoples hands. From time to time, therefore, it is likely that similar material will come to light, and can then be returned to its rightful place with the archive in Worthing.

Acknowledgement
I would like to thank John Funnell for the opportunity to look at and report on these items; and Robin Holgate who drew my attention to Elizabeth Pye's thesis, and also provided much information regarding J. H. Pull and his work. The flintwork has been deposited in Worthing Museum.

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Reference

Pye E., 1968, The Flintmines at Blackpatch, Church Hill and Cissbury, Sussex; a report of the late J. H. Pull's Excavations, 1922–55, Unpublished MA Thesis, University of Edinburgh.

Further Discoveries at Darlington Nurseries, Rustington, West Sussex

Following the discoveries made in 1986–88 at Darlington Nurseries (TQ 06160315) (Rudling 1990), further finds were made during the development of a superstore for J. Sainsbury, and immediately to the north during the construction of a carriageway of the Rustington by Pass.

A watching brief was maintained by Mr P. Hammond and Mr B. Frost, with occasional help from the writer. Unfortunately parts of the development were inaccessible, but it was possible to recover evidence which helps put the earlier finds in context.

Finds on the Sainsbury's Site

The earliest evidence of activity was a scatter of Neolithic flintwork (now in the possession of Mrs M. Taylor). The majority consisted of small flake implements: scrapers, hollow scrapers and fabricators were typical. In addition there was a small ground and polished flint axe:

1) Ground and polished flint axe. The flint is grey-white and has been badly damaged in antiquity. The cutting edge has been recut several times with longitudinal flaking on one side and tranchet on the other (Fig 1).

This small assemblage is typical of the material frequently recovered in the Littlehampton area. A general scattering occurs throughout the Arun area, particularly in waterside locations such as this. These finds may provide support for Bedwin's (1983) suggestion that much of the flintwork of this date indicates the activities of seasonal fishermen and hunters.

Further topsoil clearance revealed part of an Iron Age saucepan pot the larger portion of which had been removed

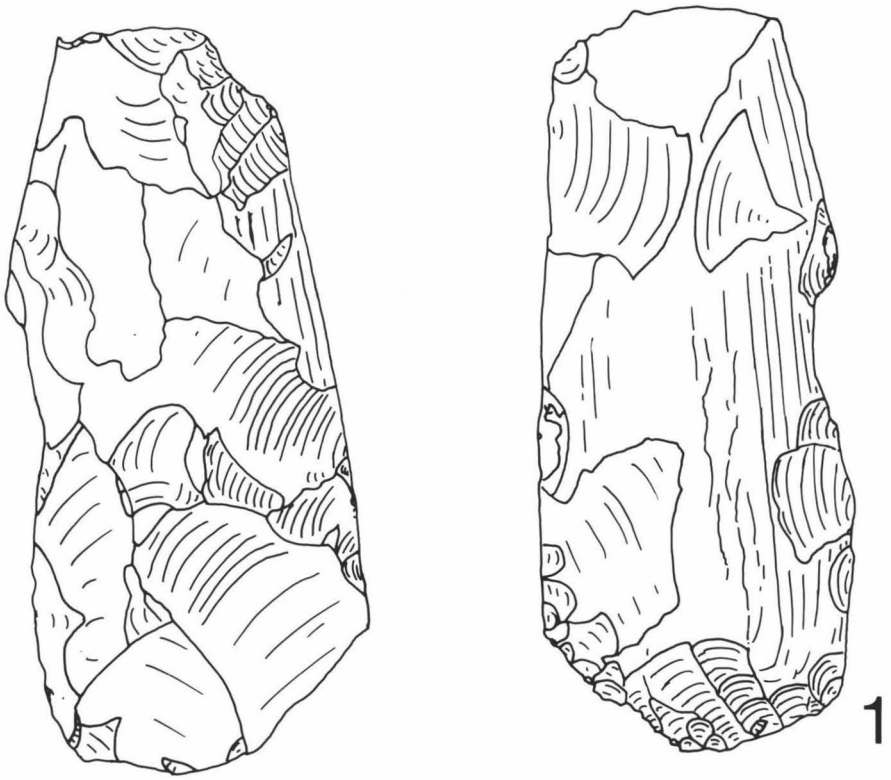

Fig. 1.

by a JCB. This was contained within the brickearth, evidently an ancient ground surface, as there was no indication of a surrounding feature.

2) Saucepan pot in a grey-brown flint tempered fabric with some organic and grog inclusions. The rim is broken and missing, the body undecorated.

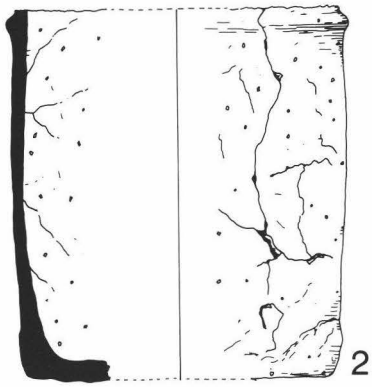

Fig. 2.

Unfortunately it was not possible to trace the ditch system investigated in 1988 to the south. However a number of new archaeological features were uncovered. Depressions, pits and a concentration of burnt flint, possibly a 'burnt mound', were found in various parts of the site. In addition to the west of Rudling's Site A a further feature, apparently a V-shaped ditch running north south, was sectioned. From its direction this feature would seem to run under the A259, although it was not observed in trenches to the north of the road.

During a sweep with a metal detector Mr B. Frost recovered a single Sestertius of Julia Mamaea (RIB694):
obv: Head r. IVLIA MAMEA AVGVSTA
Rev: Venus stg. r holding sceptre and victory VENERI FELICI SC.

Finds to the North of the A259

From Autumn 1990, road and drainage works connected with the Rustington by Pass were in progress. A number of features were sectioned by soil clearance operations opposite Rudling's (1990) site A. Only a short time was available to examine these before refilling with aggregates occurred.

The main features recorded were a north-south running ditch (Ditch A) 1 metre in width and traced for some 17 metres; almost certainly a continuation of the ditch observed during the 1988 excavations. 12.8 metres to the west a further north-south ditch was uncovered. This varied in width to a maximum of 0.80 metre and appeared to terminate within the area uncovered. It is possible that this latter feature had been truncated and that only its lower levels survived.

Three other features, depressions or pits were uncovered in the vicinity of Ditch A, and where this ditch was truncated by trenching for services immediately to the north a series of stakeholes and a further feature were visible, although there were no other indications of structures. The stratigraphy overlying the features was very similar to that observed by Rudling (1990 Fig. 3) with almost a metre of later deposition.

The topsoil clearance had only grazed the tops of the features uncovered, and as aggregates were to be dumped onto the surface thus created it was decided not to excavate. Investigation was limited to planning, (plan in Littlehampton Museum) and collecting some finds off the tops of the exposed features. Most of the finds came from Ditch A, and consisted of daub and pottery which, as was to be expected, parallels those first to second century AD types retrieved previously (Rudling 1990, 11–15).

Discussion

These new finds serve to clarify the nature of the settlement sampled in the immediate vicinity. It is clear that the waterside location has been a catalyst for settlement and the Rustington stream in common with the other watercourses of the area must have presented a valuable resource for a considerable expanse of time.

