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The excavation of a Bronze Age round barrow at Round-the-Down near Lewes, East Sussex

by Chris Butler

A barrow at Round-the-Down near Lewes, was excavated by Lewes Archaeological Group in the mid 1970s under the direction of the late Richard Lewis. The barrow had been plundered, probably in its more recent history, and its poor state of preservation at the time of excavation plus the inadequate records kept meant that the amount of useful information extracted was limited. However, use of those records that exist, and a full analysis of the finds from the excavation, have made it possible to date the construction of the barrow to the early Bronze Age, thus contributing further to our understanding of the past landscape and activity in this area.

INTRODUCTION

A Bronze Age round barrow at Round-the-Down, Lewes (TQ 43330914) (Fig. 1), was excavated by the Lewes Archaeological Group, under the direction of Richard Lewis between 1973 and 1976. Unfortunately no report on the excavations was ever prepared, and on the death of Richard Lewis the finds and archive were deposited at Barbican House, Lewes.

In 1973 the barrow was situated on the edge of a quarry (Fig. 2), but further quarrying has subsequently destroyed part of the site. It was described by Grinsell (1934, 54SW, no. 41) as a bowl barrow, 20 paces in diameter and two feet high; in 1930 it was under plough. By the time of the excavation there was little of the mound visible.

THE EXCAVATION

The excavation was carried out using the quadrant method, with the four quadrants being excavated in turn between 1973 and 1975 (Fig. 2). A single trial trench was also excavated across a possible feature to the north-west of the barrow, but nothing was found. The excavation of the barrow was carried out by hand, with the top-soil also being carefully trowelled. Unfortunately, there are no surviving context records for the excavation, and the same context numbers were used to refer to different

contexts in each quadrant. The features and contexts described below were interpreted from the plans, section drawings, slides and the very brief notes contained in the site notebooks.

THE DITCH

The barrow was surrounded by an uninterrupted ditch which varied in depth and width. When excavated, the ditch (Fig. 3) was recorded as containing a primary fill described as a 'chalky silt wash', and a secondary fill of 'a fine chalk rubble with a silty loam'. In quadrants where the barrow was less plough-damaged, a tertiary fill comprising a 'fine chalk rubble and chalky clay loam' survived. The ditch fills were described by Allen in 1995 (this report) as producing a typical tripartite infill sequence (*cf.* Evans 1972, 321-8; Limbrey 1975, 290-310).

- | | |
|----------|---|
| 0-33 cm | Modern brown rendzina, humic silty loam with weak small blocky peds, many roots. Rare small and medium sub-rounded chalk pieces, 2% macropores and larger voids, much biotic activity. Tertiary fill. |
| 33-46 cm | Silty loam, common and medium fleshy to fine fibrous roots, frequent small and very small chalk pieces, rare large subangular chalk pieces. Stabilization horizon. |

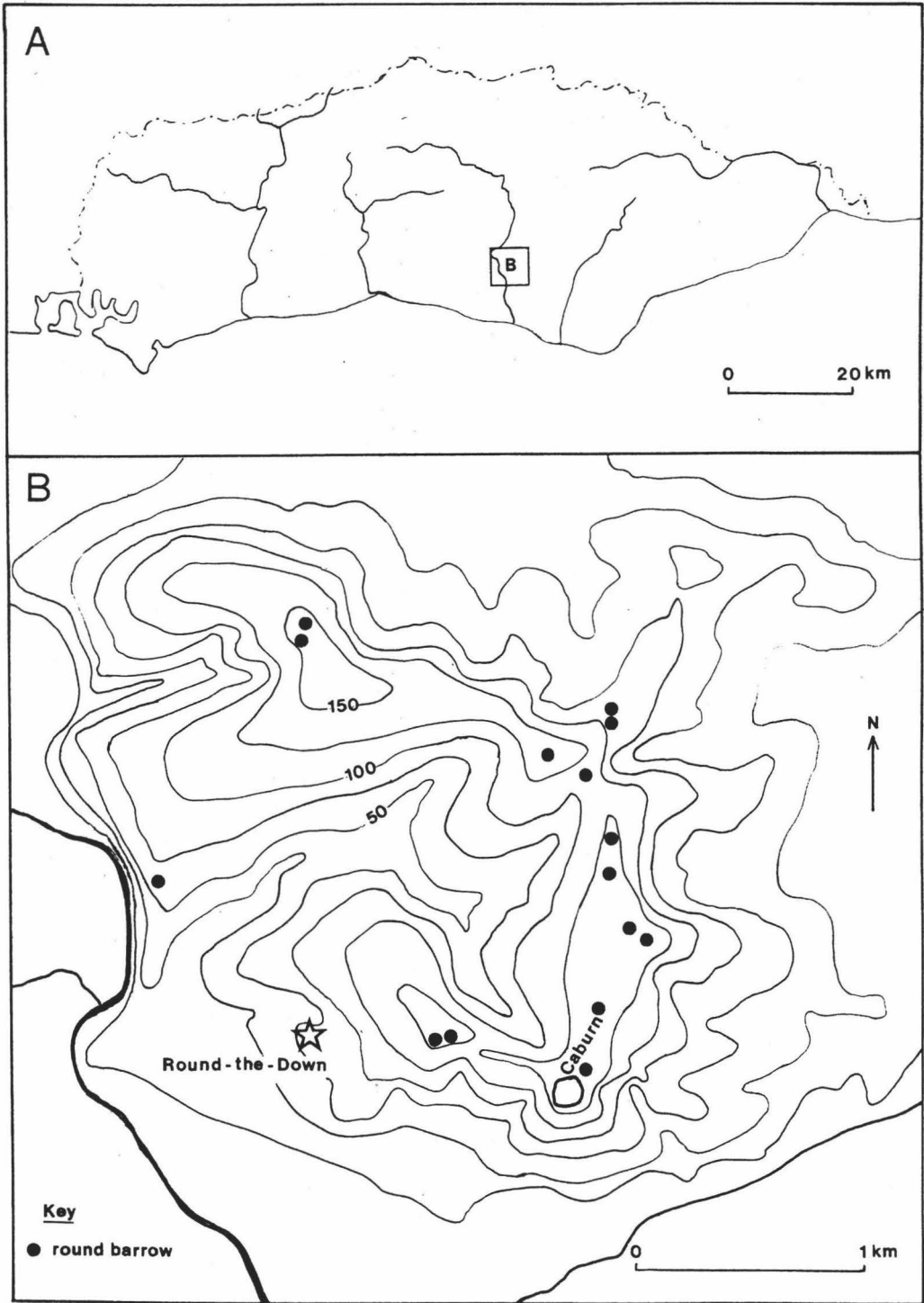


Fig. 1. Site location plan.

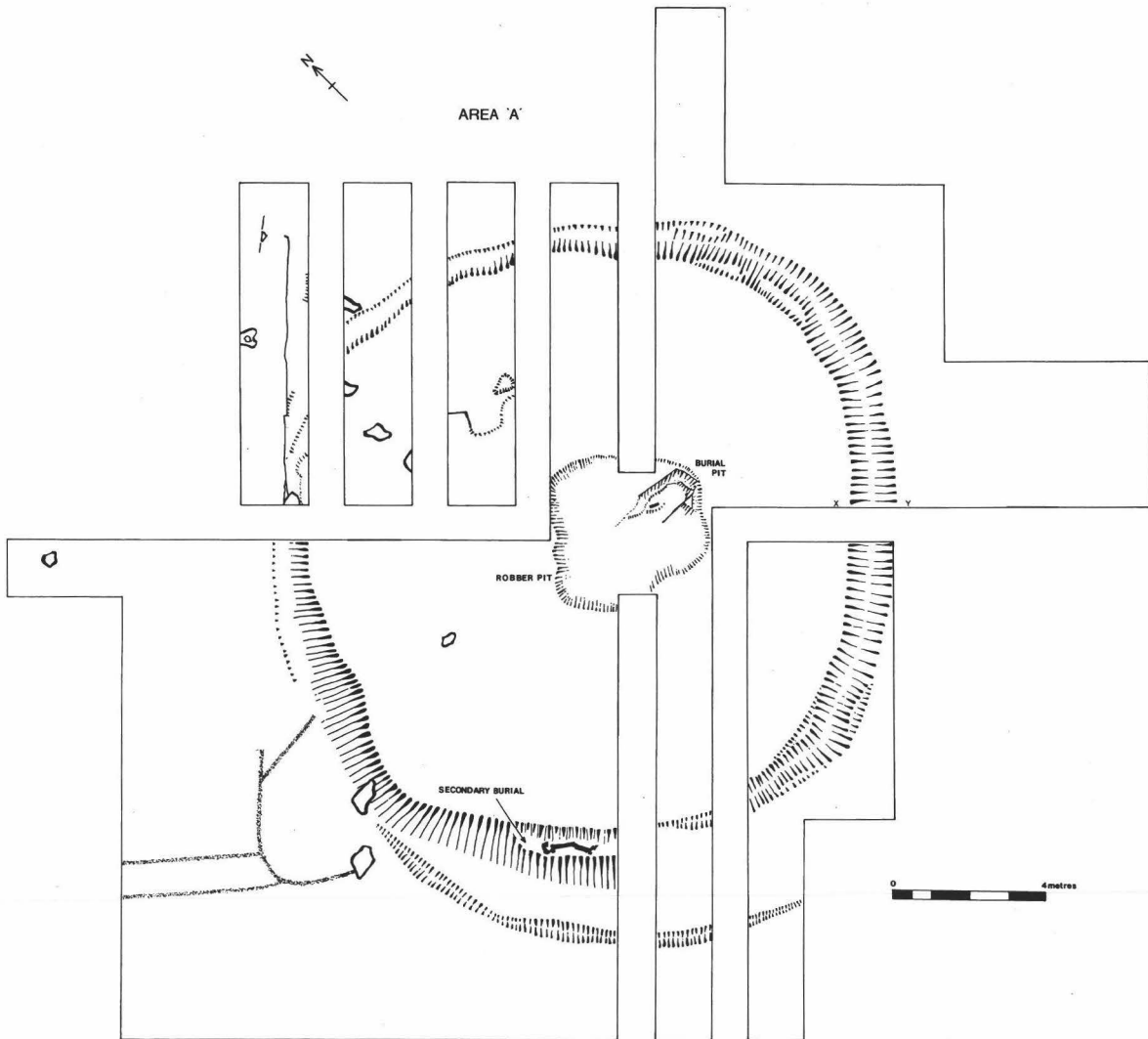


Fig. 2. The excavated barrow at Round-the-Down.

- 46–65 cm Calcareous silty clay loam with medium subangular chalk pieces, common fine fibrous roots. Secondary fill.
- 65–92 cm Calcareous primary fill with common to abundant small and medium angular chalk pieces and some large angular chalk blocks in a calcareous silt matrix.
- 92–99 cm Stone-free calcareous chalk mud. Primary wash.

There was a suggestion at the time, although not apparently the view of the excavator, that the ditch in the south-west quadrant was more reminiscent of a negative lynchet created by the later ploughing (Allen, pers. comm.); this does, however, now appear to be the case.

A secondary burial had been inserted into the barrow ditch on the south-west side, on what appears to have been a specially cut platform. Only

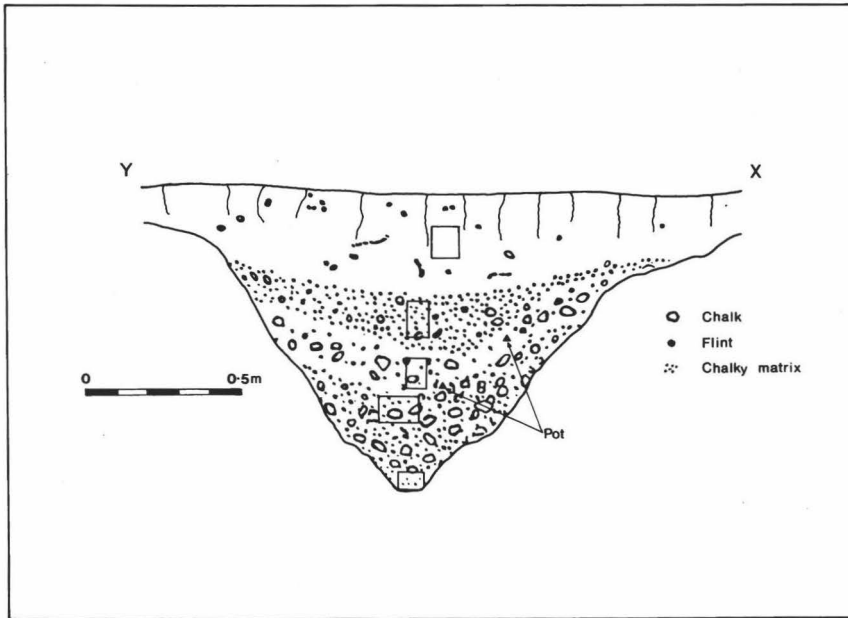


Fig. 3. Ditch section in the north-east quadrant, showing the location of the soil samples taken for molluscan analysis.

a few fragmentary remains were present, again probably due to the damage caused by later ploughing, and there were no associated grave goods. Some human remains were apparently also found in the ditch in the north-east quadrant.

The site notebooks mention possible pick marks on the 'north wall' of the ditch in the north-west quadrant. This observation is confirmed by those who assisted in the excavation and who can remember 'distinct pick marks on the ditch, especially on the well-preserved sides towards the base of the ditch in the north-east and north-west quadrants' (Allen, pers. comm.).

THE BURIAL PIT

In the centre of the barrow there was a primary grave pit, but this had been badly damaged by a large robber pit. The burial pit appears to have had a single

fill of chalk rubble. This was cut by the robber pit which had a primary fill of fine chalk, suggesting that it had been left open for a period of time, and a secondary fill of chalk rubble. There was no remaining evidence for a burial or grave goods.

OTHER FEATURES

There were a number of features, possibly post-holes, in the north-west quadrant, but no record of any finds associated with them. A shallow gully was found outside the ditch in the south-east and south-west quadrants. In the south-west quadrant a pit apparently produced a flint blade and some fire-fractured flint, but there was no trace of these artefacts amongst the surviving finds. If correct though, this could indicate Neolithic or earlier activity. Another possible pit in the same quadrant was sterile.

THE FINDS

THE POTTERY

By Tessa Gingell
In total, 903 sherds of pottery were recovered from the excavations (Table 1). The pottery ranges in date from early Bronze Age through to the present day. 553 sherds were retrieved from the barrow ditch fills and the remainder was recovered from the top-soil.

The fabrics

The prehistoric fabrics have been categorized by Prehistoric

Ceramic Research Group conventions (P.C.R.G. 1992). Later fabrics have been analyzed under the conventions of Peacock (1977). Fabric descriptions for the Roman and later pottery can be found in the site archive.

1. Bronze Age fabrics

a) Early Bronze Age

G1 Soft fabric with grey core and buff/beige surfaces. This coarse fabric usually has sherds with a cross section of c. 10 mm and would seem to be from a tripartite, second series, urn of a comparable form and fabric to vessel 49

from barrow 3 at Black Patch (Ellison 1982). A single sherd from the lower part of a collar is decorated with impressed twisted cord. The form of the decoration and the shape of the lower collar might suggest that the vessel represented is a food vessel rather than a collared urn, but the small size of the sherd makes firm conclusions difficult. The presence of a protruding-foot base sherd would support the food vessel interpretation, although this may just be due to the irregularity of the base, as flat base sherds in a similar fabric are also present.

b) Middle Bronze Age

F1 Reasonably hard fabric with a black core and red/brown margins and exterior. Contains very coarse flint and is generally thick-walled. This fabric relates to large urn vessels, although the small size of the sherds makes precise form recognition difficult.

F2 Hard fabric with black/grey core and reddish margins and exterior. Contains coarse flint though in lesser amounts than F1. This fabric is slightly thinner than F1, but would also seem to represent urn forms.

c) Late Bronze Age

F3 Hard fabric, may be the same as F2 but is generally harder and thinner.

F4 Hard fabric with grey core and red/brown surfaces. Common medium to coarse flint. This fabric is often smoothed on the exterior surface.

F5 Hard fabric with black core and margins. Common medium to fine flint. This fabric is often thin-walled.

FQ1 Hard fabric with black core and exterior. Common medium to coarse flint with moderate amounts of medium sand.

FQ2 Hard fabric with black/grey core and reddish margins. This fabric has common fine flint and sand. It is generally thin-walled and is most often associated with 'S' profile bowls/jars.

FI1 Greyish core with red/brown exterior. Hard fabric with common medium to fine iron oxide inclusions. This fabric is thin-walled and sherds are often burnished. This fabric may well be of an Iron Age date, but is probably from the transitional late Bronze Age/early Iron Age period.

Discussion

Collared urns and food vessels are generally found associated with burial sites rather than settlements, and it is therefore not surprising that evidence for these vessels was found at Round-the-Down. Similar vessels, all dug from barrows, have been found on this same block of downland (e.g. Musson 1954, nos. 280, 290 & 250). The occurrence in the ditch fills of collared urn/food vessel sherds in such numbers does suggest that the barrow was constructed in the early Bronze Age.

The presence of middle and later Bronze Age fabrics in the later ditch fills indicates that activity continued in the immediate vicinity of the barrow throughout later prehistory,

Table 1. The pottery (summary of main fabric types).

Fabric	Context				
	Primary	Ditch fills Secondary	Tertiary	Top-soil	Total
<i>Bronze Age</i>					
G1	-	64	79	-	143
F1	-	2	-	-	2
F2	-	1	-	1	2
F3	4	27	22	6	59
F4	-	-	1	3	4
FQ1	-	-	1	-	1
FQ2	-	-	2	3	5
F5	-	1	-	3	4
FI1	-	-	2	2	4
<i>Roman</i>					
East Sussex Ware	-	99	27	42	168
Samian	-	2	-	1	3
Grey Sandy Ware	1	1	1	2	5
<i>Medieval</i>					
Medium Sand & Grog	-	30	19	68	117
Medium Sand & Flint	-	79	60	136	275
Hard Fired Earthenware	-	-	2	5	7
<i>Post-medieval</i>					
Sandy Ware	-	17	5	72	94
Staffordshire	-	2	-	2	4
China	-	2	-	4	6
Total	5	327	221	350	903

and these sherds have probably been incorporated into the barrow ditch through later ploughing and the natural ditch fill process. However, the F3 fabric sherds in the primary ditch fill would suggest that the barrow ditch was still open at this time.

The Romano-British, medieval and post-medieval sherds confined to the top-soil and later ditch fills are almost certainly present via farming activities, such as manuring, and would not appear to relate to any features found on the site.

THE FLINT

Over 1400 pieces of struck flint were recovered during the excavation (Table 2), of which 62% came from the ditch fills. The raw material is mainly a white patinated flint which originated from the chalk downs, with a smaller proportion of grey or blue-black pieces. A small number of pieces are of pebble flint, possibly originating from the pleistocene river gravels on the edge of the Ouse valley, or from soliflucted deposits in footslope locations, as revealed in the local quarries.

Debitage

The debitage has a high proportion of hard hammer-struck short stubby flakes with numerous hinge fractures, a large number of them having some cortex present. A large number of the flakes are very small (less than 20 mm in both length and breadth) and there is a very high proportion of shattered pieces (20% of the total debitage). Blades make up only 2% of the debitage, and 6% of the flakes and blades were produced with a soft hammer. The cores have either one or two platforms and are generally rather roughly worked, with no preparation of the striking platform and little care taken with the removal of flakes.

Table 2. The flint.