For the Romano-British period it is now reasonably certain that the immediate area was occupied by a field system. Observation by Mr P. Hammond of contractors' trenches in East Drive to the north appeared to show a further series of north-south ditches, possibly associated with those discovered crossing the A259. There is still no certain trace of the settlement postulated by Rudling (1990, 18). Nevertheless it is likely that structures and habitations of some form are not far distant from the supply of fresh water.

Acknowledgments

Thanks are due to contractors Shepperd Hill and Wiltshier for their co-operation, and also to Mr P. Hammond and Mr B. Frost for carrying through the watching brief.

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Reference

Rudling, D., 1990 'Archaeological Finds at Rustington, West Sussex, 1986–88.' *Suss. Arch. Coll.* **128,** 1–21.

Middle Bronze Age Pottery from Littlehampton

During housing development on the Wickbourne estate at Littlehampton between the years 1949 and 1952 a number of archaeological discoveries were made. Mr G. R. Cutler of Littlehampton undertook salvage work and was able to record a settlement sequence from *c.* 1400 BC until *c.* AD 350.

For various reasons and despite valuable post excavation work by Mr F. Blick the excavations carried out at this time were never published. Subsequently the finds became dispersed and only some are now extant in Littlehampton Museum. This note is an attempt to record the evidence recovered for the earliest phases of activity at Wickbourne. The later Bronze Age, Iron Age and Roman discoveries are reported on elsewhere.

During topsoil clearance in Wick Farm Road two Middle Bronze Age vessels were discovered apparently singly within separate features. The drawings have been modified from those by Mr F. Blick.

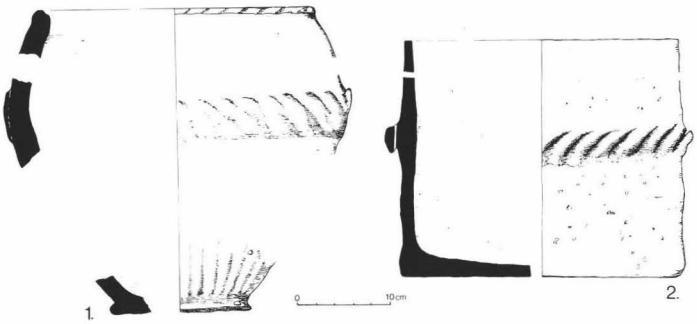

Fig. 3.

1) Large jar with a raised cordon around the waist slightly undercut and decorated with finger impression fluting. The rim is also decorated, with finger tip impressions. Regrettably this vessel is one of those which has suffered from the ravages of time and is no longer extant. The drawing is the only existing record (Fig 3)

2) Bucket urn with a cordoned waist decorated with slashings found approximately 33 metres to the east of vessel 1. The fabric is dark brown in colour and is tempered predominantly with flint. Some grogs and a little shell are also present.

No cremated human remains are to be found with the vessels today. However, notes made by Francis Blick suggest that at least vessel 1 contained a burial. Until recently few other finds of contemporary date were known from the Littlehampton area and these few were largely metalwork (Bedwin 1983). However, some 3.5 km to the east recent watching briefs carried out on development sites have revealed possible occupation sites and burials (Rudling, 1990).

Acknowledgements
I would especially like to thank Sue Hamilton for commenting on the two vessels reported on above. In addition I am indebted to Irene and Andrew Blick for making available the material which enabled this note to be written.

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References

Bedwin, O., 1983, 'Prehistoric Settlement on the West Sussex Coastal Plain', *Sussex Arch. Coll.* **121**, 31–44.

Rudling, D., 1990, 'Archaeological Finds at Rustington, West Sussex, 1986–88' *Suss. Arch. Coll.* **128,** 1–21.

The Excavation of a Bronze Age Round Barrow (Site 15), Cornish Farm, Eastbourne

During the summer of 1976 Mr L. Stevens located two circular parchmarks to the south-west of the Cornish Farm buildings (Stevens, in Drewett 1977). The western circle was sampled by Mr Stevens in 1977 and allocated Site No. 14 in the Bullock Down Survey (Drewett, 1982). The eastern circle (Site 15) was totally excavated during the period 2–21 April 1990. A 2 metre wide trench was excavated across the site by hand and then the plough soil removed from the remainder of the site using a JCB 3c.

The barrow ditch consisted of a rough circle some 12 m. in diameter (Fig. 4). No mound material survived, but it may be assumed that the ditch was dug to provide chalk for a barrow mound. The ditch varied in depth from some 40 cm. to 60 cm. Silting within the ditch was fairly consistent throughout the circle, but with some additional fine silty material in the bottom of the ditch on the western side. The primary silt in the ditch (Fig. 5, Context 19) consisted of compact chalk eroded from the upper edges of the ditch. Above this was a gradually accumulating silt consisting of a light brown friable soil with rounded chalk lumps and fragments (Context 9). This probably accumulated under grassland cover. Above Context 9 was a light grey friable soil with chalk and flint fragments (Context 3). This represents recent plough soil derived from the barrow mound. Above Context 3, and covering the whole site, was the modern plough soil.

Under the site of the mound, within the ditch circle, were four features. The three disturbed areas to the west may be interpreted as tree holes. The dates of these are uncertain although they may well pre-date the barrow. The fourth feature was a small oval pit dug 20 cm. into the chalk and containing a poorly preserved crouched burial with head towards the south east (Fig. 6). Although the contents of the pit were sieved, no artifacts appear to have been deliberately buried with the body. Its crouched position is, however, entirely consistent with a Beaker (Early Bronze Age) Date.

Dug around, and partly into, the south western side of the barrow were three large pits 140 cm. deep. These clearly post-date the barrow (Pits 2 and 3 cutting into the ditch) but

Cornish Farm Site 15
Barrow

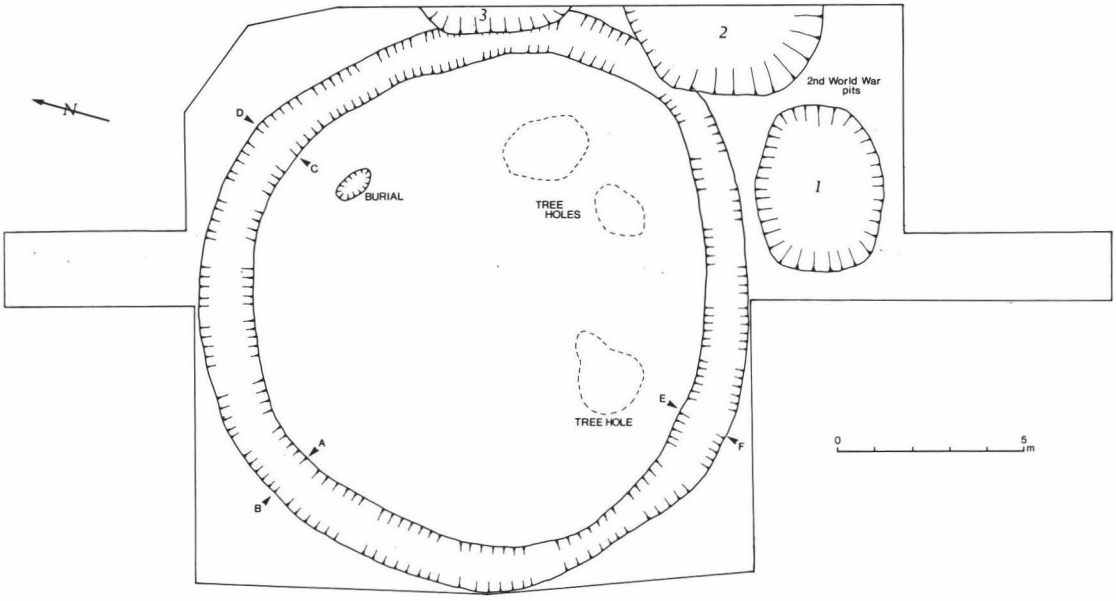

Fig. 4. Cornish Farm. Plan of excavated round barrow, Site 15.

contained no conclusive dating evidence. It is likely, however, that these are Second World War pits associated with the adjacent gun emplacements.