Type	Primary	Ditch fills Secondary	Tertiary	Other features	Top-soil	Surface
<i>Debitage</i>						
Flakes	25	435	247	8	338	53
Blades/bladelets	2	6	10	–	9	2
Shattered pieces	3	95	80	1	112	5
Axe thinning flakes	–	–	–	–	1	–
<i>Cores</i>						
Single-platform flake cores	–	5	2	–	1	–
Two-platform flake cores	–	3	2	–	7	1
<i>Implements</i>						
Scrapers	1	3	8	–	11	4
Piercers/awls	–	2	–	–	1	–
Combination tool	–	–	–	–	1	–
Notched pieces	–	–	–	–	1	–
Misc. retouched pieces	–	2	–	–	3	–
Chopping tool	–	–	–	–	1	–
Barbed-and-tanged arrowhead	–	1	–	–	–	–
Chisel arrowhead	–	–	1	–	–	–
<i>Sub-total</i>	<i>31</i>	<i>552</i>	<i>350</i>	<i>9</i>	<i>486</i>	<i>65</i>
Fire-fractured flint	6	278	360	10	383	96
Total	37	830	710	19	869	161

Implements

The implements and retouched flakes comprise only 3.4% of the assemblage. Scrapers predominate; some of them were invasively retouched on the end of small hard hammer-struck flakes, whilst others were crudely produced on larger, rounded flakes with abrupt or semi-abrupt retouch, or in some cases simply abraded around the scraping edge.

Discussion

There was little flintwork (2% of the assemblage) found in the primary ditch fill, which suggests that there was only limited activity around the barrow in the years immediately after its construction. Most of the assemblage occurred in the secondary and tertiary ditch fills (60%) with the remainder in the top-soil. The proportions of flintwork found in each of the ditch fills are comparable with those found in Bronze Age barrows elsewhere, for example at Pyecombe (Butler 1991) and Cornish Farm (Drewett 1992), and are probably a function of the natural ditch fill processes rather than an indication of human activity. Most of the assemblage is made up of debitage, with implements and retouched flakes comprising only 3.4% of the worked flint. The range of implement types is limited, with scrapers and piercers predominating (Table 2).

The large proportion of small flakes and shattered pieces in the upper ditch fills could suggest that some flint knapping/preparation was taking place either in the partially open ditch, or adjacent to the ditch. However, the small number of cores (1.4%), and the lack of any discrete clusters of debitage or pieces that could be refitted make this unlikely. The large number of shattered pieces in the top-soil is probably the result of the extensive ploughing that has taken place at Round-the-Down. There is no suggestion that any of the flintwork had been

placed in the ditch as a ritual deposit, as at Pyecombe (Butler 1991).

The flint assemblage from Round-the-Down, with its roughly produced hard hammer-struck debitage and predominantly scraper- and piercer-based implement range, appears to be typical of assemblages that have been dated to the later Bronze Age (Ford *et al.* 1984). This assemblage, which has accumulated almost entirely in the top-soil and upper ditch fills, does suggest activity throughout the later Bronze Age in the vicinity of the barrow.

FOREIGN STONE

Three fragments of foreign stone from the secondary ditch fill were identified by Tim Gosden.

1. Possible fragment of quernstone. Light grey-green medium-grained calcareous sandstone with brown iron staining. Well sorted and structureless. Probably from the Lower Greensand.
2. Probable sharpening stone. Buff to light grey medium-grained calcareous sandstone. Well sorted with occasional light brown grains. Possibly from Bargate beds of the Lower Greensand.
3. Miscellaneous fragment. Medium-grained granite with quartz feldspar crystals and biotite mica. Source possibly Devon or Cornwall. Palaeozoic strata.

METAL

A number of iron and copper-alloy objects and a lead token (dated 1784) were found in the top-soil. A small strip of copper-alloy 27 mm × 4 mm was recovered from the primary ditch fill in the north-west quadrant, but this may be intrusive.

HUMAN BONE

By Wendy K. Wood
A total of five bones (Table 3, see microfiche m3) were identified as human. Owing to their long burial in chalk these specimens are very badly eroded; it therefore was not possible to localize areas of pathological change. Similarly, measurements could not be taken from the bones because of their fragmentary nature.

All the bones were from an adult. Fortunately, a large fragment of the pelvis had escaped damage. From the narrowness of the sciatic it is probable that this burial is of an adult male.

ANIMAL BONE

By Patricia Stevens
A small quantity of animal bone (Table 4, see microfiche m3) was found during the excavation, mainly from the upper ditch fills and the top-soil. Unfortunately, the bone was too fragmented for any useful measurements or age analysis to be made; the majority could only be attributed to size rather than species. Cattle bones account for the largest number of identifiable fragments, followed by sheep/goat bones. However,

ROUND-THE-DOWN

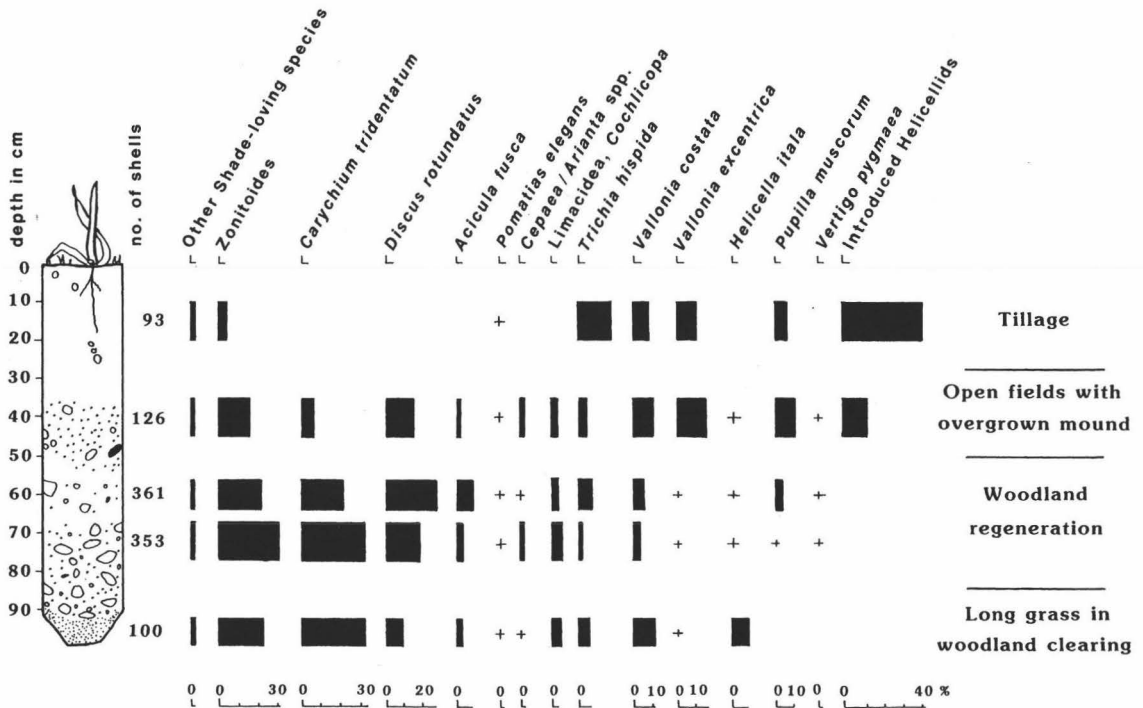


Fig. 4. The molluscan analysis: a histogram of relative abundance.

Table 6. Land mollusca from the ditch fills.

\ Sample Context Depth (mm) Wt (g)	4	5	6	7	8
	4	3	2	2a	1
	920-990 1500	670-770 1500	560-640 1000	350-450 1000	100-200 1000
MOLLUSCA					
<i>Pomatias elegans</i> (Müller)	+	2	+	1	1
<i>Acicula fusca</i> (Montagu)	3	9	27	2	-
<i>Carychium tridentatum</i> (Risso)	19	91	66	9	-
<i>Carychium</i> spp.	14	24	4	-	-
<i>Oxyloma/Succinea</i> spp.	-	-	1	-	-
<i>Cochlicopa lubricella</i> (Porro)	1	1	-	-	-
<i>Cochlicopa</i> spp.	2	7	8	1	-
<i>Vertigo pygmaea</i> (Draparnaud)	-	1	3	1	-
<i>Vertigo moulinsiana</i> (Dupuy)	-	-	-	1	-
<i>Pupilla muscorum</i> (Linnaeus)	-	1	15	12	6
<i>Vallonia costata</i> (Müller)	11	10	22	13	7
<i>Vallonia excentrica</i> (Sterki)	1	2	3	19	9
<i>Acanthinula aculeata</i> (Müller)	-	5	3	-	-
<i>Ena obscura</i> (Müller)	-	-	1	-	-
<i>Punctum pygmaeum</i> (Draparnaud)	1	-	-	-	-
<i>Discus rotundatus</i> (Müller)	8	60	91	17	-
<i>Vitrina pellucida</i> (Müller)	1	-	-	1	2
<i>Virea crystallina</i> (Müller)	-	-	1	-	-
<i>Vitrea contracta</i> (Westerlund)	20	67	52	17	-
<i>Nesovitrea hammonis</i> (Ström)	-	-	1	-	-
<i>Aegopinella pura</i> (Alder)	2	9	5	-	-
<i>Aegopinella nitidula</i> (Draparnaud)	-	17	15	3	-
<i>Oxychilus draparnaudi</i> (Beck)	-	-	-	-	4
<i>Oxychilus cellarius</i> (Müller)	1	16	5	-	-
Limacidae	1	10	4	3	-
<i>Euconulus fulvus</i> (Müller)	-	1	-	-	-
<i>Cecilioides acicula</i> (Müller)	3	6	58	234	108
<i>Cochlodina laminata</i> (Montagu)	-	-	-	+	-
<i>Clausilia bidentata</i> (Ström)	+	1	1	-	-
<i>Balaea perversa</i> (Linnaeus)	-	1	-	-	-
<i>Candidula intersecta</i> (Poiret)	-	-	-	7	22
<i>Candidula gigaxii</i> (L. Pfeiffer)	-	-	-	7	3
<i>Cernuella virgata</i> (da Costa)	-	-	-	2	6
<i>Helicella itala</i> (Linnaeus)	8	4	1	2	-
<i>Cochlicella acuta</i> (Müller)	-	-	-	-	17
<i>Trichia hispida</i> (Linnaeus)	6	8	26	6	16
<i>Arianta arbustorum</i> (Linnaeus)	+	-	-	-	-
<i>Helicigona lapicida</i> (Linnaeus)	-	+	+	+	-
<i>Cepaea/Arianta</i> spp.	1	6	5	2	-
<i>Helix aspersa</i> (Müller)	-	-	-	+	+
Taxa	16	21	23	20	11
Total	100	353	361	126	93
Species diversity	2.31	2.32	2.35	2.57	2.10

a large proportion of these fragments are teeth, and few of the remaining fragments are from bones which would provide meat. No evidence for butchery was found.

Marine molluscs

By Elizabeth Somerville
The small sample (Table 5, see microfiche m3) was largely made up of fragments of oyster (*Ostrea edulis*) shell, and is described in more detail in the archive. As all of these specimens were found in the top-soil or upper ditch fills, it is likely that they

are the result of manuring during the medieval and post-medieval periods.

LAND-USE HISTORY OF ROUND-THE-DOWN; THE MOLLUSCAN EVIDENCE

By Michael J. Allen
Over ten years after excavations had been conducted, the site was revisited (in 1985) to obtain samples from the Bronze Age ditch for mollusc analysis. Sampling was undertaken by the writer with the aid of Louise Mount and Paul Hill. A series of

Table 7. Hand picked mollusca (and shells washed from them).

\ Quadrant \ layer	NEQ	NEQ	NEQ	SEQ	SEQ	NEQ	NWQ	SEQ	SWQ	SWQ
	—4—		—3—		2a	—2—				1b
MOLLUSCA										
<i>Pomatias elegans</i> (Müller)	—	—	32	4	—	11	—	22	—	—
<i>Carychium tridentatum</i> (Risso)	—	—	1	—	—	—	—	1	—	—
<i>Cochlicopa lubrica</i> (Müller)	—	—	1	1	1	—	—	—	—	—
<i>Cochlicopa</i> spp.	—	—	2	—	—	4	—	1	—	—
<i>Pupilla muscorum</i> (Linnaeus)	—	—	—	—	—	3	—	—	—	—
<i>Vallonia costata</i> (Müller)	—	—	—	—	—	17	—	—	—	—
<i>Vallonia excentrica</i> (Sterki)	—	—	1	—	1	4	—	—	—	—
<i>Discus rotundatus</i> (Müller)	—	—	3	—	2	10	—	1	—	—
<i>Vitrea contracta</i> (Westerlund)	—	—	—	—	—	1	—	1	—	—
<i>Nesovitrea hammonis</i> (Ström)	—	—	1	—	—	—	—	—	—	—
<i>Aegopinella pura</i> (Alder)	—	—	1	—	—	—	—	—	—	—
<i>Oxychilus cellarius</i> (Müller)	1	—	5	—	3	—	—	2	—	—
Limacidae	—	—	—	—	1	1	—	—	1	—
<i>Cecilioides acicula</i> (Müller)	9	—	—	—	4	40	—	1	—	—
<i>Cochlodina laminata</i> (Montagu)	—	—	4	—	—	—	—	+	—	—
<i>Candidula intersecta</i> (Poirot)	1	—	4	—	—	—	—	1	—	1
<i>Candidula gigaxii</i> (L. Pfeiffer)	—	—	—	—	—	1	—	—	—	—
<i>Cermeuella virgata</i> (da Costa)	—	—	—	—	—	4	1	—	—	2
<i>Helicella itala</i> (Linnaeus)	3	—	5	—	1	10	—	—	12	1
Helicellids	—	—	—	—	—	2	—	—	—	—
<i>Trichia hispida</i> (Linnaeus)	1	—	4	—	—	—	—	—	—	—
<i>Arianta arbustorum</i> (Linnaeus)	—	—	—	1	2	2	—	—	—	—
<i>Helicigona lapicida</i> (Linnaeus)	—	—	1	—	—	—	—	—	—	—
<i>Cepaea nemoralis</i> (Linnaeus)	+	2	18	4	15	36	2	11	5	—
<i>Cepaea hortensis</i> (Linnaeus)	—	1	8	—	1	2	—	2	—	—
<i>Cepaea/Arianta</i> spp.	—	—	8	—	—	—	—	4	—	—
<i>Helix aspersa</i> (Müller)	40	—	+	—	—	499	—	—	5	2
Taxa	5	2	16	4	9	14	2	10	4	4
Total	46	3	100	10	27	608	3	46	23	6

five spot samples of each layer were taken from the cleaned face of the ditch section in the north-east quadrant (Fig. 3). During excavation a number of caches of land snails were found and collected. These were identified (Table 7) and any soil and smaller shells carefully washed from them and also identified. This information is dealt with separately.

The methods of analysis are outlined by Evans (1972, 45–6) and detailed elsewhere (Allen 1989; 1990) and the results are presented in Table 6 and as a histogram of relative abundance in Figure 4. Mollusc nomenclature follows Waldén (1976).

The V-shaped ditch produced a typical tripartite infill sequence (cf. Evans 1972, 321–8; Limbrey 1975, 290–310) which is described earlier in this report. The basal chalk rubble primary fill probably accumulated over c. 20 years (cf. Bell 1990) and thus the associated mollusc assemblages probably represent the environment immediately prior to the barrow's construction and that contemporary with its construction and initial use. No buried soils were observed within the ditch sequence.

The Mollusca

The assemblages from the chalk mud and primary fills are significant in that up to 85% belong to Evans' (1972, 194–6) shade-loving group. They are characterized by species commonly associated with decaying plant matter beneath leaf litter on a deciduous woodland floor. The relatively high proportion of Vallonias with *Vitrea contracta* may indicate long

mesic grassland, as argued by Allen for ditch assemblages at Barton, Bedfordshire (1991). Certainly many of these shade-loving species have been recorded in chalk grassland succession communities (Cameron & Morgan-Huws 1975). A shady woodland habitat is confirmed by the record of *Acicula fusca* which is a woodland species in the strict sense. It inhabits mature, undisturbed woodland ecosystems, is anthropophobic and, therefore, relatively rare in Neolithic and post-Neolithic contexts (Evans 1972, 135).

The upper primary and lower secondary fills broadly relate to the periods of the barrow's construction and initial ditch infill. Both these fills produced predominantly shade-loving species which is unusual as normally, barrows were left in open grassland and much of the downland in Sussex at this time was open grassland (Allen 1994). *Carychium* is still dominant but the increase in *Discus rotundatus*, *Acicula fusca* and the Zonitids, particularly *Aegopinella nitidula* and *Oxychilus cellarius*, and the presence of *Balaea perversa*, which lives on tree trunks, indicate that shrubs and perhaps even woodland conditions had been re-established. Such regeneration may represent either the encroachment of the former woodland, or the later stages of a hawthorn sere vegetation community. Whatever the precise nature of this more shady vegetation, it is clear that these conditions were prolonged. Surprisingly, despite the evident human activity, the anthropophobe *A. fusca* is still present. The only open-country species present in any significance

is *Pupilla muscorum* which probably exploited the bare earth habitats created by the weathering sides of the ditch itself.

It is only in the tertiary fills that open-country species become established in any way, but even here a surprisingly high shade-loving element is still in existence. The open-country group is typical of short grassland or even arable contexts, but the shade-loving species such as *Discus* and *Zonitids* shun these environments. It is possible, therefore, that the assemblages relate to two very localized environments: an arable environment around the barrow, and taller herbaceous vegetation and hawthorn shrubs on the mound and ditch. This assemblage included a number of Introduced Helicellids (Table 6) which indicates a medieval or later date (Kerney 1966; 1977). More typical open-country conditions finally prevailed very late in the monument's history. The base of the modern rendzina soil produced assemblages dominated by open-country species, typical of open dry downland and arable activity. One of the Introduced Helicellids, *Cochlicella acuta*, has a maritime distribution (Kerney 1976), but does occur inland (Ellis 1951) and is present in a number of locations in the Lewes area today (Allen personal observation).

Hand-picked shells

Usually only the larger specimens are recovered by manual recovery and these are not useful for palaeo-environmental interpretation. Careful cleaning and removal of the soil within the larger shells can sometimes provide an indication of the other smaller species with which it was associated (Table 7). During the excavation, a number of large caches of shells were recovered in the ditch. They were carefully excavated as it was thought that as they came from the lower fills, they may have constituted a part of the Bronze Age diet. However, identification revealed that the most common species (of which one cache included 499 specimens) was the large garden snail, *Helix aspersa*, not known to have existed in this country prior to the Roman period (Kerney 1966; 1977). A high proportion of snails were adult and detailed examination of every complete shell showed no evidence of apertural damage often caused when extracting the snail for consumption. The most likely explanation for the large collections of this species is that they were hibernating in the loose rock rubble. They are known to have gregarious habits and hibernate for six months of the year, often in groups in which individuals affix themselves to each other. That large numbers did not survive can be attributed to the 'species' susceptibility to winter frosts. Indeed, during sampling in March 1985 clusters of hibernating *Helix aspersa* were seen in the thin chalk rubble layers that had accumulated since the excavations were completed ten years earlier.

CONCLUSION

There is limited evidence for any Neolithic or earlier activity at Round-the-Down; there was little clearance of the primary woodland and only a few pieces of flintwork dating to the Neolithic period were found.