The Finds

(a) *Flint* (Table 1)

A total of 402 pieces of struck flint was recovered during the excavation. These consisted of 398 flint flakes, three cores and one scraper. The scraper is of a typical late Neolithic-early Bronze Age type, being a simple flake with end retouch. The assemblage looks like the remains of core preparation. Nodules of flint recovered during the original ditch digging were, no doubt, roughly prepared for use elsewhere.

TABLE 1
Flint

Context	*1*	*3*	*4/6/8 Pit 1*	*5 Pit 2*	*9*	*17*	*19*	*21 Burial*
Flint flakes	31	219	11	13	93	1	13	17
Cores	1	2					1	
Burnt flint	2	56	4	6	2	2		2
Scraper		1						

(b) *Pottery* (Table 2)

Two possible small Beaker sherds were found in the middle ditch silts (Context 9). The remaining pottery consisted of seven Romano-British sherds, four medieval sherds and 29 post-medieval sherds.

TABLE 2
Pottery

	1	*3*	*4/6/8 Pit 1*	*5 Pit 2*	*9*
Beaker?					2
Romano-British		3	3	1	
Medieval		1		3	
Post-Medieval	5		4	20	

TABLE 3
Marine Shells

Contexts	*1*	*3*	*4/6/8 Pit 1*	*5 Pit 2*	*9*	*17*	*19*	*Burial 21*
Limpet *(Patella vulgata)*	3	28	24	11	1		1	1
Periwinkle *(Littorina littorea)*	2	4		10				
Mussel *(Mytilus edulis)*			5	5				
Oyster *(Ostrea edulis)*			5	1				
Whelk *(Buccinium undatum)*			2					

Cornish Farm Site 15
Ditch sections

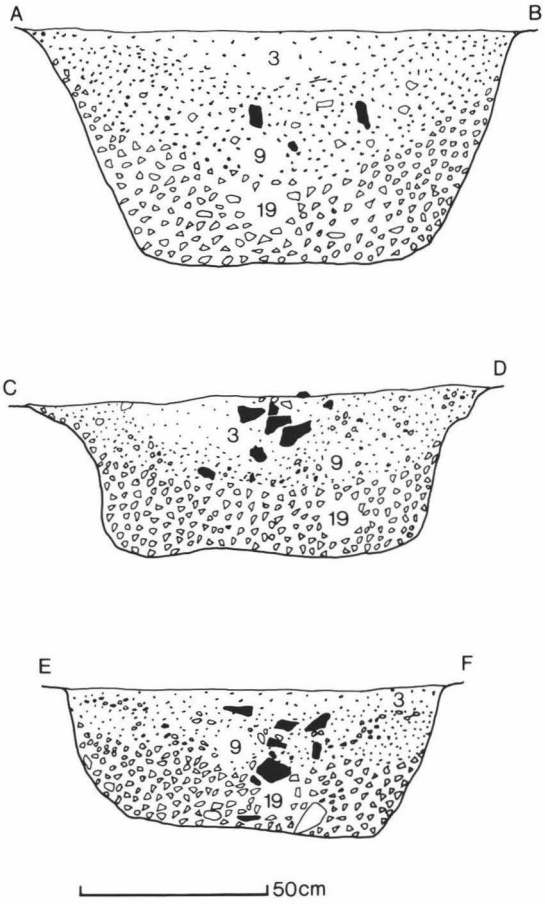

Fig. 5. Cornish Farm, Site 15. Sections of round barrow ditch.

(c) *Clay Pipes*
Two clay pipe stems were found in the modern plough soil (Context 1).
(d) *Iron*
The tang of an iron knife, of uncertain date but probably post medieval, was found in Context 3. Iron nails and other pieces of corroded iron were found in the Second World War pits.
(e) *Marine Mollusca*
Only three undisturbed prehistoric contexts produced marine shells. Contexts 9, 19 and 21 produced one limpet shell each. More limpets (28) and periwinkle (4) come from the upper ditch fill (Context 3) which contained medieval pottery. The widest range of shell fish, however, came from the Second World War pits (Table 3).

Cornish Farm Site 15
Burial

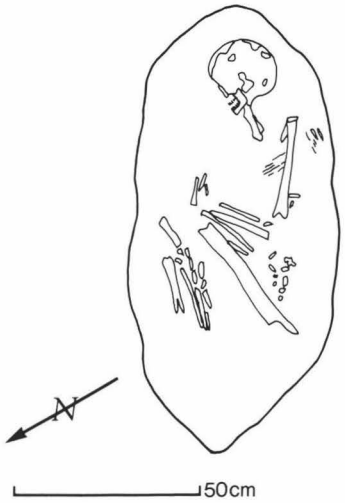

Fig. 6. Cornish Farm, Site 15. Crouched burial in oval burial pit.

(f) *Pebbles*
Beach pebbles were found in Contexts 3 (two pebbles), 4 (two pebbles) and 5 (three pebbles).
(g) *Foreign Stone*
The Second World War Pit 1 (Context 8) produced one piece of Greensand.
(h) *Animal Bone*
The only animal bone was a fragment of a pig's(?) tooth from Context 3.

The Burial
A single crouched burial was found in a pit on the northern side of the barrow. The skeleton was lying on its side facing north. The bones were in a very fragmentary condition and many had eroded away completely (Fig. 6).

The skeleton is possibly that of a female, although in the absence of the pelvis this cannot be certain. The bones are very gracile and the stature of the individual was small, probably no more that 5 feet.

The teeth were well preserved and indicated reasonably good dental health. All teeth were present, with no signs of caries or abcess. Wear on the molars indicates an individual some 35–45 years old. No bone disease was noted, but this may have been due to the poor state of preservation.

Conclusions
The excavation of a ploughed-out round barrow revealed a chalk cut ditch around an off-centre burial pit. The burial pit contained the crouched remains of a female in her late 30s or early 40s. No grave goods were found. Flint flakes in the ditch indicated some core preparation, probably from nodules

recovered during excavation of the ditch. The size and shape of the barrow, together with the form of the burial rite and the waste flakes, would be consistent with an early Bronze Age date (*c.* 2000–1600 B.C.). Two possible Beaker sherds would be consistent with this date. Little evidence for later land use was recovered. A few sherds of Roman and medieval pottery would suggest some non-intensive agricultural practices.