The barrow appears to have been constructed in a small area of recently-cleared woodland, possibly cleared just for that purpose during the early Bronze Age. There was probably a primary burial in a central

Discussion

The assemblages from the barrow are atypical in the prolonged predominance of shady, albeit local, habitats. It is evident that some of the local Down was cleared in the early Bronze Age, as indicated by the colluvial sequence at Grey Pit (Allen this volume), but there seems to have been little clearance of the woodland on the ridge of Round-the-Down itself at this time. This concurs with the broader picture of the area suggested by Thorley (1971; 1981) from pollen sequence in the Vale of the Brooks where woodland is indicated until the middle Bronze Age, but it is unclear how extensive woodland was, for the foot of the Down was probably already cleared at this time. The clearance at Round-the-Down may have been specifically for the construction of the barrow and its associated activities and, therefore, only localized. The rapid colonization of the ditch occurred probably within about 20 years and indicates that woodland clearance can only have been local. Certainly the topography is such that even a relatively small clearance on the ridge would result in the barrow having been a prominent feature and visible from various vantage points, including from both above (Caburn) and below (Ouse Valley).

It is also clear that after construction the monument was not tended, for the white chalk mound was very soon allowed to become an overgrown morass of vegetation, and probably remained as such through the rest of the prehistoric period. No episodes of temporary clearance associated with secondary activity, as have been demonstrated elsewhere (eg. Buckskin II, Hampshire; Allen *et al.* 1995), were recorded, but here this may have been a failing of the sampling strategy adopted.

Although Round-the-Down itself does not seem to have been ploughed, nor even extensively cleared for rough grazing throughout prehistory, this is not the case for the surrounding downland (Allen 1994; this volume). Certainly, both the Iron Age earthworks at Ranscombe and Caburn were constructed in open short-turfed downland probably with some bracken locally (Dimbleby 1985). Tillage of the slopes adjacent to and beneath Round-the-Down is evidenced in the hillwash recorded in the north face of the quarry section to the east and in the dry valley immediately to the west of the barrow (Fig. 1) and see Allen (1994, fig. 20; this volume, fig. 2). In both cases hillwash as a result of tillage is of early- to middle-Bronze Age date. It is certainly unusual that Round-the-Down, an area of apparently prime agricultural land, does not seem to have been exploited as such in prehistory despite the fact that most of the surrounding land was. Perhaps one can venture to say that the ridge was designated for other activities, one of which may have been the burial of the dead.

pit, although most of the evidence for this had been destroyed by the later robber pit. Following the interment a circular ditch was dug around the burial pit and the chalk excavated from the ditch thrown up to construct the barrow mound over the burial pit.

During the middle and later Bronze Age the barrow mound was not tended, and became overgrown. Although the surrounding downland appears to have been cultivated throughout this period, Round-the-Down itself does not seem to have been cleared for cultivation. This, however,

does not mean that the monument was being ignored; the ditch was still open, and may have provided a suitable place for depositing broken pottery and flint debitage. The flint implements, debitage and pottery dating to the later Bronze Age that were found in the upper ditch fills and top-soil show that there was activity in the immediate vicinity throughout this period.

It is also possible that the monument remained a place for burial as at least one further inhumation was inserted into a grave dug into the barrow ditch, although without firm dating evidence it is impossible to say when. The continued use of the barrow and the uncultivated state of its immediate surroundings do suggest that it was situated in a location that remained ritually important to later generations, and possibly marked a boundary, as has been suggested elsewhere (Butler 1991).

Only in later times were the immediate surroundings cleared for cultivation, and ploughed from the Roman period up to more recent times. This ploughing resulted in the ditch initially silting up, and then, together with most of the barrow mound, being severely truncated, creating a negative lynchet on its western side.

The digging of the robber pit in the centre of the barrow mound has completely destroyed the primary burial pit, and presumably resulted in the destruction or removal of its contents. There has been much antiquarian activity around Lewes since the early 19th century; Gideon Mantell's journal recorded the opening of eight tumuli near Mount Caburn in 1818 (Spokes 1932) and it is therefore likely that Round-the-Down was the victim of one of these antiquarian 'expeditions'.

There are a number of other barrows located on this block of chalk downland between Lewes and the Caburn. However, apart from one barrow which

was recorded before its destruction by quarrying at the golf course on Cliffe Hill (Spokes 1932), none have been subject to recent archaeological investigation. Many of them have been plundered in the past, as Musson records a number of early Bronze Age vessels found in barrows in this area (Musson 1954). Despite the number of barrows, there is no firm evidence for any early Bronze Age settlement here, although the colluvial sequence in the adjacent Grey Pit quarry did suggest that there was a Beaker settlement nearby (Allen this volume). A probable middle Bronze Age cremation burial was found during road construction some 250 m to the south-west of Round-the-Down in 1976 (Bedwin 1978). Any relationship this may have had with the area of the Round-the-Down barrow, however, was destroyed by the quarrying at the Grey Pit. There is substantial evidence for activity during the Iron Age and Roman periods nearby, at Ranscombe (Bedwin 1978) and Mount Caburn (Curwen & Curwen 1927), showing that the downland adjacent to Round-the-Down was being fully exploited in these later periods.

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The prehistoric land-use and human ecology of the Malling-Caburn Downs

TWO LATE NEOLITHIC/EARLY BRONZE AGE SITES BENEATH COLLUVIAL SEQUENCES

by Michael J. Allen

The analysis of two significant colluvial deposits (at Southerham Grey Pit and Malling Hill) on the Malling-Caburn block of downland to the east of Lewes has enabled a detailed landscape history to be constructed for this area. This paper attempts to provide a summary of the human rôle in the development of the chalkland block of Malling, Cliff and Caburn. It includes evidence primarily from these two colluvial sequences, but comprises a review of other environmental archaeological data including some recent analysis of archived soil samples from Burstow and Holleyman's (1964) excavations at Ranscombe Camp. The important land mollusc evidence from Round-the-Down (Allen, in Butler this volume) is also reviewed.

To conclude, an attempt is made to show how the detailed landscape history from these sites equates with the broader picture from downland in the region of Lewes.

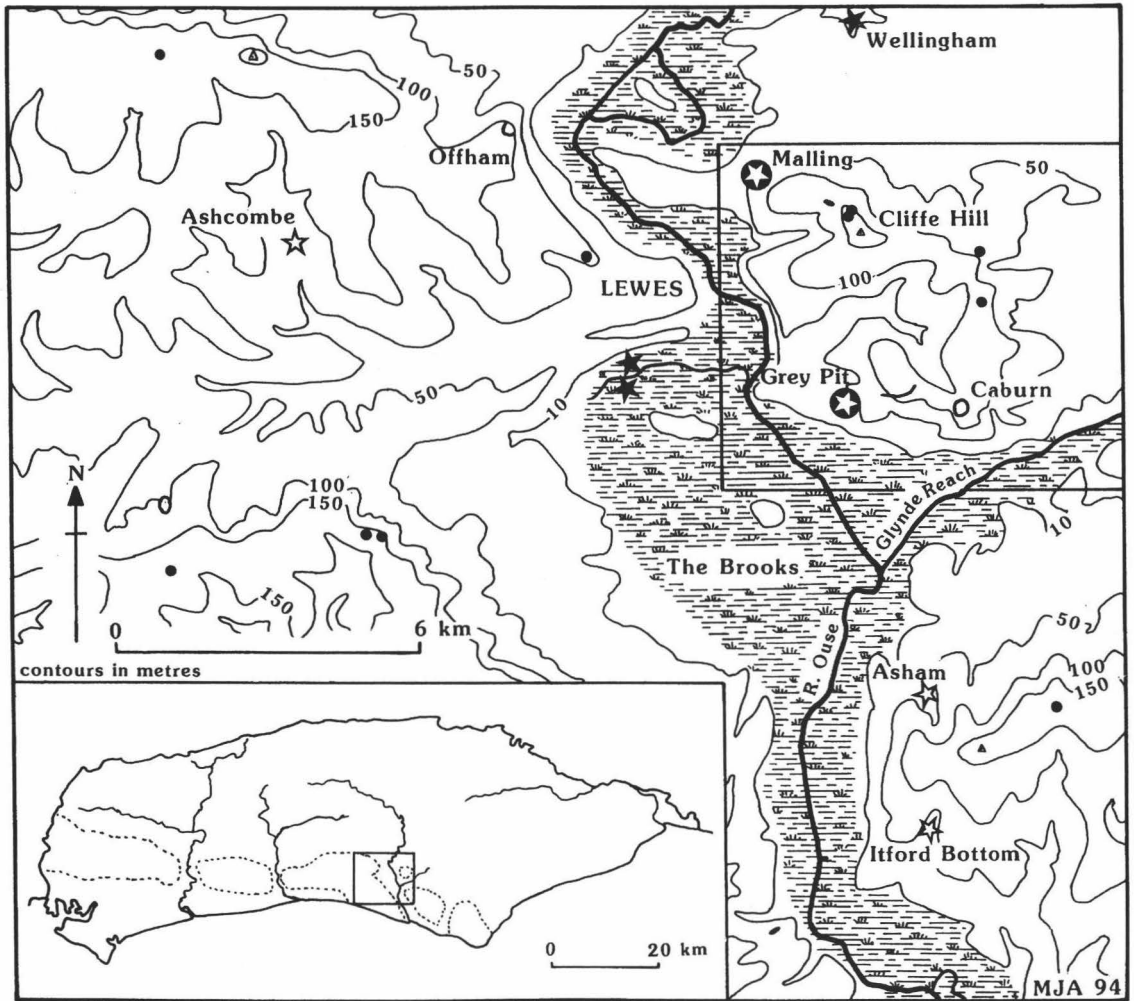
INTRODUCTION

The land around Lewes is part of the South Downs and forms a classic chalk escarpment, bisected at Lewes by the the Ouse Valley. To the east of Lewes lies a small isolated block of chalk downland from Malling Hill to Caburn, which is separated from the main escarpment by the deeply incised, steep sided Pleistocene valleys of the Ouse to the west, and the Glynde Reach to the south (Fig. 1). Its highest point is attained at Mount Caburn at 149 m OD. Most of this downland supports thin grey rendzina soils, but is fringed by deeper soils being typical calcareous, or colluvial, brown earths (Jarvis *et al.* 1984).

The area is particularly rich in archaeological, especially prehistoric, sites (Fig. 2). These include the unexcavated long barrow on Cliffe Hill (Toms 1922), probably more accurately classified as an oval barrow (Drewett 1978), Beaker Period and Bronze Age artefact scatters at Glynde (Biggar 1984), early Bronze Age activity at Oxteddle Bottom (Curwen 1954, 157), a number of Bronze Age barrow cemeteries, the Iron Age hillfort and earthworks of Mount Caburn (Curwen & Curwen 1927; Pitt-Rivers

1881; Wilson 1939) and Ranscombe Camp (Burstow & Holleyman 1964) respectively, a Romano-British farmstead at Ranscombe (Bedwin 1978a) and the Anglo-Saxon cemetery at South Malling (Norris 1956).

Key environmental research programmes, by both Martin Bell (1981; 1983) and the present writer (Allen 1988; 1992; 1994) among others, have examined the land-use history of the chalk. These have included analyses, and review, of major molluscan sequences from both dated colluvium (Allen 1994; Bell 1983) and excavated archaeological sites, including the Neolithic enclosure of Offham (Thomas, in Drewett 1977) and, more locally, the Bronze Age barrow on Round-the-Down (Allen, in Butler this volume). The Ouse valley itself has been the centre of a number of palynological investigations. Ann Thorley's work in the Vale of the Brooks produced two detailed pollen diagrams (Thorley 1971; 1981) spanning the 7th to 2nd millennia BC. Pollen analysis at Wellingham (TQ 431 131) to the east of Offham produced evidence of cereals in the Neolithic (Brooks unpub.; Wing 1980; Robinson & Williams 1983), and more recently Scaife and Burren's work at Sharpsbridge (8 km to the north) provides



- ★ colluvial site
- ☆ other hillwash site
- ★ pollen core
- ▨ alluvium
- long barrow
- round barrow

Fig. 1. The Ouse valley showing topography and sites mentioned in the text.

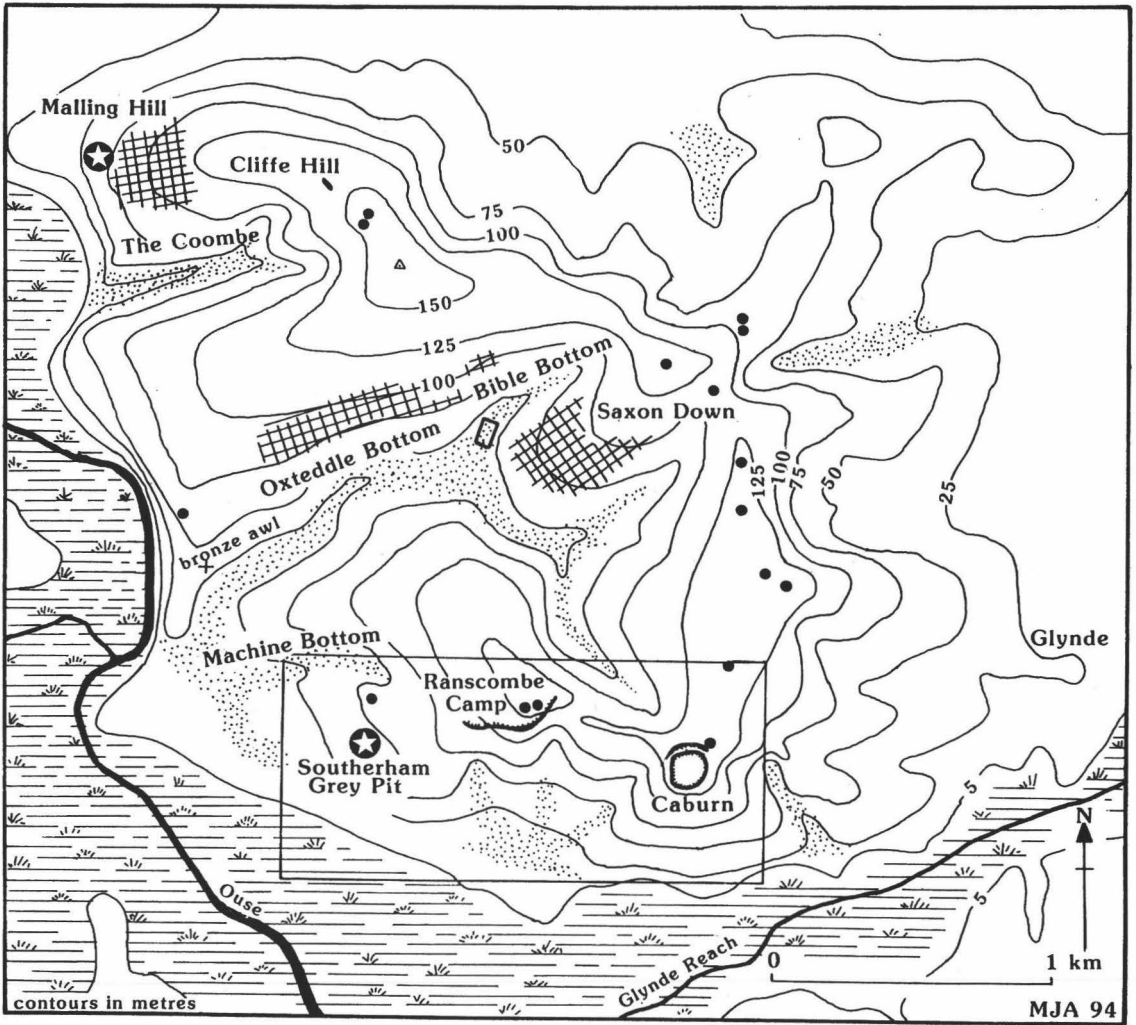
not only detailed diagrams, but more direct archaeological interpretations (Scaife & Burrin 1983; 1992; Burrin & Scaife 1984).

THE COLLUVIAL SEQUENCES

Two colluvial sequences were examined, both in quarry faces, with the aim of dating the colluvium by the retrieval and recording of datable artefacts.

From this, a chronological framework for the environmental interpretations from both the sediments themselves and the mollusc analysis can be constructed. Columns of contiguous samples were taken for mollusc analysis and were processed following methods outlined by Evans (1972) while the nomenclature follows Waldén (1976).

The two sequences studied were a colluvial



★ colluvial site
 colluvium
 alluvium
 long barrow
 field systems
● round barrow

Fig. 2. Prehistoric sites on the Malling-Caburn Downs and the location of the colluvial sites analyzed.

footslope deposit at Round-the-Down (TQ 4332 0902), situated immediately to the south of the excavated barrow on Round-the-Down (Butler this volume), and the other on the west of the Down at Malling Hill (TQ 4232 1108), where a large lynchet sequence was exposed in a small quarry. The combined results of these investigations aid the evaluation of the more general picture provided by

palynological investigations from the Ouse valley. The environmental history of this area augments the traditionally recorded archaeology and is placed in a wider context here by a review of the palynological studies mentioned above. The present aim is, therefore, an attempt to refine our understanding of the mosaic of prehistoric land-use to determine a broader view of the landscape history.

ADDITIONAL ANALYSES

In an attempt to augment the data from the colluvial sites, molluscan analysis was undertaken of samples from the Bronze Age round barrow on Round-the-Down and also of material archived in Barbican House Museum. Soil samples, charcoal and hand-picked shells from Burstow & Holleyman's (1964) excavations at Ranscombe Camp in 1959–1960 were analysed (Appendix 1).

COLLUVIAL SEQUENCE AT SOUTHERHAM GREY PIT, RANSCOMBE HILL (TQ 4332 0902)

Attention was drawn to the potential of stratified colluvial deposits near Ranscombe by Osborne White's (1926) detailed description of *c.* 3 m of colluvium which contained pottery and Mollusca. He wrote:

On the high road from Lewes to Beddingham, the opening out of the double bend about half a mile west of Ranscombe has exposed 10 or 12 ft of indistinctly bedded grey rubble marl, of Recent Age, resting on Combe Rock (p. 71). The contact of these two deposits is plainly marked by a change of colour, and by a seam of calcined flints at the base of the recent wash, which also contains similar flints, occasional flint flakes, small bits of rough pottery, a few shells of edible oyster and many terrestrial gasteropods [sic.], irregularly distributed throughout. In a small collection of land-shells from this deposit, Mr A. S. Kennard identified:

<i>Limax arborum</i> Bouch. Chant.	<i>Helicella itala</i> (Linn.)
<i>Polita pura</i> (Ald.)	<i>Helix nemoralis</i> (Linn.)
<i>Arion</i> sp.	<i>Cochlicopa lubrica</i> (Müll.)
<i>Vallonia costata</i> (Müll)	<i>Pupilla muscorum</i> (Linn.)
<i>Hygromia hispida</i> (Linn.)	<i>Carychium minimum</i> (Müll.)
" <i>striolata</i> (Pfr.)	

This deposit, says Mr Kennard, is certainly pre-Roman, and is probably of Bronze Age date.

The colluvial footslope deposit was exposed by quarrying (between 1975 and 1987) in the eastern section of the chalk quarry, known as Southerham Grey Pit, less than 200 m down hill from Round-the-Down ridge (Figs. 2 & 3) which is a part of the pericline of the Kingston anticline (Mortimore 1983, 29). The section was first recorded in 1980 and 1982 and further detail was added when sampling was undertaken in March 1986. Subsequent extension of the quarry has now removed these deposits. In the immediate vicinity, on the local ridge, are the Bronze Age barrow on Round-the-Down (Butler this volume), the Iron Age and Romano-British cross-dyke at Ranscombe Camp, and Caburn hillfort (Figs. 2 & 3). About 100 m immediately downslope is the Ranscombe Romano-British farmstead excavated by Bedwin (1978a). In the vicinity of those excavations the late Mr C. E. Knight-Farr found part of a middle Bronze Age vessel with fragments of calcined bone (Bedwin 1978a, 244, fig. 6.35; Fig. 4).