Acknowledgements
I should like to thank Mr C. Johnson, Manager of Cornish Farm, for his considerable help during the excavation. I am also indebted to Eastbourne Borough Council for financial assistance through the good offices of Messers Strutt and Parker, Lewes. The site was excavated by first year students from the Institute of Archaeology, University College London.

Author: **Peter Drewett, Institute of Archaeology, University College London**

References
Drewett, P. L. 1977. Rescue Archaeology in Sussex, 1976. *Bulletin of the Institute of Archaeology* **14**; 13.
Drewett, P. L. 1982. *The Archaeology of Bullock Down, Eastbourne, E. Sussex*. Sussex Archaeological Society Monograph 1.

An Iron Age Gold Coin from South Malling

During 1989 Mr G. Wicks discovered an Iron Age gold coin in a field to the north of Ranscombe Farm, South Malling (TQ 439088). The field is located on the slopes to the south-west of the Late Iron Age hillfort at Mount Caburn. The dicovery was reported to the coroner, and at a subsequent inquest was found not to be treasure trove.

The coin (Fig. 7), which weighs 5.91 gm., is an imported Gallo-Belgic 'E' type stater, dating to *c.* 55 BC.
Obverse: blank.
Reverse: Disjointed horse right, with double exergual line.
Reference: Van Arsdell (1989) Type 56–1.

Fig. 7.

Staters of this type, which were struck by the Ambiani tribe, are common finds on both sides of the Channel. It is presumed that one of the main reasons for the large numbers of these coins in Britain is as a result of payments for British mercenaries and supplies during the Gallic War against Julius Caesar. Such assistance from the Britons is noted by Caesar (*Gallic War IV*, 20) and was one of the reasons for his 'expeditions' to this island in 55 and 54 BC.

Other Gallo-Belgic 'E' type staters found in Sussex include finds from: Alfriston, Brighton, Burpham, Eastbourne, East Wittering, Holmbush, Pagham, Poling, Seaford, Selsey, Shipley, West Wittering, Wiston and Worthing (Allen 1960; Haselgrove 1978).

Author: **David Rudling, Institute of Archaeology, University College London**

References
Allen, D. F. 1960 'The Origins of Coinage in Britain: A Reappraisal', in S. S. Frere (ed.) *Problems of the Iron Age in Southern Britain*, 97–308.
Haselgrove, C. 1978 *Supplementary Gazetter of Find-spots of Celtic Coins in Britain, 1977*, Institute of Archaeology (London) Occasional Paper No.11a.
Van Arsdell, R. D. 1989 *Celtic Coinage of Britain*

The Results of a Watching Brief on the A23 road improvements between Sayers Common and Newtimber, West Sussex.

Construction on the A23 London–Brighton road improvements commenced during 1990. The major section of this work took place between Sayers Common and Newtimber, where a completely new dual carriageway was being constructed through farmland. A previous study of the route (Holgate 1987) had discovered a scatter of flintwork, suggesting activity in the Mesolithic and later Neolithic/early Bronze Age, and Pottery scatters adjacent to the medieval site at Muddleswood (Butler 1986), and a post medieval Farm (Holgate 1987). A more intensive survey of the block of fields around Breechlands Farm, near Hurstpierpoint (Butler 1990) confirmed the earlier work, and also added additional information to the picture.

The watching brief was undertaken by members of the Mid Sussex Field Archaeology Team, and comprised a surface collection of material exposed after topsoil stripping, and an inspection of the contractors' drainage ditches and spoil heaps. A number of concentrations of material were found (Fig. 8), and are detailed below. In addition a section through the Roman road, 'the Greensand Way' was discovered in a contractors drainage ditch, and is discussed further below.

Sites (see Fig. 8)

A. (TQ27011783) A scatter of flintwork, containing: 35 flakes (including one fire-fractured example), one axe thinning flake, 5 blades, 5 shattered pieces, one side scraper, 2 retouched flakes and one core rejuvenation flake. In addition 4 fire-fractured flints (130 gm.) and a single fragment of clay pipe were found.
B. TQ26981745) Five flakes (two of which are retouched), and two shattered pieces.
C. (TQ26941708) Ten flakes, 2 shattered pieces, one miscellaneous retouched piece, one small piercer and one retouched blade.
D. (TQ26911658) A scatter of flintwork comprising 64 flakes, one axe thinning flake, 6 shattered pieces, 4 retouched flakes, one miscellaneous retouched piece, 2 end scrapers, one side/end scraper, 2 three platform flake