The exposed section was recorded over a total length of 76.4 m, and attained a maximum depth of 1.68 m at the top of a 12 metre high quarry face. The recording of this section was not as detailed as anticipated because of the difficulty of gaining access

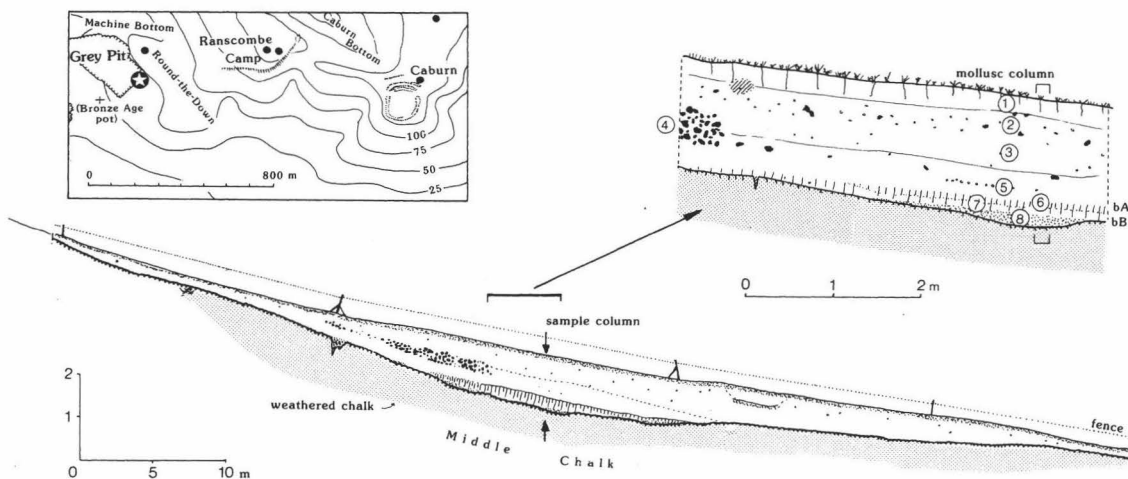


Fig. 3. Southerham Grey Pit: location and section.

to the face. Relatively few artefacts were recovered. A portion of the section c. 5 m wide was crudely cleaned and drawn (Fig. 3) and a column of 13 contiguous mollusc samples taken. Samples were not taken through the maximum depth of the deposits because of the inaccessibility of the section, but the full colluvial sequence was sampled.

THE STRATIGRAPHY

The deposits lay at the break of slope at the foot of Round-the-Down. The earlier deposits were at this break, but the later colluvium was slightly further downslope as a result of the change in slope morphology caused by previous deposition (Fig. 3). The sequence comprised typical unsorted calcareous colluvium (Allen 1992, type 1a); full descriptions are given in Appendix 2.

Weathered chalk (Layer 9): The natural chalk was loose, crumbly and highly frost-shattered along most of the section. Towards the top of the slope, the chalk was more solid and less fractured. It was obscured at the southern portion of the slope by scree and modern rubbish.

Truncated relict soil (Layer 8): A series of gentle undulations in the weathered chalk at the elbow of the footslope deposits contained a mixed, dark humic, silty clay loam with occasional mottles of deep reddish brown. The layer was worm-sorted and very crumbly.

Buried soil (Layer 7): This layer was a dark, comparatively stone-free, silty clay. It extended laterally for about 7.3 m and was interpreted in the field as a BB soil horizon. It had a sharp boundary at its base indicating possible truncation of the lower horizons before soil formation. On-site macroscopic examination with the use of a field microscope, showed signs of earthworm working and distinct worm casts.

Buried turf (Layer 6): A 0.1 m thick, stone-free horizon of dark silt loam. This was interpreted in the field as the turf or worm-worked horizon of the buried soil, but the possibility that this was stone-free transported soil material cannot be discounted.

Table 1. Pottery recovered from cleaning the Grey Pit quarry section.

Layer Pottery	8	7	6	5	4	3	2	1	Total
Medieval							3		3
East Sussex Ware						2			2
IA fabric 3				4					4
IA fabric 3				2					2
Bronze Age				3		1			4
Food vessel			1						1
Domestic beaker			2						2
Combed beaker		2	6						8
Total	0	2	9	9	0	3	3	0	26

Colluvium (Layer 5): A silty clay, calcareous, lighter in colour with many small, rounded chalk pieces and occasional flints, grading to a distinctly less stony and darker colour (possibly more humic) at its base.

Gravel fan (Layer 4): A lens of medium to large flints. It had distinctly 'bull-nosed' shape in section (Fig. 3) and trailed off upslope over a total distance of about 8 m. Although thought to be a bank when first observed in 1982, augering could not locate the deposit more than 2.1 m from the exposed section and the layer was not sampled.

Colluvium (Layer 3): An unsorted, highly calcareous, yellowish-brown silty clay colluvium with many small and very small rounded chalk pieces and rare flints.

Colluvium + aeolian (Layer 2): A highly calcareous silt loam, almost white in places, displaying pseudomycelia. This was almost stone-free and highly reminiscent of ditch fills (Layer 4) to the west of Lewes at Cuckoo Bottom (Allen & Fennemore 1984). Particle size analysis conducted on a sample from this horizon showed that more than 76% was coarse silt and thus, as with those at Cuckoo Bottom, may indicate an aeolian component. A number of sand-sized glauconitic fragments were recognized (Macphail personal observation). Several root or earthworm channels containing more humic material were also noticed. Owing to the density of these features, only the basal portion of this layer was sampled because of the possibility of contamination from above.

Modern soil (Layer 1): A colluvial rendzina (Avery 1990, 157) almost stone-free, though obviously calcareous supporting coarse tussocky grass along the quarry edge.

ARTEFACTS

Only a rapid examination of the colluvium for artefacts was possible. Collection was biased towards pottery sherds in the hope that enough could be acquired to date the sequence. The exact location was not recorded for any of the artefacts; they were located by layer only (Table 1). It is unlikely that this is a true representation of the artefact density as these basal horizons were searched more thoroughly. Nevertheless, the fact that Layers 6 and 7 might represent buried soils and old land surfaces may account for the higher numbers of artefacts recovered. Several other finds (including a possible copper alloy object) were noticed in the section, but were out of reach.

Pottery

A total of 26 sherds was recovered of which nearly 40% was from Layers 6 and 7 for the reasons discussed above; most were Beaker or Early Bronze Age in date (Table 1).

Beaker and Early Bronze Age

A relatively high number of sherds of grog-tempered Beaker pottery was recovered (11 sherds). Three

distinct fabrics and forms could be recognized.

Beaker 1. Eight soapy, grog-tempered sherds with occasional medium sized (up to 1.8 mm) calcined flint inclusions. They were entirely oxidized and sherds were 4–5 mm thick. At least two vessels were represented. Most of the sherds were comb-decorated with simple bands of sharply incised rectangular impressions, all from vessels similar to Clarke's (1970) Wessex–Middle Rhine style. Three sherds had a darker red (almost the colour of sealing wax *cf.* Clarke 1970, 85–6) on the external surface and were decorated with shallower and finer comb impressions in possible lozenge and ladder decorations typical of Clarke's (1970) late Southern Developed forms. All sherds are from Middle and Late Beakers.

Beaker 2. Two grog-tempered sherds with coarser flint inclusions (up to 3.6 mm) with thicker walls (5–6 mm) and a reduced core. One sherd was decorated with rustications. These sherds are typical of late Domestic Beakers (ApSimon pers. comm.).

Food vessel. One sherd of soapy texture with fine, sparse flint tempering and some grog, is probably Food vessel (ApSimon pers. comm.).

Bronze Age

Only four sherds of undiagnostic Bronze Age pottery were recovered.

The sherds were tempered with calcined flint, liberally spread throughout the fabric; up to 10% vegetable or calcium carbonate tempering was represented by voids. Some fine sand was also thought to be present. All the sherds were relatively thick, c. 10 mm, with reduced cores and orange to orangey/red exteriors. One showed crude thin vertical incisions.

Iron Age

Six sherds of Iron Age pottery in two fabrics were recovered, all from Layer 5.

Hamilton Fabric 3b. Fine flint-tempered fabric with iron oxide inclusions (*cf.* Hamilton 1977, 90). This fabric has a distinctly East Sussex distribution and belongs to Cunliffe's early Iron Age Kimmeridge/Caburn style group (Cunliffe 1978).

Hamilton Fabric 3c. Hard, dark grey fabric with very dark sand-sized inclusions and occasional calcined flint and a dark grey to black smooth surface (*cf.* Hamilton 1977, 90). Only two sherds belonged to this group; one of them has a bead rim which may indicate that it is a saucepan pot typical of those found at Caburn (Curwen & Curwen 1927; Hawkes 1939).

East Sussex Ware

Only two sherds of Iron Age/Roman pottery were recovered. Both belong to East Sussex Ware, which was the most common fabric from the excavations at the bottom of Ranscombe Hill (Green 1977; 1978). Both sherds have slight decoration: grooves or banding, and are more typical of Roman than of Iron Age forms.

Medieval

Three small sherds of well-fired thin-walled (c. 5 mm) sandy pottery were recovered. These are all typical of medieval fabrics in the area and possibly originate from the 13th-/14th-century kilns at Barnett's Mead, Ringmer (Hadfield 1981).

Copper alloy object

A copper alloy object could be seen within Layer 6, but it could not be reached and so was described *in situ* with the use of a 420 mm camera lens. It could be seen both as a stain in the soil and as a distinct band of copper alloy a few millimetres wide and about 20–30 mm long. Whether this was a simple rod, an awl or even a dagger, could not be discerned. A visit made several months later, with a ladder over 40 ft (13 m) long, enabled the general location to be reached precariously, but the object itself could not be found. A rapid metal detector survey of the quarry floor revealed no such object, neither had the site foreman any record of it. It is perhaps significant that another, recently published (Wallis 1993), copper alloy object has been found in the area. This was a bronze awl from Southerham Farm, TQ 428096 (Fig. 2), but cannot be the item observed by the present writer.

Flints

Only seven worked flints were recovered. All were well-patinated, undiagnostic, secondary flakes. A flint blade was recovered from the truncated relict soil (Layer 8) and the other flints were from the colluvium and buried soil.

ARTEFACT DISTRIBUTION

From the distribution and occurrence of artefacts, some general statements of the date of the various deposits can be made. No pottery was recovered from the basal horizon (Layer 8) from which the only artefact recorded was the small parallel-sided

Table 2. Charcoal identifications from the Grey Pit colluvium (ident. J. Ede).

Species	Layer					
	8	7	6	5	3	2
<i>Crataegus</i> (hawthorn)				*	*	
<i>Corylus</i> (hazel)			*			
<i>Quercus</i> (oak)	*	*	**		*	
<i>Fraxinus</i> (ash)		*	**			
<i>Pinus</i> (pine)	*					
Unident. fragment	*	*	**	*		*

* = present

** = many small fragments

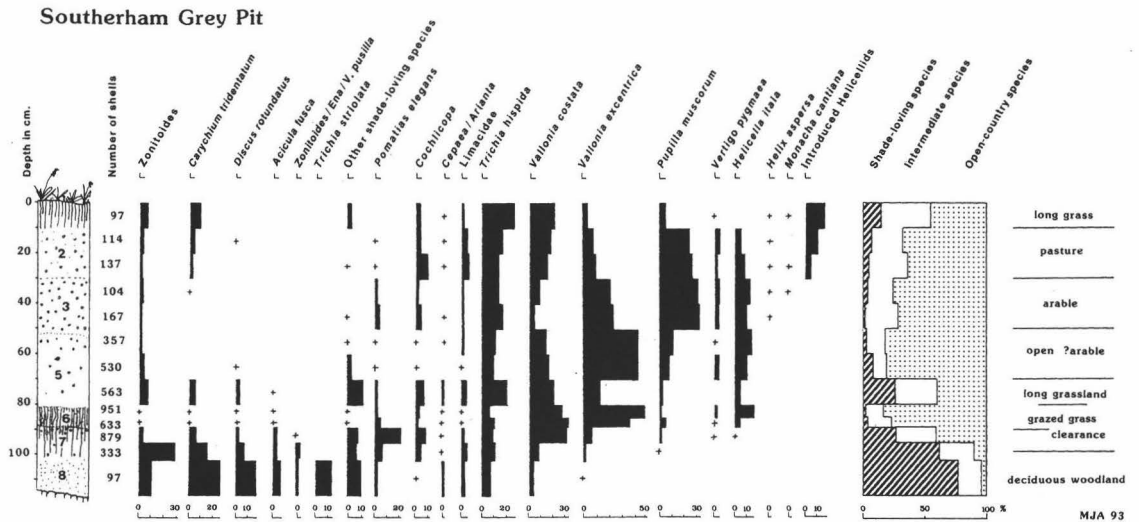


Fig. 4. Southerham Grey Pit: mollusc histogram.

flint blade recovered from a mollusc sample. Although this layer remains undated, the overlying buried soil horizon (Layers 6 & 7) is of Beaker date as all of the domestic Beaker sherds and the single sherd of Food Vessel came from the stone-free turf (Layer 6). Six of the eight comb-decorated Beaker sherds also came from the buried turf; their mean sherd weight was 3.9 g. The two sherds from the underlying layer (Layer 7) were more abraded and smaller (2.4 g). One was so badly worn that the comb decoration was only just discernible. Since no difference in decorative style or form could be detected, it is assumed that these may have been worm-worked deeper into the soil profile after having lain on the surface for a longer time. The size and nature of the sherds indicates activity, possibly settlement, in the vicinity, but not necessarily *in situ*. There is no evidence for major colluviation in the Bronze Age. The main colluvial deposits (Layers 3 & 5) are thought to belong to the Iron Age and Roman periods and the thin, highly calcareous upper colluvial layer (Layer 2), which is much thicker and more extensive downslope (Fig. 3), is of medieval or post-medieval date. The distribution of the sherds is given in Table 1.

CHARCOAL

Fragments of charcoal were not seen in section, but were later recovered from the mollusc samples. They were particularly abundant in sample 3 from the top of buried turf. Most of the fragments were too

small to be identified, but, those that were identified by Joy Ede are presented in Table 2.

THE MOLLUSC SEQUENCE

Elsewhere from this quarry (TQ 431092) the late glacial chalk muds have been reported to contain a late glacial zone II molluscan fauna (Williams 1971, 37). For the research described here the post-glacial colluvium exposed in the quarry face was sampled at the most accessible point as a single column of 13 samples. Sampling included all but one of the main layers recorded. The mollusc diagram constructed from this sequence (Fig. 4) is discussed by layer for convenience.

Truncated relict buried soil (Layer 9)

The basal sample is particularly interesting; it produced a predominantly shade-loving assemblage with a number of significant species. The dominant species were *Carychium tridentatum*, *Discus rotundatus* and *Trichia striolata*, but with *Vertigo pusilla*, *Ena montana*, *Acicula fusca* and *Zonitoides excavatus*. The latter species was kindly checked by the late Maureen Girling. *E. montana*, *Vertigo pusilla*, *A. fusca* and *Zonitoides excavatus* (Table 3) are all extinct in the area today and rarely occur in later prehistoric contexts. The occurrence of *E. montana* is particularly interesting as this record falls well outside its known distribution (Kerney 1976; in press; pers. comm.). This assemblage suggests that this deposit may be of considerable age, possibly Atlantic or even Boreal.

Table 3. Grey Pit: Mollusc data from the colluvial sequence.

Sample layer Depth (cm) Wt (g)	1	2	3	4	5	6	7	8	9	10	11	12	13
	8	7	6	5	4	3	2	1	0	1	2	3	4
	102-116	95-102	89-95	85-89	80-85	70-80	60-70	50-60	40-50	30-40	20-30	10-20	0-10
	1500	1500	1000	869	942	1000	1000	1000	1000	1000	1000	1000	1000
MOLLUSCA													
<i>Pomatias elegans</i> (Müller)	2	26	161	27	16	9	+	5	7	2	1	+	-
<i>Acicula fusca</i> (Montagu)	5	11	21	3	12	2	-	-	-	-	-	-	-
<i>Carychium tridentatum</i> (Risso)	24	49	53	2	1	30	-	-	-	1	3	4	9
<i>Cochlicopa lubrica</i> (Müller)	-	1	5	3	1	2	-	-	-	-	-	-	-
<i>Cochlicopa lubricella</i> (Porro)	-	3	3	3	9	7	-	1	1	-	5	1	2
<i>Cochlicopa</i> spp.	1	9	19	8	23	26	3	2	4	2	7	2	1
<i>Vertigo pygmaea</i> (Draparnaud)	-	-	2	9	18	-	18	4	5	2	3	4	1
<i>Vertigo pusilla</i> (Müller)	1	2	-	-	-	-	-	-	-	-	-	-	-
<i>Pupilla muscorum</i> (Linnaeus)	-	-	13	29	31	17	43	38	59	32	36	27	5
<i>Vallonia costata</i> (Müller)	3	23	261	197	249	103	79	45	7	8	18	19	19
<i>Vallonia excentrica</i> (Sterki)	1	9	79	239	476	86	236	160	45	24	15	10	4
<i>Acanthinula aculeata</i> (Müller)	-	4	42	2	2	17	4	2	-	-	-	-	2
<i>Ena montana</i> (Draparnaud)	+	3	2	-	-	-	-	-	-	-	-	-	-
<i>Ena obscura</i> (Müller)	3	2	4	+	-	8	2	-	-	-	-	-	-
<i>Punctum pygmaeum</i> (Draparnaud)	-	8	14	4	3	27	2	-	-	-	-	1	1
<i>Discus rotundatus</i> (Müller)	16	22	18	4	2	16	7	-	-	-	-	+	-
<i>Vitrea pellucida</i> (Müller)	-	3	2	-	-	6	3	1	-	-	-	-	-
<i>Vitrea crystallina</i> (Müller)	-	6	4	-	-	-	-	-	-	-	-	-	-
<i>Vitrea contracta</i> (Westerlund)	3	36	28	5	4	17	9	1	-	2	2	1	1
<i>Nesovitrea hammonis</i> (Ström)	-	6	2	1	3	-	1	-	2	-	1	-	-
<i>Aegopinella pura</i> (Alder)	-	11	8	1	2	3	2	3	1	1	-	2	2
<i>Aegopinella nitidula</i> (Draparnaud)	430	25	2	1	13	6	1	-	-	-	-	-	-
<i>Oxychilus draparnaudi</i> (Beck)	-	-	-	-	-	-	-	-	-	-	-	-	3
<i>Oxychilus cellarius</i> (Müller)	2	-	-	-	-	4	2	1	-	-	-	-	-
<i>Zonitoides excavatus</i> (Alder)	1	4	2	-	-	-	-	-	-	-	-	-	-
Limacidae	3	14	17	9	7	21	4	7	4	2	8	6	4
<i>Eucomulus fulvus</i> (Müller)	1	3	-	-	-	-	-	-	-	-	-	-	-
<i>Cecilioides acicula</i> (Müller)	-	-	-	-	-	3	34	85	167	68	45	18	5
<i>Cochlodina laminata</i> (Montagu)	2	1	2	-	-	3	1	-	-	-	-	-	-
<i>Clausilia bidentata</i> (Ström)	3	2	5	1	1	2	2	1	+	-	1	-	-
<i>Candidula intersecta</i> (Poiret)	-	-	-	-	-	-	-	-	-	-	3	4	7
<i>Candidula gigaxii</i> (L. Pfeiffer)	-	-	-	-	-	-	-	-	-	-	1	2	3
<i>Cermea virgata</i> (da Costa)	-	-	-	-	-	-	-	-	-	-	3	4	4
<i>Helicella itala</i> (Linnaeus)	-	-	8	16	24	21	64	45	16	12	9	6	-
<i>Cochlicella acuta</i> (Müller)	-	-	-	-	-	-	-	-	-	-	-	1	1
<i>Monacha cantiana</i> (Montagu)	-	-	-	-	-	-	-	-	-	1	1	-	1
<i>Trichia striolata</i> (C. Pfeiffer)	12	4	-	-	-	-	-	-	-	-	-	-	-
<i>Trichia hispida</i> (Linnaeus)	7	36	77	62	24	111	51	40	31	15	19	19	25
<i>Arianta arbustorum</i> (Linnaeus)	1	1	+	-	-	-	-	-	-	-	-	-	-
<i>Helicigona lapicida</i> (Linnaeus)	+	+	-	+	-	-	1	-	-	-	-	-	-
<i>Cepaea nemoralis</i> (Linnaeus)	-	-	-	-	-	3	-	-	-	-	-	-	-
<i>Cepaea hortensis</i> (Müller)	-	-	-	-	1	1	-	-	-	-	-	-	-
<i>Cepaea/Arianta</i> spp.	2	2	+	-	4	8	-	+	1	-	1	+	1
<i>Helix aspersa</i> (Müller)	-	-	-	-	-	-	-	-	+	+	+	1	1
Taxa	21	29	27	21	22	25	21	16	12	13	18	17	20
Shannon Index (<i>H'</i>)	2.52	2.87	2.39	1.81	1.60	2.59	1.87	1.75	1.87	1.94	2.36	2.35	2.46
Total	97	323	879	633	951	563	530	357	167	104	137	114	97

NOTE: All totals exclude *C. acicula*.

It represents a fauna of mature deciduous woodland with a dense carpet of leaf litter. The gentle undulations in which the deposit occurred may be relict tree-throw hollows. *Vertigo pusilla*, which has rarely been recorded in Sussex, was found by Caroline Ellis at Asham (1986) in a buried soil beneath colluvium of Atlantic age.

Buried soil (Layers 7 & 6)

Although the assemblage from the base of the putative buried soil (Layer 7) was largely dominated by shade-loving species, its composition was distinctly, and subtly different. The Zonitids, particularly *Vitrea* and *Aegopinella* are important. *Zonitoides excavatus*, *E. montana* and *V. pusilla* are

still present. This assemblage is still indicative of a shady woodland, but what these changes mean in terms of habitat change is not immediately obvious. A slight increase in open-country species and of *Pomatias elegans* may indicate some local disturbance on the forest floor. The abrupt boundary between Layer 7 and the dark crumbly humic material beneath (Appendix 2) may indicate truncation and a hiatus, thus possibly representing a considerable time lapse between the two assemblages (cf. Carter 1990).

In the upper portion of this soil there is a reduction in all shade-loving elements. *Pomatias elegans* is significant, and open-country species, particularly the pioneering Vallonia, *V. costata*, increase. This is undoubtedly evidence of woodland clearance and localized ground disturbance (*Pomatias elegans*). In the buried turf (Layer 6) the trend continues, but *P. elegans* is no longer a significant component. The dominance of *Vallonia excentrica*, *Vallonia costata* and *Helicella itala* indicate a short, possibly trampled or grazed, dry grassland. This would seem, therefore, to confirm the field interpretation of a turf horizon and indeed, shell numbers increase to over 1000 per kilogram. Many of the shade-loving species did not return.

Colluvium (Layers 5 & 3)

The base of the main colluvial units (Layer 5) showed, surprisingly, an increase in the shade-loving group and also of *Trichia hispida* at the expense of most of the open-country species. The increase of *Carychium tridentatum* and *Punctum pygmaeum* is more likely to represent longer grass and reduction of grazing or occupation pressure than woodland regeneration. Subsequently these disappear and open dry downland, probably tilled, is evidenced by the high numbers of *V. excentrica* and the presence of *H. itala*. This is reminiscent of many colluvial and lynchet mollusc faunas (cf. Bell 1983). Layer 3, which is stratigraphically separated from Layer 5 upslope by the gravel lens, shows a change in the composition of the open country fauna. The abundance of *Pupilla muscorum* (at the expense of *V. excentrica*) might normally be seen to indicate grassland condition (cf. Evans & Williams 1991). However, the re-emergence of *P. elegans* indicates disturbance more consistent with tillage. On balance, this probably indicates tillage; the change in the molluscan fauna may reflect a change between Iron Age and Roman tillage practices. The

specific habitat changes cannot, however, be discerned.

Modern soil (Layer 1)

The highly calcareous and extremely silty horizon shows a similar mollusc assemblage. Changes are minor, though probably significant. *P. muscorum* is still dominant, and the Vallonias display an elegant antipathetic behaviour; that is *V. excentrica* declining with the expansion of *V. costata*. Also present are *C. tridentatum* and the Introduced Helicellids. These assemblages represent a more stable dry grassland. The base of the modern soil profile shows open conditions, but the increase in *C. tridentatum* and the Zonitids indicate longer, ungrazed grassland. The presence of *Cochlicella acuta*, which has a broadly maritime distribution, is noteworthy.

DISCUSSION

There can be no doubt that this colluvial sequence is of importance. It is, in part, similar to the mollusc sequence of deeply stratified deposits at Asham only 2.2 km to the south (Ellis 1986), again on a slope overlooking the River Ouse. The mature woodland identified at the base of the Grey Pit sequence may be of Atlantic age (i.e. later Mesolithic or earlier Neolithic) and is possibly represented by the charcoal of oak and pine (Table 2). A change in the woodland, probably dating to the Neolithic, can be seen from the mollusc assemblages. Limited local disturbances might have created slightly more open woodland, possibly represented by the presence of hazel charcoal. The buried soil seems to have survived to a total depth of about 0.2 m, but is distinctly less calcareous and more humic than the present-day grey rendzinas and colluvial brown earths. It may represent a compressed, or truncated, typical or calcareous brown earth soil. Certainly, the interpretation of a grassland turf seen in the section is supported by the molluscs and by the fact that the majority of the pottery seems to have come from this layer. The number of Late Beaker sherds may indicate occupation within the immediate vicinity. The density recovered is greater than that from Ashcombe Bottom (Allen 1994; in prep.) where intensive excavation was conducted, but the mean sherd size here is appreciably smaller. The recovery of food vessel sherds is also significant as they are rare in Sussex (Ellison 1980). The main example cited in Sussex is Belle Tout (Bradley 1970), but sherds have been recorded from Cliff Hill (Musson 1954,

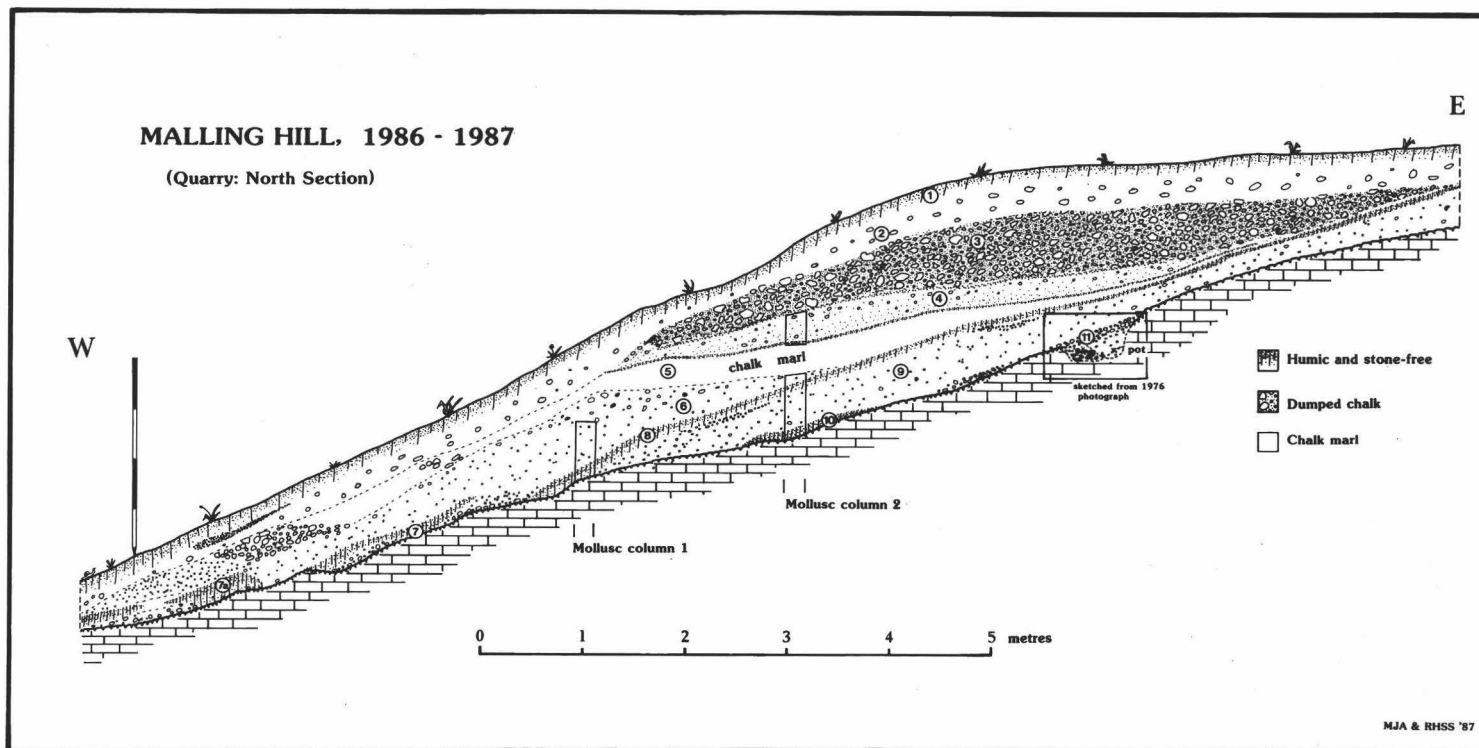


Fig. 5. Malling Hill: lynchet section.

no. 240) and Round-the-Down (Butler this volume).

The colluvium overlies this surface with a sharp boundary which may indicate loss of former soil, or colluvial, horizons. Indeed, the lack of Bronze Age pottery is perhaps surprising in view of the barrow immediately upslope, and of the number of sherds recovered in the vicinity from fieldwalking (C.E. Knight-Farr pers. comm.). The main colluvial episodes seem to have occurred during the Iron Age after a period of longer grassland. Tillage of the local slopes probably occurred, and may have been associated with the hillfort at Caburn and the local dykes at Ranscombe Camp.

Roman tillage was most probably associated with the adjacent farmstead and pottery recovered from the section matches that from the excavations at Ranscombe (*cf.* Green, in Bedwin 1978a). The fact that the mollusc assemblages indicate a possible change in tillage or farming practices is particularly interesting. This may be evidence of a real change in the local farming methods, a break between those of the native Iron Age population and those of Romanized influence. The medieval deposits are thicker further downslope from the location sampled. Although the mollusc evidence suggests open grassland and pasture, the aeolian nature of the sediments indicate that the silts had blown off local fields. The presence of a number of fragments of glauconite in the sediments may suggest that the greensand bench downslope was also being cultivated.

SUMMARY

This analysis has enabled three significant observations to be made:

- 1) the identification of two former deciduous woodland mollusc faunas;
- 2) the presence of Beaker occupation in the vicinity;
- 3) a possible difference between Iron Age and Roman cultivation practices.

LYNCHETS AT MALLING HILL (TQ 4232 1108)

A complex section of lynchets and deposits is exposed in a small post-war quarry on the western edge of Malling Hill (Fig. 2). The chalk pit is quarried into Middle Chalk and bisects a major plateau-edge lynchet. Between 1974 and 1994 the site has been the subject of a number of visits by the writer, of

investigations by Sarah Clark (1988) and of observations by Courty *et al.* (1989, fig. 7.5c).

A number of artefacts were recovered from both the scree and the exposed face. Initially, artefacts were recovered indiscriminately, but after 1977 a basic record was made of the location of all artefacts recovered. In 1986 the whole of the northern section of the quarry was cleaned, the location of artefacts recorded, and the section drawn (Fig. 5) prior to sampling for land Mollusca.

The area is rich in evidence of prehistoric activity. This includes a Neolithic long barrow and a number of Bronze Age barrows (see Fig. 2). Bronze Age socketed axes have also been recovered from the Down. Immediately to the north of the chalk pit is a reasonably well-defined prehistoric field system (Fig. 2), the systematic fieldwalking of which produced predominantly Iron Age and Roman pottery with small quantities of Bronze Age pottery and flints (O'Shea 1983; Gregory 1984; 1985). A number of Romano-British finds are known from the area, many of which are within the area of the Saxon cemetery (Norris 1956).

A large Saxon cemetery at South Malling lies to the west on the low spur overlooking the River Ouse (Norris 1956, 11). A mass grave of up to 13 murdered male victims was recovered in 1973 from an area immediately adjacent to the quarry pit section studied here (Lewis 1973; Allen in prep.). A radiocarbon date of 1010±80 BP (cal AD 980–1150 one sigma) was obtained from one of the skeletons (HAR- unpublished information from Sussex Archaeological Society).

THE STRATIGRAPHY (described and sampled 17 April 1986)
The colluvial sequence comprises a series of lynchets (Fig. 5) which form the lower edge of the prehistoric field systems beneath which runs a well-defined track. The chalk surface dips at about 16° and is interrupted by a series of stepped ledges which are probably negative lynchets.

The pit

The edge of a small, steep-sided pit (not illustrated) was noticed in section in 1976–77. Only a thin slice of the fill remained and even this was almost totally eroded by late 1977, but did survive until 1983 when it was sampled. The pit was filled with a dark soil with few chalk pieces. This feature produced three sherds of Peterborough style pottery (identified by P. L. Drewett and A. M. ApSimon).

The lynchet sequence (Full descriptions are given in Appendix 3.)

Weathered natural (Context 11): A highly calcareous lens of small and medium rounded chalk pieces in a silty loam; it immediately overlies the chalk in two of the negative lynchet steps on the upslope side.

Pre-lynchet buried soil (Context 10): Stone-free, humic silty clay with very rare small chalk pieces; a relict old land surface. This horizon is discontinuous and seems to be preserved in the localized negative lynchet platform.

Colluvium (Context 9): A yellowish-brown calcareous silty clay loam with many subangular small and medium chalk pieces comprises the first low lynchet accumulation.

Buried soil (Context 8): Dark greyish brown, highly calcareous, humic, stone-free silt loam overlying a weathered stony horizon which seals the lynchet and probably represents stabilization and limited *in situ* soil formation and worm sorting. This certainly gave the impression in the field of being a buried soil or turf line.

Buried soil (Context 7): This stone-free horizon has the same physical characteristics of Context 8 and may represent its continuation.

Colluvium (Context 6): Light brownish grey, highly calcareous, silty clay with common small and medium chalk pieces. It displays pseudomycelia (Evans 1972, 398). This is colluvial material and forms an extension of the former low lynchet (Context 9), creating a broad platform. It could not be determined in the field whether this was deliberately dumped to create a larger boundary, which would explain the preservation of the buried soil horizon (Context 8), or was a result of colluviation.

Chalk marl (Context 5): Chalk rubble and silty marl not dissimilar to periglacial Coombe Deposit. This has probably been dumped either to create a larger boundary, or as a result of digging upslope. No evidence of the latter could be seen in the immediate area.

Dumped soil (Context 4): Yellowish brown silty clay with many medium and large chalk pieces. This layer seems to be a mixture of soil material and chalk.

Table 4. Pottery recovered from cleaning the section at Malling Hill.

Pottery	Context						unstrat.	Total
	Pit	10	9	6 (6/9)	2			
Medieval					2		2	
Anglo-Saxon				2			2	
Fine Roman			1				1	
E. Sx. Ware		2	9			14	25	
IA fabric 3b			8	4	2	39	53	
IA fabric 5			2			1	3	
L Bronze Age		1					1	
Peterborough	3						3	
Total	3	1	12	14	4	2	54	
							90	

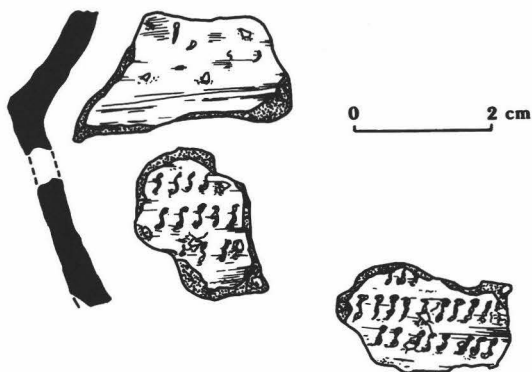


Fig. 6. Peterborough ware sherds from the pit at Malling Hill.

Chalk rubble (Context 3): Large angular chalk rubble with little matrix; an enigmatic layer which probably represents chalk excavated from further upslope.

Modern soil (Context 2): Greyish brown silty clay loam with common medium chalk fragments: the present brown or colluvial rendzina soil profile.

Turf (Context 1): Stone-free humic turf which supported short-turf species rich grassland.

The horizons primarily examined during all field visits were the colluvial layers of the lynchets (Contexts 6 & 9). These contrast with the overlying layers which give the impression of having been deliberately dumped.

ARTEFACTS

A number of artefacts recovered from the section and the scree by both the writer and Clark (1988) are detailed here (Table 4). Only the precise location of a few was recorded. Nevertheless, some basic chronology is indicated by the distribution of these finds.

Pottery

The present writer recovered 82 sherds between 1974 and 1986, and seven were added to this total by Clark's (1988) investigations and one by R. Lewis in 1973 (Table 4).

Neolithic

Three sherds were deep brown. They had a weakly fired matrix and the predominant inclusions were calcined flint; voids indicate that there had been some organic or calcareous inclusions. All three sherds belong to the same vessel. Some sand grains and a few chalk pieces were observed using a hand lens. This fabric probably equates with Drewett's fabric I (1980, 24), of local manufacture and common on chalk sites. Three rows of crude stab impressions were visible on one sherd. All

the sherds were gently curved and one (Fig. 6) had a return which possibly indicated that it had broken along an undecorated 'carination'. The vessel, therefore, seems to have been a small round-based open bowl typical of the late Neolithic Peterborough tradition (ApSimon pers. comm.) for which local parallels can be seen at Alfriston (Drewett 1975a), Selmeston (Drewett 1975b) and Offham (Drewett 1977).

Later Bronze Age

One sherd of flint-gritted fabric was recovered by Richard Lewis in 1973.

Iron Age

Three sherds of hard, silky, grog-tempered wares were recovered. These are similar to Hamilton's Bishopstone fabric 5 and are characteristic of the latest pre-Roman Iron Age in East Sussex (Hamilton 1977, 99), though its production continued throughout the 1st century AD (Green 1977, 155). One sherd examined by Sue Hamilton was thought to be comparable with the late Iron Age sherds from Bishopstone (Clark 1988) and thus probably dates from c. 30 BC to 70 AD.

The majority of the sherds (60%) were fine, flint-tempered, with iron oxide (possibly pisolithic) inclusions which Hamilton describes as 'burnished wares with sand and iron oxide inclusions' (1977, 90). These probably belong to Hamilton's Bishopstone fabric 3, which has a distinctive East Sussex distribution associated with Cunliffe's early Iron Age Kimmeridge/Caburn style group (Cunliffe 1978). Those sherds examined by Sue Hamilton (Clark 1988) probably belong to the earlier period (Hamilton pers. comm.) i.e. 900–700 BC.