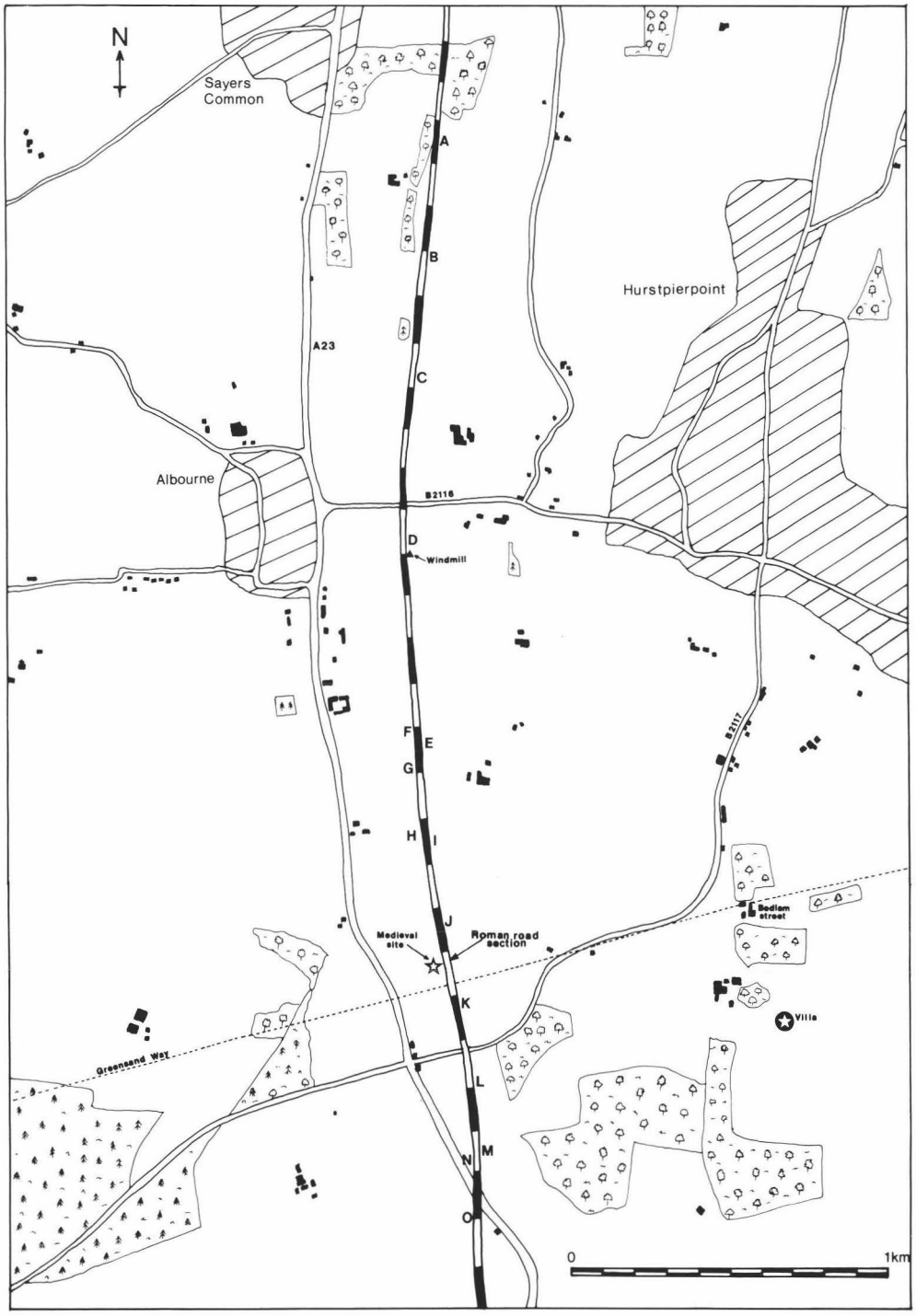

Fig. 8. The A23 Improvements between Sayers Common and Newtimber; showing location of the sites.

cores, 1 one platform blade core and 1 core tablet. There were also 22 medieval sherds, one post-medieval sherd, 2 fragments of clay pipe, and 3 sherds of a grog-tempered ware with small quartz inclusions. In addition, 8 fire-fractured flints (105 gm.), 2 fragments of slate and numerous brick/tile fragments were found here.

E. (TQ26951594) A flintwork scatter, comprising; 28 flakes, 3 bladelets, 8 shattered pieces, one retouched flake, one miscellaneous retouched piece, 4 end scrapers, 2 side scrapers, one notched flake and one cutting flake. Also 2 fire-fractured flints (23 gm.), a fragment of oyster shell and a battered pebble.

F. (TQ26921597) Twenty-two flakes, one bladelet, 14 shattered pieces, 2 end scrapers, 2 core tablets and a single Hassocks Adze/pick. Plus 4 fire-fractured flints (43 gm.), and a whetstone (see below).

G. (TQ26931584) one 2-platform flake core, one retouched flake and a miscellaneous retouched piece, plus a single medieval sherd. In addition two coins were found at this location (see below).

H. (TQ26951563) One flake.

I. (TQ26981561) Four flakes, one axe thinning flake and 4 shattered pieces.

J. (TQ27001536) Four flakes, one 2 platform flake core, one 2 platform blade core, 3 shattered pieces, 2 medieval sherds.

K. (TQ27061510) One retouched flake and one large post-medieval strap handle.

L. (TQ27111485) A probable whetstone, described below.

M. (TQ27131468) Twenty-two flakes, 3 shattered pieces (one is fire-fractured), and one miscellaneous retouched piece. Twelve sherds of a grog-tempered ware, some with occasional flint and sand inclusions (East Sussex Ware?), 4 sherds of a grog-tempered ware with frequent small to medium calcined flint and quartz inclusions, one sandy Iron Age sherd with quartz/iron oxide inclusions, one sherd of a grey sandy (Roman?) ware. Six medieval sherds, 2 post-medieval sherds, one fragment of clay pipe and 7 fragments of daub (24 gm.). There were also a number of fragments of brick/tile and some bone, together with a coin and token which are described below.

N. (TQ27091460) One flake, one retouched flake (scraper?), one medieval sherd, 2 sherds of a calcined flint-tempered ware with frequent small to medium calcined flint inclusions (late Bronze Age/early Iron Age), and one rim sherd of a grog-tempered ware with occasional small to medium flint inclusions and holes from burnt out organic material; this appears to be an East Sussex Ware type fabric, but the form is more Bronze Age in style.

O. (TQ27091443) Eleven flakes, one blade, one axe thinning flake, 2 shattered pieces (one retouched), one core rejuvenation flake, one notched flake and one scraper, 3 fire-fractured flints (60 gm.), 55 medieval sherds (2 Saxo-Norman ware), 4 post-medival sherds. In addition there were numerous fragments of brick/tile, some of which are medieval or possibly Roman, some daub and 2 fragments of oyster. There was also a coin which is described below.

The Finds

The Flintwork

The flintwork was of three types; a blue/black material and an orange/brown material, both of which originate from the greensand area, and a white material which probably originates from the chalk. The majority of the material found comprised debitage, although a small number of cores and implements were also found. Approximately 30 per cent of all the flakes found were produced with a soft hammer, most of these, together with the blades and bladelets and a small number of the implements date to the Mesolithic, the remainder are probably of later Neolithic/early Bronze Age date.

The Pottery

Most of the pottery dated to the medieval period, however a number of sherds of earlier pottery were found especially at sites D, M and N. The grog-tempered wares comprise a few sherds that are Bronze Age in date, together with some East Sussex Ware sherds, although some of the later seem to have flint and sand inclusions, and are rougher than typical East Sussex Ware sherds. Other sherds, such as two from site N, probably date to the later Bronze Age/early Iron Age. A single sherd of grey sandy ware from site M may be Roman.

The Coins and Token

1. George IV, 1821 Farthing. Site G.
2. George VI, 1941 Farthing. Site G.
3. Victoria, 1861 Penny. Site M.
4. George III, 1806 copper Penny, 4th Issue—short haired bust, Soho mint. Site O.
5. Token: Obverse; central bust of Victoria, 'To Commemorate the Diamond Jubilee'. Reverse; 'London' in centre, 'Our Boys Clothing Company limited'. Site M.

Foreign Stone

Two items of foreign stone were identified by Tim Gosden.

1. Whetstone from site L: A blue-grey argillaceous, non calcareous, metamorphised? mudstone. Structureless with Iron staining. Perhaps originating from Palaeozoic rocks of South West England or Wales.
2. Whetstone from site F: A buff to red brown medium grained, non calcareous, sandstone. Well sorted and structureless. Of local origin, from Wealden series or Lower greensand.

Discussion

The scatters of flintwork found in this project generally conform to the concentrations discovered in the previous surveys (Holgate 1987 and Butler 1990) giving a picture of activity from the Mesolithic up to the later Neolithic/earlier Bronze Age, with concentrations of Mesolithic material being found at sites A, D and F. The flintwork and pottery found to the south of the B2117, at sites M and N, may indicate that there was activity here during the Bronze Age and into the Iron Age. However, there was little evidence for activity during the Roman period. No further evidence was found for the post-medieval farm of 'Breatch Land' (Butler 1990), and the windmill recorded at TQ26921652 in the early 19th Century (West Sussex SMR) was not located; although a scatter of slate, brick and tile here may confirm its presence at this location.