Iron Age/Romano-British

Twenty-four sherds belong to the amorphous East Sussex Ware (Green 1977) of the late Iron Age and Romano-British periods. None of the sherds were particularly diagnostic, but some had slight finger grooves which might indicate that these come from handmade vessels that had been wheel-finished. These would be more typical of Romano-British forms (e.g. Green 1977, sherds 2, 15).

Roman

A single sherd of a Roman fine ware was recovered by Clark (1988) and was identified by David Rudling as a part of a flagon.

Anglo-Saxon

Two small, but unabraded sherds of dark, undecorated grass/vegetable-tempered pottery with some multi-coloured flint and coarse sand inclusions were recovered from the main body of the lynchet (Context 6 or 9). These seem to be similar to the pottery recovered from the 5th-century cemetery at South Malling (Norris 1956; Bell 1978, 46) and similar to the Anglo-Saxon fabric 2 from Bishopstone (Bell 1977).

Medieval

Two sherds of well-fired sandy fabric are typical of the 13th-/14th-century material from kilns at Barnett's Mead, Ringmer (Hadfield 1981).

Flints

A number of worked flints was recovered from the section, of which 72 were recorded. The majority of

these were secondary flakes but eight retouched flakes and four tools were also found. These included a small discoidal scraper and a small horseshoe scraper; both are typical of Beaker or early Bronze Age assemblages. A larger, bull nose scraper typical of cruder mature Bronze Age assemblages was recovered from Context 7. A single, unpatinated arrowhead was recovered from the scree. It was a straight-sided triangular piece which had been broken at both base and tip. Fine pressure, or soft hammer, flaking occurred almost perpendicular to the edges. It is possibly a barbed-and-tanged arrowhead, typical of the early Bronze Age, which was snapped in antiquity.

The flint assemblage indicates Bronze Age activity in the vicinity which is also shown by Gregory's finds from fieldwalking (Gregory pers. comm.).

ARTEFACT DISTRIBUTIONS

The Neolithic pit remnant, observed in 1976–77 and sampled in 1983, was sealed by the colluvial sequence. The only sherd of Bronze Age pottery was found in the land surface (Context 10) which antedated the lynchet, while the initial low lynchet (Context 9) contained the majority of the later Iron Age pottery. The later lynchet produced most of the Romano-British pottery. The provenance of the two Anglo-Saxon sherds is not certain, but they were recovered from the colluvium and are more likely to have originated from the later (Context 6) accumulation. No material was recovered from the dumped horizons, but the two sherds of medieval pottery were recovered low down in the subsoil (Context 2). This suggests that the formal dumping of material (Contexts 3–5) was post-Roman and prior to the 13th–14th century, i.e. Saxon.

MOLLUSCA

Spot samples were obtained from the pit fills and the immediately overlying colluvium in 1983. These were augmented by a series of 12 samples taken through the the main lynchet deposits (Fig. 5).

The pit produced a species-rich assemblage of Mollusca (Fig. 7; Table 5) dominated by shade-loving species (74%). *Carychium tridentatum*, *Discus rotundatus* and the Zonitidae were dominant; the only other numerous species was *Pupilla muscorum*, which accounted for nearly the entire open-country element of the assemblage. Of particular note is *Acicula fusca* which Evans (1972, 135) states is

MALLING HILL, 1986 - 1987

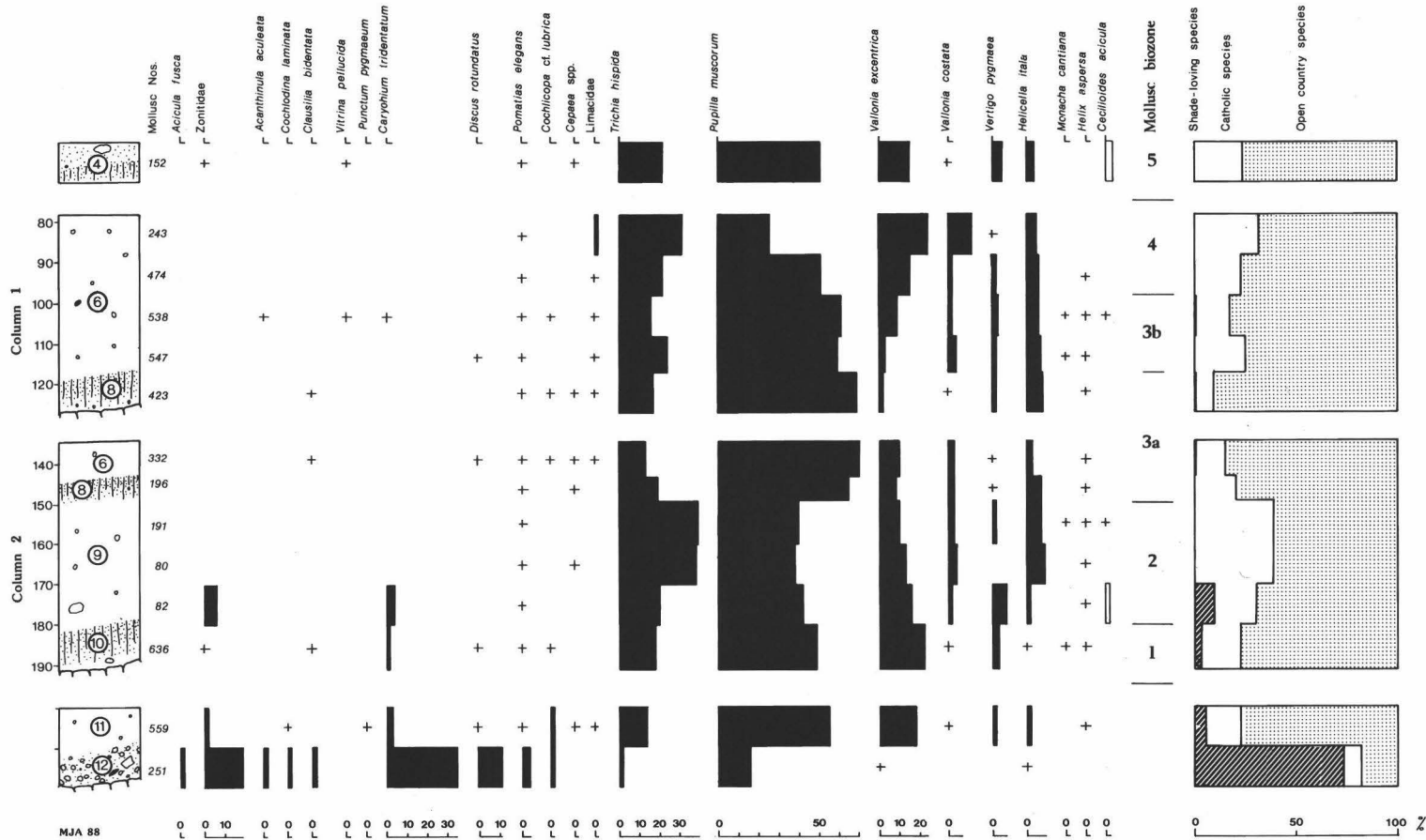


Fig. 7. Malling Hill: mollusc histogram.

Table 5. Malling Hill: mollusc data from the colluvium.

Sample Context Wt (g)	14	13	6	7	8	9	10	11	1	2	3	4	5	12
	12	11	10	9	9	9	8	6	8	6	6	6	6	4
	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
MOLLUSCA														
<i>Pomatias elegans</i> (Müller)	9	3	2	1	+	+	+	2	+	2	+	+	+	1
<i>Acicula fusca</i> (Montagu)	6	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Carychium tridentatum</i> (Risso)	87	4	6	3	-	-	-	-	-	-	-	-	-	-
<i>Carychium</i> spp.	-	10	4	-	-	-	-	-	-	-	0	-	-	-
<i>Cochlicopa lubrica</i> (Müller)	6	1	3	-	-	-	-	1	-	-	-	-	-	-
<i>Cochlicopa</i> spp.	-	8	4	-	-	-	-	1	2	-	1	-	-	-
<i>Vertigo pygmaea</i> (Draparnaud)	-	12	21	3	-	4	2	3	8	6	10	9	-	7
<i>Vertigo cf. pygmaea</i>	-	-	-	3	-	-	-	-	-	5	6	4	1	-
<i>Pupilla muscorum</i> (Linnaeus)	41	308	313	34	30	77	127	233	290	324	329	242	63	78
<i>Vallonia costata</i> (Müller)	-	5	8	2	2	4	3	6	2	22	13	11	29	1
<i>Vallonia excentrica</i> (Sterki)	3	101	142	13	10	20	15	32	9	16	51	71	59	23
<i>Acanthinula aculeata</i> (Müller)	5	-	-	-	-	-	-	-	-	-	1	-	-	-
<i>Punctum pygmaeum</i> (Draparnaud)	-	1	-	-	-	-	-	-	-	-	-	-	-	-
<i>Discus rotundatus</i> (Müller)	30	+	+	-	-	-	-	+	-	+	-	-	-	-
<i>Vitrina pellucida</i> (Müller)	-	-	-	-	-	-	-	-	-	-	2	-	-	1
<i>Vitrea crystallina</i> (Müller)	11	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Vitrea contracta</i> (Westerlund)	6	-	2	-	-	-	-	-	-	-	-	-	-	-
<i>Aegopinella pura</i> (Alder)	1	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Aegopinella nitidula</i> (Draparnaud)	15	5	4	4	-	-	-	-	-	-	-	-	-	-
<i>Oxychilus cellarius</i> (Müller)	4	5	2	1	-	-	-	-	-	-	-	-	-	1
Limacidae	-	1	-	-	-	-	-	1	2	1	1	2	4	-
<i>Ceciloides acicula</i> (Müller)	5	-	-	2	-	2	-	-	-	-	1	-	-	6
<i>Cochlodina laminata</i> (Montagu)	5	1	-	-	-	-	-	-	-	-	-	-	-	-
<i>Clausilia bidentata</i> (Ström)	5	-	1	-	-	-	-	1	2	-	-	-	-	-
<i>Helicella itala</i> (Linnaeus)	2	11	7	2	7	11	11	9	35	36	34	30	12	6
<i>Monacha cantiana</i> (Montagu)	-	-	1	-	-	1	-	-	-	1	2	-	-	-
<i>Trichia hispida</i> (Linnaeus)	5	80	116	16	30	74	37	43	71	134	88	105	75	33
<i>Cepaea nemoralis</i> (Linnaeus)	-	1	-	-	-	-	-	-	-	-	-	-	-	-
<i>Cepaea</i> spp.	-	2	-	-	1	-	1	+	1	-	-	-	-	1
<i>Helix aspersa</i> (Müller)	-	+	+	+	+	+	+	+	1	+	+	+	+	-
Taxa	17	17	16	11	8	9	9	13	12	11	12	9	8	11
Shannon Index (<i>H'</i>)	2.15	1.49	1.45	1.77	1.36	1.32	1.09	1.05	1.05	1.20	1.27	1.36	1.55	1.39
Total	241	560	636	82	80	191	196	332	423	547	536	474	243	152

NOTE: All totals exclude *C. acicula*.

anthropophobic; it is a species common in rich woodland, and uncommon on post-Neolithic sites. It is rare locally (Kerney 1976), but has recently been recorded at Round-the-Down in both the Bronze Age barrow (Allen, in Butler this volume) and the Grey Pit colluvium (above). The assemblage includes the rupestral species *Acanthinula aculeata* and Clausiliidae, and is undoubtedly one of shaded, probably deciduous, woodland with some opening of the canopy indicated by *P. muscorum*. This limited disturbance might account for the presence of *Pomatias elegans* but this may, however, have been living in the loose soil fill of the pit itself.

What is most striking about this assemblage is its contrast with assemblages from the overlying deposits. A number of species in the pit do not occur in the colluvial deposits: *Acicula fusca*, *Vitrina crystallina* and *Aegopinella pura*. The severity of this change certainly indicates truncation of the pit and

a hiatus within the sequence.

The colluvial deposits are characterized by open-country species with a dominance of *Pupilla* with *Trichia hispida* and *Vallonia excentrica*, shade-loving species never accounting for more than 10% and more usually representing less than 1%. These are undoubtedly assemblages of very open dry downland. Fluctuations in the assemblages indicate subtle, but significant, changes within the local environment and five mollusc zones were detected in this sequence (Fig. 7).

Zone 1

The basal samples of colluvium are dominated by *Pupilla* with both *Vallonia excentrica* and *Trichia hispida* each representing 10–20%. As *Pupilla* is a species of short grassland with localized patches of bare earth, these assemblages probably indicate a short-turf, grazed, grass downland environment. The more humic buried soil (Context 10) shows a significant increase in shell numbers typical of stabilization horizons. The colluvium

overlying this layer produced a similar assemblage indicating the erosion of this context upslope.

Zone 2

The assemblages from the main body of the initial lynchet showed a general decline in *V. excentrica* with a significant increase in *T. hispida* and a minor rise in *H. itala*. This assemblage is paralleled by assemblages from a number of colluvial deposits, many from Sussex (Bishopstone: Thomas 1977a; Kiln Combe: Bell 1983; and Southerham Grey Pit, above) and indicates local arable environs and confirms the ploughwash nature of the deposits and of the lynchet itself.

Zone 3a

Sealing the lynchet is a humic horizon in which not only are there changes in the mollusc assemblages, but an increase in mollusc numbers which coincides with, and confirms the presence of a buried soil. The histogram (Fig. 7) shows assemblages comparable with those described in mollusc zone 1, and thus, there is a return to stable, short-turf, probably grazed grassland locally. The lynchet was under grass and this soil accumulation ceased temporarily. Whether this was due to the colonization by vegetation which prevented further accumulation, to a general reduction in erosion or to the cessation of cultivation upslope is not determined.

Zone 3b

The lynchet/terrace deposit (Context 6) on the downward edge of the earlier lynchet produced similar assemblages, but showed an overall decline in *Pupilla* and a marginal rise in *V. excentrica*. Although these assemblages resemble those from short-turf grassland, there is some ambiguity as to the origin of the deposits, as it was not certain in the field whether they had been deliberately dumped or were a result of erosion.

Zone 4

At the upper portion of this lynchet sequence, *T. hispida*, *V. excentrica* and *V. costata* all increased and *Pupilla* declined along with overall shell numbers. This probably represents another localised episode of tillage.

Zone 5

The latest deposits sampled show a return to the open grassland type assemblages seen in mollusc zones 1 and 3.

The chalk marl (Context 5) was analyzed by Clark (1988) and produced relatively high numbers of shells which indicated open Holocene environments of arable or grassland contexts described above. The occurrence throughout the colluvium of two species, *Helix aspersa* and *Monacha cantiana*, both of which are considered to be Roman introductions (Kerney 1966), confirms the chronological evidence suggested by the pottery.

It is certainly evident that well-established open conditions had prevailed for a considerable time as the assemblages were virtually devoid of shade-loving species and represented both specialized and mature faunas. Short-turf, presumably grazed

grassland is seen through most of the sequence. Although this is only interrupted by limited periods of local tillage this may be due to the highly localized nature of the grassland, it being predominantly confined to the lynchet and boundary itself. Certainly, the assemblages recorded in the sequence equate well with the modern faunas of short downland turf locally.

DISCUSSION

The presence of the Neolithic pit, and its associated environmental evidence, which indicates deciduous woodland with only a limited clearance or glade, is of particular interest. There are few other Neolithic sites on this Down. Until this discovery, evidence for Neolithic activity was confined to the oval barrow on Cliffe Hill (Fig. 2). Molluscan analyses from other Neolithic sites, for example, Bishopstone (O'Conner 1977), Alfriston (Thomas 1975) and, more locally, Offham (Thomas 1977b), also indicate an element of woodland clearance. There is thus evidence of woodland clearance of the downland in the vicinity at c. 3200–2900 BC, and this date would fit well with the Peterborough pottery recovered. 'The evidence for Neolithic settlement sites in Sussex is still very scanty' (Drewett 1978, 23) and this evidence alone can do little to further this, except to add a potential site. The environmental evidence, however, is perhaps of more significance and is discussed below.

Although residual flint artefacts were found within the lynchets and scree, no deposits could be assigned to the Bronze Age/earlier Iron Age, despite evidence for activity of these periods upslope (O'Shea 1983; Gregory 1985). The series of stepped, negative lynchets terraced into the chalk slope may, however, be a testimony to Bronze Age tillage. The severe hiatus in the sequence and removal of all pre-Iron Age colluvium deprives us of a potentially considerable portion of early deposits. It is possible that a more complete sequence of deposits survives in The Coombe: a large incised dry valley to the south.

There are two main phases and causes of debris accumulation, the first is a typical lynchet formation and the second, one of deliberate dumping of material, probably during Saxon times. The lynchet formation can be attributed to late Iron Age/Romano-British tillage of the western slopes of Malling Hill, following a period of pasture and creation of a low lynchet on the downslope edge of

the field. Subsequent establishment of a short grass turf over the lynchet does not necessarily imply the cessation of tillage, just the stabilization of a grassy field boundary. A second stage of accumulation on the southern edge of the low lynchet created a broad platform or terrace. As the origin of this feature has not been determined (it might represent later colluvium, or may have been deliberately deposited), it is difficult to interpret the molluscan assemblage more fully than to say that it was derived from a grazed downland environment.

Evidence for later Iron Age and Roman agriculture accords with Gregory's evidence from the ploughed-out field systems upslope to the south and east which indicates Iron Age systems on the hill top and brow, and Roman fields on the slopes (Gregory 1985). Occupation during the later Iron Age and Roman period is well attested in the area (Fig. 2) and a small Romano-British farmstead excavated on the southern side of this downland (Bedwin 1978a), produced a similar, though much larger, assemblage of pottery (Green 1978).

The second main formation of this sequence is a result of deliberate dumping. The chalk marl was probably quarried from upslope, though the surprising number of shells in this (Clark 1988) indicates that it was not freshly excavated. After a minor lacuna and temporary stabilization (grass), a major deposit of chalk rubble was added. This considerably enlarged this boundary. In fact, at its greatest height, most of the sequence (1.4 m of 2 m) was deliberately created, making a sizeable boundary bank which runs along the break in slope. This may be contemporaneous with the major 5th-century Saxon cemetery known at South Malling. These deposits may, therefore, represent the enlargement of a pre-existing field boundary. It is relatively common for Saxon boundaries to reflect boundaries of Iron Age or Roman date (Bell 1978, 68; Bonney 1972). The boundary bank defines the edge of the Malling Hill below which the present-day trackway runs. Its location and size make it a formidable feature which is readily observable from the opposite side of the Ouse valley. What precisely it delineates remains, unfortunately, obscure, but if it is related to the large and complex royal Saxon estates in the area, documentary evidence might help resolve this mystery.

It is unfortunate that such a dramatic lynchet section does not contain more information about the prehistoric land-use of the western side of

Malling Hill to complement the work from Round-the-Down. Evidence for both Neolithic occupation and environment may be a significant contribution to studies of this period in Sussex. The section itself records evidence for Iron Age and Bronze Age field systems which were enlarged to form a boundary bank in the Saxon period. It is on this lynchet about 25 m to the north that a series of up to 13 late-Saxon skeletons were excavated by Richard Lewis (Allen in prep.).