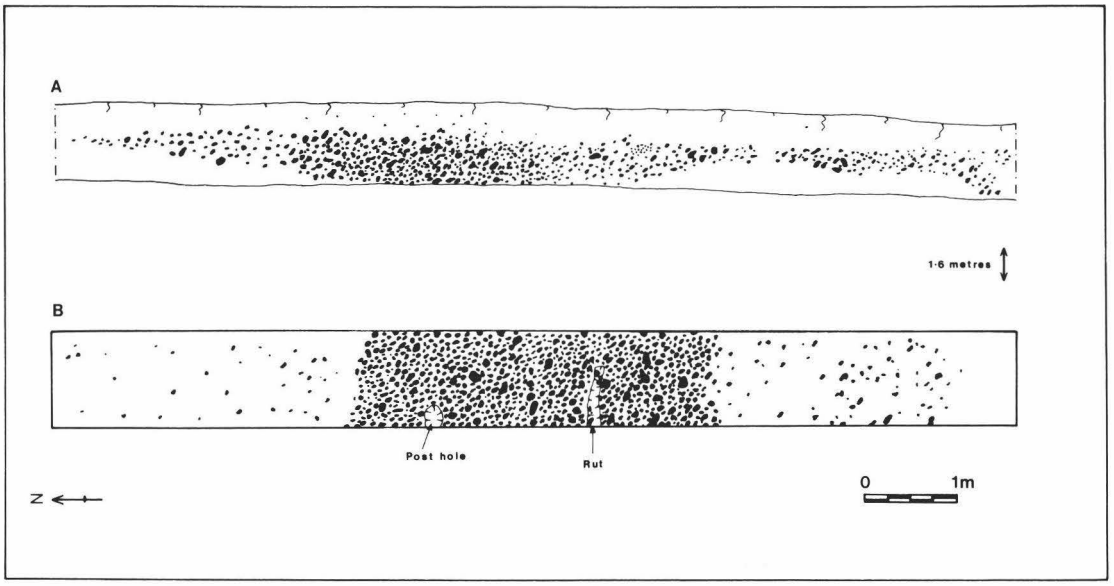

Fig. 9. The Roman Greensand Way; A: Section, B: Plan.

The Roman Greensand Way
A section through the Roman road, the 'Greensand Way', was discovered in a drainage trench that had been dug by the contractors, this was cleaned up and recorded (Fig 9, A). The road metalling was 7 metres wide, and comprised flint of various sizes that had been built up on a bed of flint and sandstone to form an agger. The depth of the flint/sandstone bed could not be fully established but it appeared to be deeper than the contractors trench. Subsequently a trench was excavated 1.6 metres to the west of the contractors trench to get a plan of the road surface (Fig 9, B). Here the flint metalling was 4 metres wide, and had been cut into by a rut, 0.07 metre deep and 0.13 metre wide, and a later post hole. A resistivity survey was carried out to the west of the excavated trench, but no further trace of the road could be found.

The Finds
Very few finds were located, and none of these were Roman. They comprised:
Topsoil
4 flakes (one retouched), 1 bladelet, 1 axe thinning flake, 2 shattered pieces and one scraper. Two fire-fractured flints (47 gms.) 9 fragments of daub, 3 fragments of clay pipe and 3 iron nail fragments.
Road Surface
2 flakes, 1 shattered piece, 1 axe thinning flake 1 unidentified fragment of pottery/tile.

Discussion
The Roman Greensand Way runs from Barcombe Mills north of Lewes to Storrington in West Sussex (Margary 1948). As it approaches the site from the east along Bedlam street, it is visible near Randolphs Farm as a distinct agger which merges with the B2217. All trace is then lost until it reappears in Coldharbour Wood to the west of the existing A23 London–Brighton road. Margary's route (Fig. 8) shows the line of the road approximately 50 metres south of the excavated section. However a number of trenches excavated by the author there in 1985 failed to reveal any trace of the road, and the resistivity survey also failed to locate it there. It was noted however, that a thin scatter of flint at a depth of 30 cm. appeared in section in the contractors trench at approximately the right point, but there was no further evidence to suggest that this was another road, and may simply be accumulated flint at the interface of the ploughsoil and underlying soil. The Greensand Way seems to have varied in construction considerably, even over short distances. Excavations carried out by Margary (1948) near to the site revealed the following:

Section 23 (Bedlam Street)—A flint metalling 2–3 inches thick on a stoney loam. Width 13 feet.
Section 24 (200 yards further west of section 23)—Unmetalled prominent agger of stiff clay 15 inches deep on a sandy loam. Width 40 feet.
Section 25 (Shaves Farm)—Flint metalling 3–5 inches thick on a 5 inch layer of red sand. Width 18 feet

The discovery of the Greensand Way running along the low ridge line here, keeping to the higher ground, makes more sense than if it had followed Margary's route, where it would have dipped down onto the lower ground 50 metres to the

south that would have been much wetter and possibly subject to flooding in wet weather. Such a small alteration to the route would not have affected the general alignment of the road, which could have switched back to its original alignment a little further west before it runs through Coldharbour Wood.

Acknowledgments
I would like to thank those members of the Mid Sussex Field Archaeological Team who helped with this project, especially Lawrence Gaston, Frank Mishenko, Cathy McGuigon and Ron Lloyd. I would also like to thank Mr M Newton, the Project Manager of Amey Construction Limited, for his co-operation. The finds have been deposited at the Museum of Sussex Archaeology, Barbican House, Lewes, except for those from site O, which remain in the possession of the owner of Newtimber Place.

Author: **Chris Butler, 41 East View Fields, Plumpton Green, East Sussex. BN7 3EF.**

References

Butler, C. P. 1986, 'Investigations of a Medieval Site at Muddleswood, near Hurstpierpoint, West Sussex: Interim Report' *Suss. Arch. Soc. Newsletter* **50**, 508.
Butler, C. P. 1990, 'A Fieldwalking Project at Breechlands Farm, near Hurstpierpoint, West Sussex' *Suss. Arch. Coll.* **128**, 21–32.
Holgate, R. 1987, 'Field Survey of the Pyecombe to Warninglid A23 Extension, West Sussex' *Suss. Arch. Coll.* **125**, 226–8.
Margary, I. D. 1948, *Roman Ways in the Weald.*

Bellarmines and Witch-Bottles in Sussex

Jane Bellam's interesting article on the Bellarmine witch-bottle found at Michelham Priory[1] reminded me that my late father, Eric Holden, and my mother Hilda, saw the bottle soon after its discovery. It had, unfortunately, been washed out by the builders. Realising there was still something inside, they took it home, extracted a number of broken pins and other material and sent it all for analysis.[2] Jane Bellam states that the Michelham Bellarmine 'is the only recorded example of a witch-bottle in Sussex'. However, other Bellarmines have been recorded, though whether they are witch-bottles is open to question.

In the 1960s at Old Place, Pulborough, my parents saw a Bellarmine that had been found bricked into the wall by a window of the house. They also saw another, found with a glass medicine bottle, both empty, in the rubble of the hearth at The Old House, again at Pulborough.[3] In 1987 the late Maisie Wright of Cuckfield reported three Bellarmines in Cuckfield Museum, two of which were found in a pond at Horsegate. The latter were sealed and apparently contained 'spirits of great age' (liquid ones!). In the early 20th century a local builder at Rudgwick is reported to have found several Bellarmines under hearths when relaying them.[4]

On a visit to John Bull House, Cowfold on 5 April 1987 with my father, we saw three Bellarmines on the mantelpiece there. Pat Bracher informed him that one was also in the possession of Dr and Mrs Moss of Turks Croft, Ifield, Crawley, West Sussex; it had been found below a hearth, apparently empty. On 13 April 1987 my parents visited Dr and Mrs Moss and were told that the jar (a perfect specimen) had been found, standing upright, about two feet below hearth level, when the hearth was subjected to renovations some years before. It had been washed out by Dr Moss. I enclose my father's sketch of the jar, done at the time of his visit (Fig. 10). The placement of this Bellarmine suggests that it was a witch-bottle, as probably was the one at The Old House, Pulborough. It goes without saying that these jars should not be washed out when first found, but taken to the appropriate experts for analysis of any contents. It had been hoped that the owners of Turks Croft, who were moving, might give the jar to the Sussex Archaeological Society, and that it could have been displayed at Ifield Mill Museum. However, they took it with them when they moved.[5]

I regret that I have only found Bellarmine sherds, one displaying a beard, in my garden at Botolphs, and my husband will not let me dig out our 17th century hearth. It may interest readers to know that the erroneous title of Bellarmine came to be applied to these jars after Cardinal Robert Bellarmino (1542–1621) who persecuted Protestants in the Low Countries. Apparently he 'preached abstinence while not necessarily practising it himself'. In 1594 he was quoted as being 'leane of body' with 'a little sharp beard'. Bottles and jugs which pre-date him, certainly those in the early 16th century, can be seen to be quite unlike his description, and indeed the mask usually had a kindly expression; whereas later, those in the 17th century used as witch-bottles had developed an 'unpleasant snarl'. The use of Bellarmines as witch-bottles seems to have been an English invention. The bearded mask originated long before Cardinal Bellarmino's rise to fame and is not a caricature of him. The earliest known literary reference to Bellarmines is in 1563. The latest dated bottle, 1770, was found in Sussex.[6]

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Notes

[1] J. Bellam, 'The Bellarmine witch-bottle and its contents, Michelham Priory', *Suss. Arch. Coll.*, **128** (1990) 254–6
[2] *Ex info* Hilda Holden.
[3] *Ex info* Hilda Holden; M. V. & A. V. Backhouse, 'The Old House, Pulborough, West Sussex', *Suss. Arch. Coll.* **116** (1978), 376.
[4] M. Wright, ' A Museum Query', *West Sussex History* **37** (1987), 8.
[5] Journal of the late Eric Holden, 1.6.1986–23.12.1988; ex info Pat Bracher; E. W. Holden, 'A Museum Query a reply', *West Sussex History* **38**(1987), 10–11, and quoting *Suss N&Q.* **2** (1928–9), 161.
[6] J. Pennington, 'Bearded Faces on Bellarmines', *West Sussex History,* **38** (1987), 12–15, and quoting D. Askey *Stoneware Bottles from Bellarmines to Ginger Beers, 1500–1949* (1981); R. Merrifield, *The Archaeology of Ritual & Magic* 163–175 (1987); there is a good Bellarmine in the Lancing College museum, but it is not provenanced.

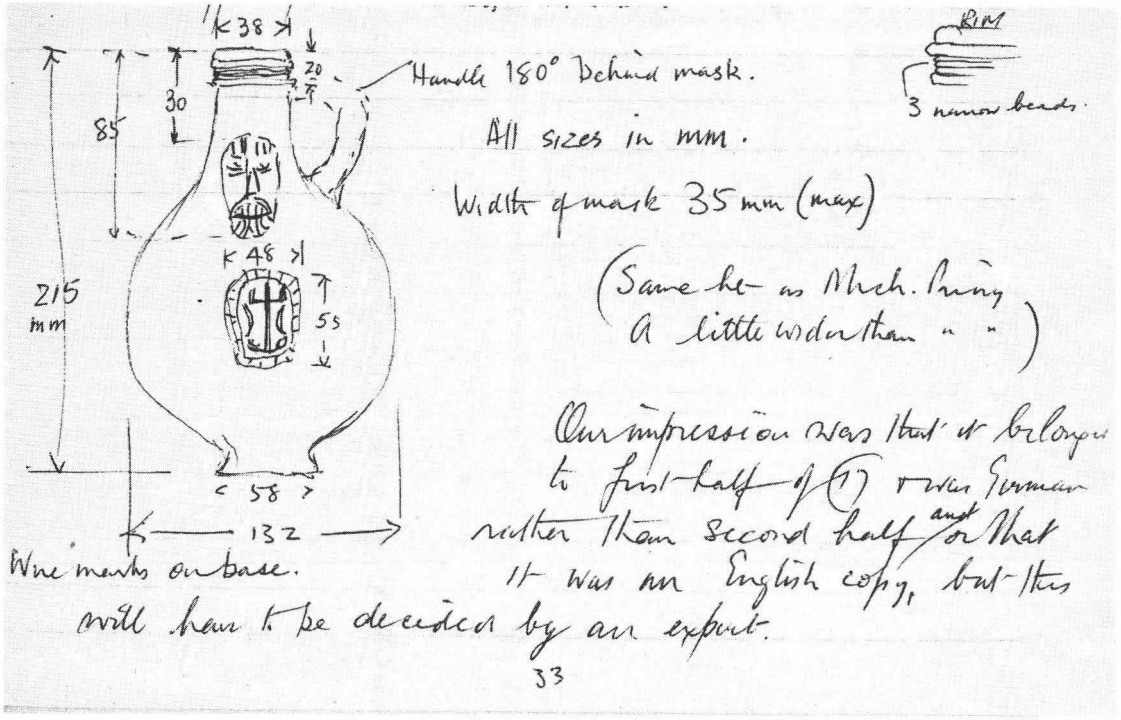
38
20
30
85
215 mm
48
55
58
132
Wire marks on base.
Handle 180° behind mask.
All sizes in mm.
Width of mask 35 mm (max)
(Same ht as Mich. Prinz
A little wider than " ")
Our impression was that it belonged to first half of (17) & was German rather than second half and or that it was an English copy, but this will have to be decided by an expert.
33
RIM
3 narrow beads.

Fig. 10.

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 publications 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 inhabitants of Midhurst: An amendment

In volume 20 of *Sussex Archaeological Collections*, a paper by William Durrant Cooper F.S.A. was published, entitled 'Midhurst: its Lords and its Inhabitants'.[1] In his account of the people of the town, Cooper used several listings of inhabitants, mainly tax returns from the Public Record Office, and including the Lay Subsidy of 1524, which contains 102 names.[2] Two pages later he listed the 1670 Hearth Tax payers, numbering only 45, with another 16 householders exempt.[3] Since the list of Hearth Tax payers should include all the householders in the Borough of Midhurst this seems a very small number, when compared both to the Lay Subsidy list, and to the 264 men either signing or refusing to sign the Protestation Oath in 1641.[4] It is also noticable that very few of the surnames on the Hearth Tax list appear on the list of probate inventories for Midhurst.[5]

An examination of the original 1670 Hearth Tax returns for Sussex explains the anomalies of number and name. The returns consist of six bundles, one for each Rape. The first four membranes of the bundle for Chichester Rape contain the list for Chichester itself. The next heading is 'Eastborne Tything', followed by the list given by Cooper in his paper. However, that is followed by small lists for other tithings within the hundred of Easebourne, and only after those is to be found the list headed 'Midhurst Towne'.[6] It contains a total of 193 names: 149 tax payers, 38 persons certified as poor and therefore exempt, and the names of six persons who had not paid, and on whose property no distraint could be found. It is followed by another list of 21 names, headed 'St John's Liberty in Cambridge'.[7] The Liberty of St John, originally owned by the Order of St John of Jerusalem, forms a small part of the town of Midhurst.