HUMAN ECOLOGY AND LAND-USE HISTORY OF THE DOWN

There is no artefactual or monumental evidence for Mesolithic or earlier Neolithic activity on the Down. Molluscan evidence from the South Downs consistently shows a wooded environment prior to 4000 BC and charcoals frequently found include hawthorn, hazel and oak. This suggests that these species may have been growing on the South Downs where that woodland may also have included pine (Grey Pit charcoals). The high percentages of pine from the pollen sequences in the Vale of the Brooks dating from before 4000 BC to 1250 BC (Thorley 1971; 1981) suggest that pine was possibly present on the chalk in the middle Holocene (Allen 1994; Allen & Scaife in prep.). Pine charcoals have also been recovered from ancient tree hollows near Lewes at Ashcombe Bottom (Allen 1994) and Itford Bottom dating to 8020–7540 cal BC (8770±85 BP, BM-1544; Bell 1983). On Salisbury Plain, Wiltshire, pine charcoals have been also been recovered from Mesolithic features; a ditch at Strawberry Hill buried under nearly 3 m of colluvium was dated to 8920–8080 cal BC (9350±120 BP, OxA-3040; Allen 1992; 1994) and pine charcoals from postpits at Stonehenge produced a range of dates from the 8th and 9th millennia BC (Allen 1995). It has been argued that pine could not survive on thin chalkland soils as it tends to suffer from chlorosis, a condition arising from its inability to obtain sufficient magnesium in the presence of calcium carbonate (Thorley 1971), but I have suggested that pine might have been a significant component of the chalkland during the later Mesolithic–Neolithic (Boreal–sub-Boreal) woodland (Allen 1994; Allen & Scaife in prep.) because of thicker, less calcareous soils that existed then (Limbrey 1978; Allen 1988). Although there is no direct evidence for human activity on the Down at this period, the presence of charcoals in the

Table 6. Occurrence of final Neolithic and early Bronze Age artefacts.

Pottery Flint	L Neo	Final Neo		E B Age		L B Age
	P	MB	DB	LB	FV	FGW
Malling Hill	+				+	+
Grey Pit		+	+	+	+	
Glynde		+	+	+		
Round-t-Down		+	+	?	+	+

NOTE: Flint was not collected at Grey Pit or Glynde.
+ = present

P = Peterborough; MB = Middle Beaker; LB = Late Beaker;
DB = Domestic Beaker; FV = Food Vessel; FGW = flint-gritted
ware; s = scrapers; bta = barbed-and-tanged arrow.

basal deposits at Grey Pit might be taken as evidence of campfires, but need not imply any clearance as wood could easily be collected. However, pollen analysis of alluvial sediments in the Ouse Valley between Offham and Malling Hill indicate limited woodland clearances at about 4500 BC and these were coincidental with both an increase in grasses and the occurrence of cereal pollen (Brooks unpub.; Wing 1980; Robinson & Williams 1983). Woodland regeneration had occurred by about 3500 BC. This picture is confirmed by Burrin and Scaife (1984) who indicate periodic clearance prior to 3000 BC from pollen analysis elsewhere in the Ouse Valley.

Drewett (1978, 28) states that 'very little . . . demonstrably Late Neolithic is known from Sussex', but Gardiner's research revealed that large late Neolithic-early Bronze Age flint scatters do exist and that 'there is a vast amount of evidence for late Neolithic activity in Sussex . . . this is mostly artefactual, and in contrast to the earlier Neolithic, did not apparently involve the construction of still visible monuments' (Gardiner 1988, 445). However, on this Down, later Neolithic activity is only evidenced by the oval barrow on Cliffe Hill (presumably c. 3300-2900 BC) from which a quartzite/sandstone pebble mace-head (Woodcock & Woolley 1986, no. 200) may have originated (Evans 1897, 229). Although in artefactual and monumental terms, the area seems superficially to be almost devoid of activity, both colluvial sequences reported here produced evidence of later Neolithic and Beaker activity (Table 6), and were associated with well-stratified environmental data for the history of the local land-use. Indeed, at Malling Hill the discoveries of a Neolithic pit and pottery shows that such sites may be more

widespread than is perceived in many recent publications (*cf.* Drewett *et al.* 1988) and the recent discovery of a Neolithic henge monument to the north of Brighton confirms this. Excavations of colluvial deposits at Ashcombe Bottom (Allen 1994; Allen in prep.) produced both later Neolithic pottery and environmental information. The later Neolithic environment is also inferred from land snails from the Round-the-Down barrow.

By the later Neolithic the character of the woodland may have changed, as shown by the difference in the faunal composition of the woodland mollusc assemblages from the base of Grey Pit and those in the pit at Malling Hill. The reasons for this change in the mollusc fauna are not understood. It may be a response to a late Neolithic secondary, or regenerated, more open woodland such as those discussed from pollen evidence by Scaife (1980; 1987). Indeed, the late Neolithic pit (Malling Hill) indicates activity and presumably was accompanied by some localized clearance, but the extent or nature of the clearance was not established. Again such localized activity is suggested by Burrin and Scaife (1984).

Beaker pottery was recovered in relatively large quantity from fieldwalking of ploughed barrows at Glynde (Biggar 1984). The Beaker and Food Vessel sherds at Grey Pit are accompanied by evidence of clearance within a more open woodland with ash and oak. Again, the extent of this clearance is unknown, but it seems likely to have been the cause of the initial erosion. We may suggest that much of the Round-the-Down area, and by inference Glynde too, was cleared and this is in contrast with the pollen evidence for continued woodland from the Vale of the Brooks pollen sequence (Thorley 1981). In fact, it is probable that areas to the south and east of the Down were cleared for the barrows (Glynde) and possibly for settlement (Grey Pit). The density of pottery at Grey Pit is higher than at the settlement at Ashcombe Bottom (Allen 1984; 1994; in prep.) and may argue for settlement within the vicinity.

The early Bronze Age (1500-1200 BC) is well represented by a substantial number of barrows which at Oxteddle Bottom included one of only two rich early Bronze Age burial assemblages in Sussex. The finds from this barrow included a composite jet, amber and faïence necklace, a bronze finger ring and a secondary series collared urn (Curwen 1954, fig. 45). Other primary series collared urns are known

Table 7. The landscape and farming history of the Down.

GREY PIT				MALLING			ROUND-THE-DOWN			
layer period	descrip.	charcoal	land-use	layer period	descrip. land-use		ditch fill	period	land-use	
1				2	Med col	grass	mod.	Med	arable	
				3	?AS	dump				
				4	?AS	mix	grass			
				5	?AS	dump				
3	Rom coll	oak	arable	6	IA/RB	col	arable	tert.	IA/RB	open fields but mound overgrown
5	IA/RB	dark coll	hawt.	8		OLS	grazed			
			long grass	9	IA	col	arable			
				10	LBA	OLS	grazed	sec.	M-LBA	local shrub regeneration
6	EBA	turf/ eroded OLS	oak,ash hazel					prim	EBA	long grass in wood clearing
7	Beaker	OLS	oak,ash							
			clearance wood [3]							
					11Peterborough	Pit wood [2]				
8	-	-	pine							wood [1]

coll = colluvium; OLS = old land surface

from Cliffe Hill and Lewes Golf course (Ellison 1978; Longworth 1984) and urns and incense cups from barrows north of Mount Caburn (Ellison 1978). The numbers of barrows on Malling Hill, Cliffe Hill, Saxon Down and Caburn are an indication that most of the hilltops were cleared of trees. At Grey Pit the eroded soil (Layer 6) may indicate clearance along Round-the-Down, but evidence exists for grazing of the slopes of Ranscombe Hill which produced a short-turf grass (Grey Pit, Layer 6). On Round-the-Down itself long ungrazed grassland existed, but some remaining woodland may have existed near by (Allen, in Butler this volume). On topographical grounds it would be sensible to postulate that this woodland was in Machine Bottom, as the Round-the-Down barrow is false-crested and it can be seen on the skyline from the Ouse Valley in the east, but not from Machine Bottom to the west.

It is possible that a number of field systems below Saxon Down, on Malling Hill and around Bible Bottom belong to the early or middle Bronze Age and are associated with the majority of the barrows on the Down, including Round-the-Down. Thorley

(1981) contends that the Downs around Lewes were well-wooded until 1450 BC (middle Bronze Age), but the direct environmental evidence from Grey Pit and Round-the-Down alone indicates the presence of clearances, which, if combined with indirect evidence of the construction of Bronze Age round barrows and the large field system, implies that much, if not most of the Down was cleared well before this.

There can now be little doubt that Thorley's pollen diagrams from the Vale of the Brooks represent primarily a very local pollen catchment, that is, one of small area: probably only the Ouse Valley floodplain around the Vale of the Brooks. Her results show alder and hazel (latter, possibly also including *Myrica gale* — bog myrtle, in this pollen type) on the valley floodplain; i.e. alder carr and the woodland elements on the fringes. The total arboreal pollen levels in the Lewes I and Lewes II diagrams are evidently over-represented as a result of differential dispersal of pollen (Tauber 1965; 1967; Edwards 1982), especially within alluvial catchments (Burrin & Scaife 1984). Such biases can be extreme

on woodland edges and hazel, for instance, may be over-represented by as much as 500%! Care must therefore be exercised when using these data and previous uncritical use of Thorley's interpretations may prove unreliable.

Farming of the Down, however, can be seen to have been more extensive in the late Bronze Age. Not only were field systems in use and cultivated, but pasture is evident from the work at Malling Hill. The large number of metal objects found on the Down is a testimony to the density of activity there.

More complex, large mixed farming systems can be seen over much of the Down during the Iron Age. At about 600–400 BC, Caburn, prior to becoming a hillfort, was a large palisaded farm (Wilson 1939) and Bedwin suggests that 'it should be regarded as a very important farmstead' (1978b, 42). At this time the cross dykes at Ranscombe, previously considered an early 'hillfort', were constructed and these too may delimit areas of agricultural land or stock enclosure; land snails indicate grassy downland (Appendix 1). However, Dimbleby (1985) recovered evidence of *Pteridium aquilinum* (bracken) at Ranscombe. This is a species that grows on acidic or loessic soils and does not exist on the chalklands today. Its occurrence may possibly be taken as an indication of localized deeper soils (as at Ashcombe Bottom: Allen 1994), but it may have been introduced to the site for bedding or litter. The continuance of mixed farming is indicated by the colluvial and molluscan evidence for pasture at both Grey Pit and Malling Hill.

Farming continued during the Roman period with a number of native Romano-British farmsteads (e.g. Ranscombe and enclosures on Saxon Down). There is a considerable quantity of Roman coins, pottery and other artefacts including a glass armilla from the Down. This again is testimony to the increased activity in the Roman period and may confirm the expansion of farming at this time. More specifically, an increase of the area under cultivation is tentatively indicated as Ranscombe Hill (Grey Pit), Round-the-Down and Malling Hills were all under the plough. More significant, however, is the indication of the adoption of new farming practices suggested by the subtle, but distinct, change in the molluscan assemblages at Grey Pit.

This paper does not attempt to discuss the the Saxon activity on the Down. There is evidence of significant activity at South Malling and a number of other major Saxon finds have been made on the

Downs. The evidence here, however, does indicate the remodelling of the field system on the edge of Malling Down. A Saxon execution pit was excavated in the edge of these 'lynchets' by Richard Lewis in 1973 (Allen in prep.). Recent historical research by John Bleach will provide more detailed evidence of the Saxon period (Bleach pers. comm.)

CONCLUSION

This work has demonstrated:

1. that pine may have been present on the chalk Downs in the Late Mesolithic and Neolithic periods;
2. the finding of two new late Neolithic/early Bronze Ages sites. It is perhaps more significant that these 'sites' were found by straightforward, but detailed investigations which did not include the normal reconnaissance method of fieldwalking, used to great effect elsewhere, e.g. Bullock Down (Drewett 1982). This amplifies the arguments I have published previously (Allen 1988; 1991) that surface reconnaissance can produce major biases in the data set retrieved and thus flaw the final interpretation of the history of past human activity within that area.
3. This paper reinforces the combined importance of a mosaic of dated environmental data in augmenting the interpretation of human activity given by more usual artefactual evidence from archaeological sites and Sites and Monuments Record data. For archaeology to succeed it must consider more than simply sites and artefacts, and Bradley, for example, quite rightly questions 'whether landscape history can really be studied using an intellectual structure formed almost entirely around artefacts' (1978, 2). It must be directed toward a fuller understanding of the human ecology of prehistoric communities (Butzer 1982). Therefore, any study of the human environment needs to be thoroughly integrated into the archaeological investigation. It is only when environmental analysis is competently placed within an archaeological framework that the use of the natural and environmental sciences as a method of enquiry can truly be archaeologically relevant.

ARCHIVE

The Grey Pit archive (artefacts and identified molluscs) is retained at Department of Archaeology (A. M. ApSimon), University of Southampton along with all the finds from Malling Hill. The paper archive from the site and molluscs from Malling Hill have been deposited at Barbican House Museum (Acc. No. 1995.1)

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APPENDIX 1:

MOLLUSCA AND CHARCOALS FROM EXCAVATIONS AT RANSCOMBE CAMP, 1960

Table 8. Land molluscs and soil data from Ranscombe Camp 1960.

\Sample \Location \Wt (g)	[1] ph 1 190	[2] ph 2 30	[3] ph 3 41	[4]	[5] F2 layer 7
<i>Pomatias elegans</i> (Müller)	+	-	+	-	+
<i>Carychium tridentatum</i> (Risso)	-	-	-	-	1
<i>Vertigo pygmaea</i> (Draparnaud)	-	-	-	-	1
<i>Pupilla muscorum</i> (Linnaeus)	2	-	-	-	4
<i>Vallonia costata</i> (Müller)	1	-	-	-	2
<i>Discus rotundatus</i> (Müller)	1	-	-	-	-
<i>Aegopinella nitidula</i> (Draparnaud)	2	-	-	-	1
<i>Oxychilus cellarius</i> (Müller)	-	-	1	-	-
<i>Cecilioides acicula</i> (Müller)	1	-	-	-	-
<i>Clausilia bidentata</i> (Ström)	-	-	-	-	1
<i>Trichia hispida</i> (Linnaeus)	1	-	-	-	2
<i>Cepaea nemoralis</i> (Linnaeus)	-	-	-	1	-
<i>Helix aspersa</i> (Müller)	-	-	-	-	8
Total	7	0	1	1	20
Magnetic susceptibility ¹	6	2	3	-	-
pH	8.1	8.5	8.3	-	-

NOTE: Totals exclude *Cecilioides acicula*.

¹ SI units $\times 10^{-8}$ SI/Kg.

Table 9. Charcoal from Burstow and Holleyman's excavations at Ranscombe.

Sample	Location and description	Charcoal ident.
[1]	Site E CO -10. Bottom of post-hole	Mainly <i>Quercus</i> but some frags. of <i>cf. Fraxinus</i> (ash)
[6]	F2 (7)	<i>Quercus</i> sp. (oak)
[7]	Ranscombe 59. lg C. Belongs with bag No. 29	Mainly <i>Quercus</i> . Contains fragments of round wood twigs c. 9.3 mm diameter. Unlikely to be from timber post

Three small air-dried soil samples, two samples of hand-picked land snails and three tins of 'charcoal' from Burstow and Holleyman's (1964) excavations at Ranscombe Camp, Lewes in 1959-60 were kindly made available for analysis and identification by Fiona Marsden.

MOLLUSCA

All three soil samples were very small (Table 8) and came from post-holes from the entrance excavated in site (cutting E). Full details of all samples are given in the archive. Samples from post-holes 2 and 3 produced no or very few shells. Neither produced any charcoal. The sample from the third (as yet unidentified post-hole) produced eight molluscs (Table 8), and a number of fragments of charcoal. The depauperate mollusc assemblage did, however, represent over 42 molluscs per kilogram. Samples from post-holes are notoriously difficult to interpret as Dimbleby (1985) adequately explains. This assemblage, however, is probably derived from the old land surface, especially as the post-hole was sealed by the bank. It

produced species typical of open dry grassland (*Pupilla muscorum* and *Vallonia excentrica*) as well as species of more mesic environments e.g. *Aegopinella nitidula* and *Discus rotundatus* and might indicate open long grassland conditions.

Hand-picked land snails

Two samples of hand-picked land snails were analyzed and identified (Table 8). A collection of 7 *Helix aspersa* from F.1. (2) [sample 5] was carefully washed and the soil from its interstices was passed through a 0.5 mm mesh sieve. Surprisingly this yielded 20 apical and apertural fragments including one relatively large apical fragment of *Helix aspersa*. The complete shells of *H. aspersa* were carefully examined and no damage or marks could be observed on, or around the apertures. It is therefore assumed that they were not discarded as the waste product of eating. As it is likely that the shells were found in close proximity, it is probable that they were a hibernating group of adults from amongst which the specimens examined failed to survive through the winter. They do, however, suggest a Roman rather than Iron Age date as Kerney (1966)

suggests that this species were brought over to the British Isles by the Romans. This date cannot be strictly adhered to, and the south coast is likely to have seen the earlier colonisation of such species, being so close to the coast and trade contact zone.

CHARCOAL SAMPLES

The separate charcoal samples and that extracted from sample [1] were examined and identified (Table 9). No other plant macrofossils were present.

CONCLUSIONS

The charcoal indicates that the timbers of the palisade were of oak, and possibly ash. The post-holes were predominantly packed with chalk, rather than soil material and the depauperate mollusc assemblages are especially difficult to interpret. They do not, however, indicate woodland conditions, nor do they suggest open arable activity. They may reflect grassy downland habitats. The preponderance of *Helix aspersa* from F.1. (2) suggest a Romano-British rather than Iron Age date as it is thought that this species was brought over by the Romans (Kerney 1966).

APPENDIX 2: SOIL DESCRIPTIONS FROM GREY PIT

General descriptions of soils at sampling point (rapidly taken while sampling up a 40 ft, unsecured ladder). See Figure 3.

Context No. Description (and depth)

Layer 1
0-0.1 m Very dark greyish brown (10YR 3/2) humic silty loam; weak medium to coarse granular structure; many fine fibrous roots; almost stone-free; calcareous; abrupt smooth boundary. Turf.

Layer 2
0.1-0.3 m Brown (10YR 5/3) highly calcareous silt loam; almost white in places as a result of pseudomycelium; weak medium granular structure; common small rounded chalk pieces; rare medium flints; 5% medium to coarse macropores, many are vertical earthworm burrows containing very dark greyish brown (10YR 3/2) humic silty loam from above; diffuse wavy boundary. Brown rendzina.

Layer 3
0.3-0.5 m Yellowish brown (10YR 5/8) silty clay; fine subangular blocky structure; many small and very small rounded chalk pieces; rare small and medium flints; clear wavy boundary.

Layer 5
0.5-0.8 m Light yellowish brown (10YR 6/4) silty clay grading to a dark yellowish brown (10YR 4/4); fine blocky to subangular blocky structure; many small chalk pieces grading to few-common small chalk pieces at base; clear smooth boundary.

Layer 6
0.8-0.89 m Brown (7.5YR 4/2) silt loam; firm coarse granular structure; few stones — except occasional discontinuous lenses of small and very small chalk pieces; abrupt smooth boundary. It was patchy in its distribution.

Layer 7
0.89-1.02 m Brown (7.5YR 4/4) silty clay; subangular blocky structure; few very small and small chalk pieces; clear wavy boundary.

Layer 8
1.02-1.16 m Dark brown (7.5 YR 3/2) silty clay loam with few fine mottles of dark reddish brown (5YR 3/4); weak fine subangular to very coarse crumbly granular structure; rare chalk pieces and occasional flints; sharp broken boundary.

Layer 9
1.16 m + Loose large and medium subangular chalk pieces set in a matrix of very small rounded chalk pieces or patches of marl; few medium to large marcasite/iron pyrites nodules and stains noted.

APPENDIX 3: SOIL DESCRIPTIONS FROM MALLING HILL

Soil descriptions at mollusc column 1 (Fig. 5).