In a momentary lapse, Cooper must have forgotten to distinguish between the tithing of Easebourne, and the most populous parish in the hundred; misled, perhaps, by the fact that Lord Cowdray heads the list he published, and forgetting that Cowdray House does not lie within the parish of Midhurst. The full list for Midhurst Town and the Liberty of St John is appended.

Notes

[1] *Suss. Arch. Coll.* **20,** 1–33.

[2] Public Record Office (P.R.O.) E179 189/155

[3] P.R.O. E179 191/410

[4] Printed in Sussex Record Society **5,** 125–8.

[5] T. J. McCann (compiler), *West Sussex Probate Inventories 1521–1834, a Catalogue.* (Chichester 1981)

[6] P.R.O. E179 191/410, part 1. m 9d–11d; a manuscript note by CAF M[eekings], dated 1951, explains that the composition of the document was altered in 1939 and again in 1951 as more of its component parts were retrieved from unsorted exchequer miscellanea. There is, however, no indication that membrane nine was wanting at the probable date of Cooper's inspection.

[7] The suffix 'in Cambridge' is curious; it does not normally appear on documents relating to the Liberty of St John, and is not mentioned in *V.C.H.* It is feasible that the Knights of the Order of St John, when they owned the Liberty, had designated the revenues from it for the upkeep of their Priory in Cambridge, but would a 17th Century tax-gatherer have known that?

Midhurst Hearth Tax
Lady Day 1670
(P.R.O. E179 191/410)

Part 1: Chichester Rape

mem.9v.
Midhurst Towne

John Moody	2
Thomzine Colebrooke	3
Matthew Lewis	2
David Edmonds	2
[*landlord will pay* del.]	
[*John Swaine* del.]	2
John Marrice	2
Thomas Cooper	3
Thomas Pesced	2
John Vincent landlord	2
John Haidford	4
John Smith	4
William Marner	2
Mary Parson	3
John Beale	4
Widow Mellish	9
Thomas Hodges junior	5
Henry Brewer	4
Margaret Greenfeild	4
John Terne	2
Edward Fulgham	2
Widow Hunt and William Peake	6
Widow Marner	4
William Jurr	6
John Masey	1
Peter Iles	1
Henry Baker	2
Thomas Gates	2
Gilbert Hannam	9
Henry Peinde esquire	12
James Nevill	3
Henry Croucher	2

mem. 10

John Marner	4
Thomas Cablen	3
Richard Moorey	5

Richard Hills	4
Richard Bridger	3
Henry Christmas	2
Thomas Hodges senior	1
Widow [over *William* del.] Chandler	1
William Williams	4
John Whittell	1
Thomas Wooldrige	2
Robert Barlett	2
Widow Jury	1
Widow Richison	2
Widow Croucher	1
James Herrod	3
John Blundell	1
Francis Hill	3
Anne Guy	1
Mr Joseph King	8
Henry Covett	1 [over 3 del.]
Thomas Pescodd	2
Richard Timberly	2
Nicholas Vase and Samuel Broman	3
Thomas Cooper	3
John Gadiman	4
David Mallett	2
Simon Bateman	1
Richard Boxall	2
Robert Chandler	4
Widow Gates	2
Widow Boniface	4
Paul Adams	5
Ralph Croucher	4
John Norris	2
Mr John Taylor	6
Mr Andrew Meale	5
Mr Lawrence Alcocke	10
William Russell	4
Thomas Marsh	6
John Mills	8
John Pinke	3
William Knett	8
William Summers	4
William Tate	3 and a forge
Thomas Wright	2 and a forge
William Greenefeild	4
Robert Newland	2
Richard Addison	2
Francis King	5
Thomas Harding	6
John Stent	4
John Stent junior	6
Peter Feild } John Reeves }	2
Peter Gray	6
Thomas Croucher	3
John Shotter	7
Thomas Marner	7
Richard Burly	2
Richard West	2
William Bennett	2
William White	5
Simon Kelsey	9
George Beale	3

mem. 10v.

William Marner	5
John Pratt	3
William Butterly	2 and a forge
John Pratt and John Blundell junior	2
John Stapler	2
Henry Cooper	1
Mr George Chandler	9
Richard Hamond	2
Widow Winter	2
John Munfeild	5
John Monke	2
Robert Attkinson	3
Thomas Harmer	2
Thomas Harman	2
Ralph Croucher senior	2
Nicholas Suckett	2
Mr. Henry Courtney	13
William Streting	one fallen down
John Slade	2
John Gates	4
Thomas Withers	1
Thomas Lawrence	1
Goodwyn Clarke	1
Susan Morley	3
John Mercasen	2
John Steere	1
Henry Peeters	2
Joseph Adison	2
William Morton	2
Richard Colebrooke	1
Mrs Martha Young	7
John Mereson	2
John Steere	1
John Moody	1
Richard Guy	2
John Pipson	2
Richard Barber	1
Widow Upton	1
Richard Bright	2
John Norris junior	2
Clement Mrry [recte Urry]	3
Edward Tate	3
John Stent junior	6
Alexander Triggs	2
Mr George Blunden	6
Henry Ady	5
Richard Hill	2 and an oven
Ralph Croucher	2
John Franklyn	2
Nicholas Mander	3
	480

no Distr Stephen Geratt	2
no Distr Mr Edmondes landlord	2
no Distr John Betsworth of Lavant	2
no Distr Peter Betsworth	
no Distr Widow Upton	2
no Distr Widow Ausin	3

[illegible marginal note followed by *William Fleckerson 2* all del.]

Certificated

Widow Greenefeild	1
Widow Shelley	2
mem. 11	
Widow Page	2
Widow Pruett	1
William Wackerill	1
Widow Grevatt	2
Richard Bartlett	1
John Hills	1
Widow Cover	1
Robert Katerman	2
Widow Austin	1
Widow Austin hatter	2
Widow Chandler	1
Elizabeth Major	2
Widow Altredds	2
Stephen Grevatt	1
William Crafter	1
Widow Wright	1
John Steere	2
Widow Vase	1
Robert Mills	2
John Greenefeild	2
Widow Bridger	1
Widow Symondes	1
Thomas Rowell	1
Thomas Wither	2
one Siphorne [recte Onesiphorus] Guy	1
John Page	1
Thomas Beale	2 [over 1 del.]
Elizabeth Emmans	1
Nicholas Allison	2
Widow Marshall	1
John Gittings	2
Widow Blundell	2
Clement Moorer	1
Widow Summer	1
Widow Berry	1
Andrew Hammond	1
	53

St. John's Liberty in Cambridge

Richard Cowlinge	4
John Carman	5
Mr Nicholas Brewer	7
Peter Hollis } John Brooker }	3
John Brooker	4 and a forge
Mr Richard Cobden jun.	7
Widow Colebrooke	2
Richard Stoakes	3
Mr George Cockerill	7
William Teate	2
John Carman	4
Widow Cover	3
Widow Roberts	2
Richard Beale	2
Thomas Baldwyn	2
Samuel Sharpe	1
Edward Rowe	3
Clement Fry	2
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