Context No. (and depth)	Description
Context 1 0–0.17 m	Dark greyish brown (10YR 4/2) calcareous silty loam; few small chalk pieces; fine friable subangular blocky structure; many fine fibrous roots; sharp smooth boundary. Colluvial brown earth/brown rendzina.
Context 2 0.17–0.23 m	Greyish brown (10YR 5/2) silty clay loam; fine subangular structure; common medium chalk pieces, rare flints; sharp smooth boundary.
Context 5 0.23–0.57 m	White (2.5YR 8/2) to pale yellow (2.5YR 8/4) marl with a calcareous silty matrix (not unlike Coombe Deposits); common medium subangular to rounded chalk pieces, rare large subangular chalk pieces; rare flint nodules; no structure apparent; sharp smooth boundary.
Context 6 0.57–1.08 m	Light brownish grey (10YR 6/2) silty clay; fine subangular blocky structure; common small and medium chalk fragments, rare flints; highly calcareous, displays pseudomycelium on inter ped and weathered surfaces; mollusc fragments observed throughout context; clear wavy boundary.
Context 8 1.08–1.2 m	Dark greyish brown (10YR 4/2) humic silt loam; coarse granular to fine subangular blocky structure; almost stone-free; shells noticed; broken boundary over chalk but clear wavy boundary over colluvium (Context 9). This has the field appearance of a buried soil or turf horizon (typical/brown rendzina).
Context – 1.28–1.4 m	Regolith. Weathered brecciated chalk fragments.

Soil descriptions at mollusc column 2 (Fig. 5).

Context No. (and depth)	Description
Context 3 0.32–0.66 m	Large and medium angular and subangular chalk rubble with little matrix; abrupt smooth boundary.
Context 4 0.66–c. 0.97 m	Yellowish brown (10YR 5/6) silty clay; many medium and large chalk pieces, rare flints; no structure observed; sharp smooth boundary.
Context 5 0.97–1.34 m	Calcareous chalk marl (see descriptions above: column 1)
Context 6 1.34–1.43 m	Light brownish grey (10YR 6/2) silty clay; fine subangular blocky structure; common to abundant small chalk pieces, common medium chalk pieces; clear wavy boundary.
Context 8 1.43–1.49 m	Dark greyish brown (10YR 4/2) silt loam; fine subangular structure; essentially stone-free; highly calcareous; many fine to medium macropores; clear wavy boundary. This has the field appearance of a buried soil or turf horizon (typical/brown rendzina).
Context 9 1.49–1.8 m	Yellowish brown (10YR 5/4) silty clay loam; medium subangular blocky structure; many small and medium subangular chalk fragments, rare medium flints; sharp broken boundary over chalk, abrupt smooth boundary over Context 10.
Context 10 1.8–1.91 m	Brown (10YR 4/3) humic silty clay; coarse granular to fine subangular blocky structure; stone-free. Discontinuous, probably an old land surface/buried soil horizon — typical (humose) rendzina.
Context – 1.91–2.03 m	Regolith (see description above).

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Late Iron Age and Romano-British occupation at Ounces Barn, Boxgrove, West Sussex; excavations 1982–83

by Owen Bedwin &
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During two seasons of fieldwork at Ounces Barn, Boxgrove, the Field Archaeology Unit excavated and recorded the eastern terminal of the Devil's Ditch, a small area of a late Iron Age enclosure and numerous features of the Romano-British period. In addition, artefacts of the early and middle Bronze Age were retrieved. Pottery from the Devil's Ditch indicates that it was starting to be infilled during the first ten to thirty years after the Roman invasion; construction of this feature in the late pre-Roman Iron Age seems likely. Moulds for the production of coin blanks were recovered from the late Iron Age enclosure ditch. Its relationship to the putative territorial oppidum represented by the Chichester Entrenchments is discussed. Romano-British occupation is represented by several ditched enclosures, pits, post-holes and gravelled areas. Datable material indicates that activity was at its peak in the first 150 years after the conquest. However, artefacts dating to the 3rd and 4th centuries were recovered in sufficient quantities to indicate the longevity of several features and to suggest that activity continued into the latter half of the Romano-British period.

INTRODUCTION

Rescue excavations at the Ounces Barn site were undertaken over two seasons by the Field Archaeology Unit of the Institute of Archaeology, University of London. The first season, including the excavation of a section across the Devil's Ditch, has already been published in interim (Bedwin & Orton 1984). However, as this feature forms an integral part of the wider excavation it will be necessary to recapitulate the findings in some detail.

One of the authors (OB) was informed by F. G. Aldsworth, then County Archaeologist for West Sussex, of the discovery of a small ditch ('Ditch 1981' in Fig. 3) containing Roman pottery in Amey's Eartham Pit (OS grid ref. SU 9220 0845) to the east of Boxgrove Common. The find, made by the quarry foreman, Mr G. Udell, proved to be part of a Romano-British occupation area. In addition, it became apparent that an eastern terminal of ditch EWA(i) (Williams Freeman 1934, illus. opp. p. 56) of the Chichester Dykes System was also present and was threatened by gravel extraction. This part of the earthwork complex is commonly known as the Devil's Ditch.

Current dating of the Chichester Dykes to the late pre-Roman Iron Age is based on a few sherds of pottery (Bradley 1971, 35; Murray 1956, 143) (Bradley and Murray's excavations are located in Fig. 2, nos. 1 & 3) and morphological similarities with other dated earthworks (Bradley 1971). However, as some excavated sections have suggested a late-medieval date (Holmes 1968; Bedwin 1982) (located in Fig. 2 as nos. 2 & 4 respectively), the proximity of this newly discovered Romano-British occupation area suggested the potential for firm dating from artefacts incorporated into ditch fills or by direct stratigraphic relationship. Therefore, it was decided to carry out rescue excavation in advance of the quarrying of an area to the west of Mr Udell's discovery to incorporate the eastern terminal of the Devil's Ditch. The excavation, undertaken with HBMC funding, was directed by Owen Bedwin and supervised by Mark Roberts and Mandy Gee. Chris Place compiled the excavation report.

LOCATION (Figs. 1, 2 & 3)

The site lies on a gentle, south facing slope at the foot of the chalk escarpment between 40 m and 50 m

OD. Situated within the Upper Coastal Plain (as defined by Hodgson 1967), the site is on the extremely flinty phase of the Charity Series soils derived from a flinty silty Head. This also contains the internationally important *in situ* Lower Palaeolithic site, currently the subject of a major excavation programme directed by Mark Roberts of the Field Archaeology Unit. A series of dry valleys run southwards down the scarp edge immediately to the north. The most prominent of these is just to the north-east of the site.

THE EXCAVATION

Over the two seasons an irregular shaped area (Fig. 4) measuring approximately 70 m east-west and 74 m north-south (maxima) was stripped of top-soil. This can be divided approximately in half with the first season's work concentrating in the northern half. Top-soil was stripped using a D6 and scraper, with a JCB 3 for more restricted clearance within sub-soil hollows. A complex of linear ditches, gullies, small pits, post-holes and gravelled areas were recorded.

DITCHES

Ditch 1 (Context 284) (D1, Figs. 4 & 5)

This ditch is north-south aligned, with a return at the southern end suggesting two sides of an enclosure. The ditch varies in cross section with a maximum depth and width of 2.00 m and 1.60 m respectively. The sections are predominantly 'V' shaped in profile with a flat bottom, in some cases

restricted to a slot-like feature. Although there was no evidence for post pipes, the slot may suggest a palisade. Two other sections display a 'U' profile and there is no asymmetry within the fills to suggest the position of a bank. The lower fills (Contexts 337, 339, 389, 402 etc.) are largely aceramic, with only one sherd of pottery, possibly Bronze Age, recovered from the secondary fills. The uppermost fills contain several sherds of late Iron Age pottery (Fabric 2b, 3rd century AD to 1st century AD), two sherds of Dressel 1 (probably 1b) amphora, and ten of the thirteen Bronze Age sherds recorded for the site. Iron Age coin mould fragments were also recovered from upper fills (Contexts 223, 285; see catalogue of metallurgical remains, Nos. 1 & 2), though late-1st-century pottery (one sherd) provides a *terminus post quem* for this phase of ditch infilling. Whilst the primary silts lack firm dating evidence, the remaining evidence suggests a prehistoric, probably late Iron Age date and it is likely that Ditch 1 represents the western edge and south-west corner of an enclosure (Enclosure 1, Fig. 4).

Ditch 2 (Context 291) (D2, Figs. 4 & 5)

This feature is a shallow (maximum 0.60 m) 'U' profiled ditch parallel to, and stratigraphically later than, Ditch 1. It contains a pottery assemblage (Context 292) consistent with a pre-Claudian to early post-conquest date; providing a probable *terminus ante quem* for Ditch 1. This feature may represent a redefining of the boundary formed by Ditch 1.

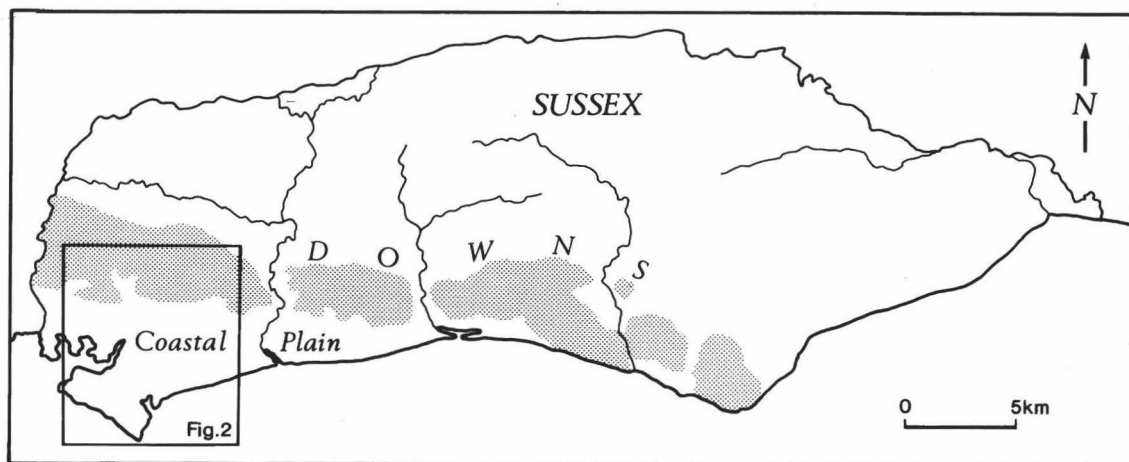


Fig. 1. Site location plan 1: the topography of West Sussex.

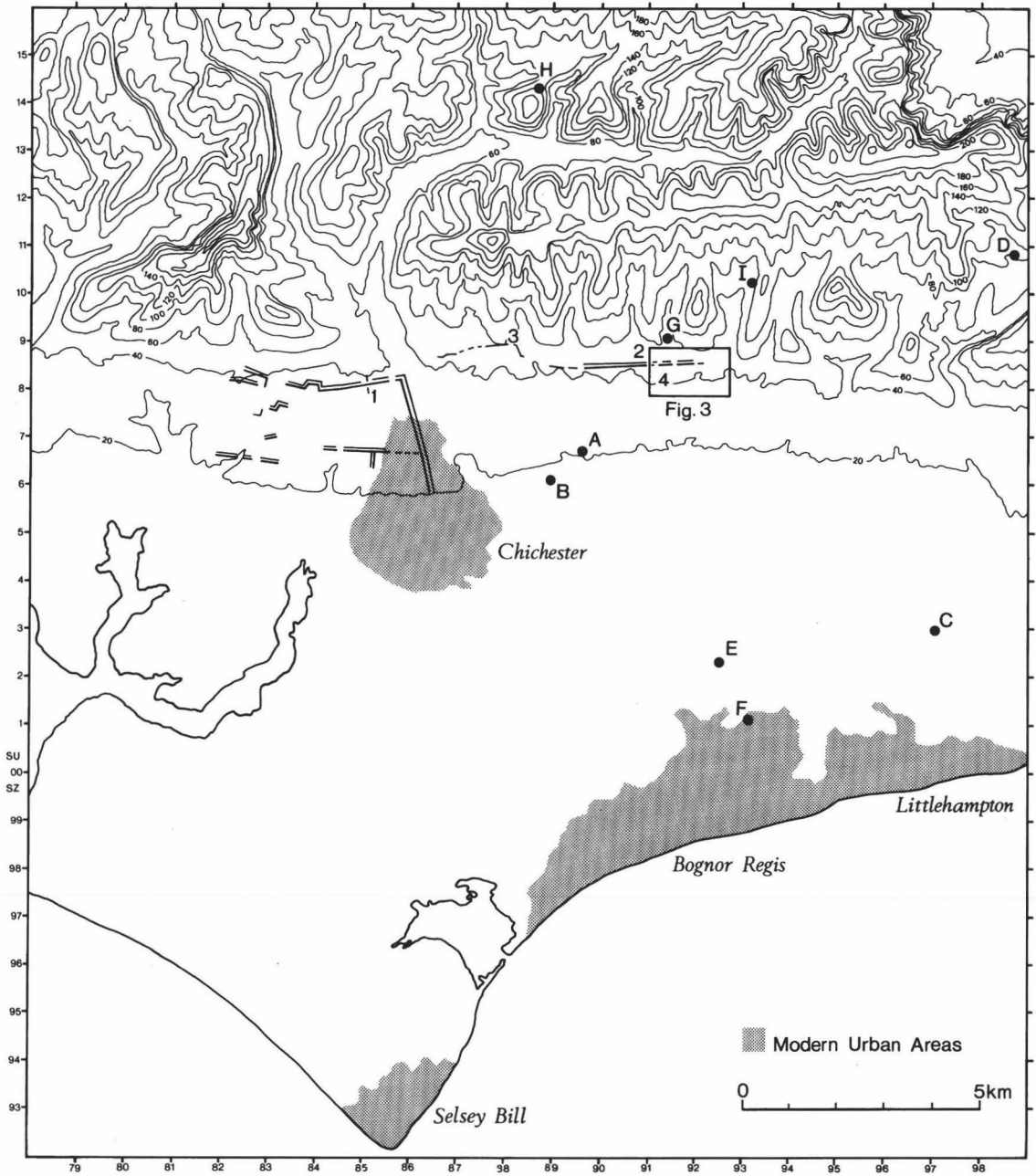


Fig. 2. Site location plan 2: Boxgrove and its environs.

Ditch 3 (Contexts 37, 167) (D3, Figs. 4 & 5)

An east-west aligned shallow (0.40 m–0.60 m), ‘U’ profiled ditch. The dating of this feature is problematic, with a pottery group from the eastern half suggesting a Claudio-Neronian date bracket,

and the western half containing Pulborough tradition fine wares from the late 1st to the early 2nd centuries. It is not inconceivable that the method of excavation, a series of sections, could have missed evidence for the partial recutting of this

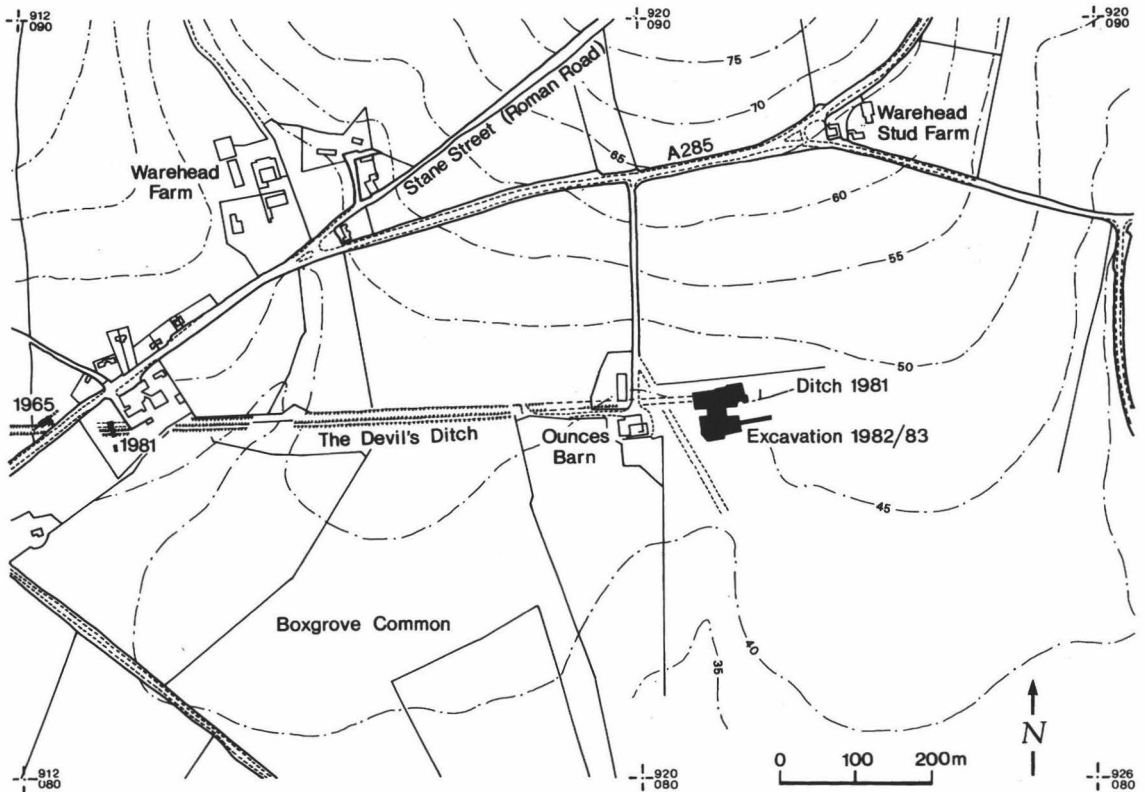


Fig. 3. Site location plan 3: Ounces Barn and the Devil's Ditch.

feature. The ditch is stratigraphically later than the Devil's Ditch and the resolution of this problem might have provided a closer *terminus ante quem* for its infilling, though the later date seems more probable.

Ditch 4 (Context 27) (D4, Figs. 4 & 5)

This north-south aligned ditch was initially excavated in the 1982 season and has previously been published (Bedwin & Orton 1984). Several sections were excavated and a variety of profiles recorded, from straight sided 'V' profiles through flat-bottomed to intermediate. The ditch is stratigraphically earlier than the Devil's Ditch, and with Ditch 3 it forms a potential date bracket for the larger ditch. The previous authors suggest a date range between AD 50-70 for the later infilling, if not the cutting, of the feature; pottery from the 1983 season indicates a Claudio-Neronian date for the primary silts and is not in conflict with the initial dating. Some sections across the ditch record mid-2nd- to 3rd-century pottery from the upper fills (e.g. Context 31), suggesting that the feature was still

extant at this period. Two almost complete crucibles (Figs. 26, Nos. 13 & 14; see catalogue of metallurgical remains, No. 3) and two fragments of crucible (catalogue of metallurgical remains, Nos. 7 & 8) were recovered from two of the ditch fills (Contexts 31 & 71).

Ditch 5 'The Devil's Ditch' (Context 6) (D5, Figs. 4 & 7)

This ditch forms an integral part of the Ounces Barn site and it seems appropriate, therefore, to reiterate the conclusions of the previous article (Bedwin & Orton 1984) in detail and to comment on those initial findings where new evidence allows.

It was noted that eight episodes were discernible in the silting of Contexts 27 and 6 (Ditches 4 & 5), but that *absolute* dates were not available prior to Episode 5. The episodes were described as follows.

1. Context 27 (Ditch 4), the north-south ditch is cut.
2. There is dumping in this ditch (Context 73).
3. Cutting of the Devil's Ditch, the bank of which largely fills the north-south ditch. The bottom of the bank thus corresponds to the very clean gravel fills, Contexts 72, 76 and part of 62, in

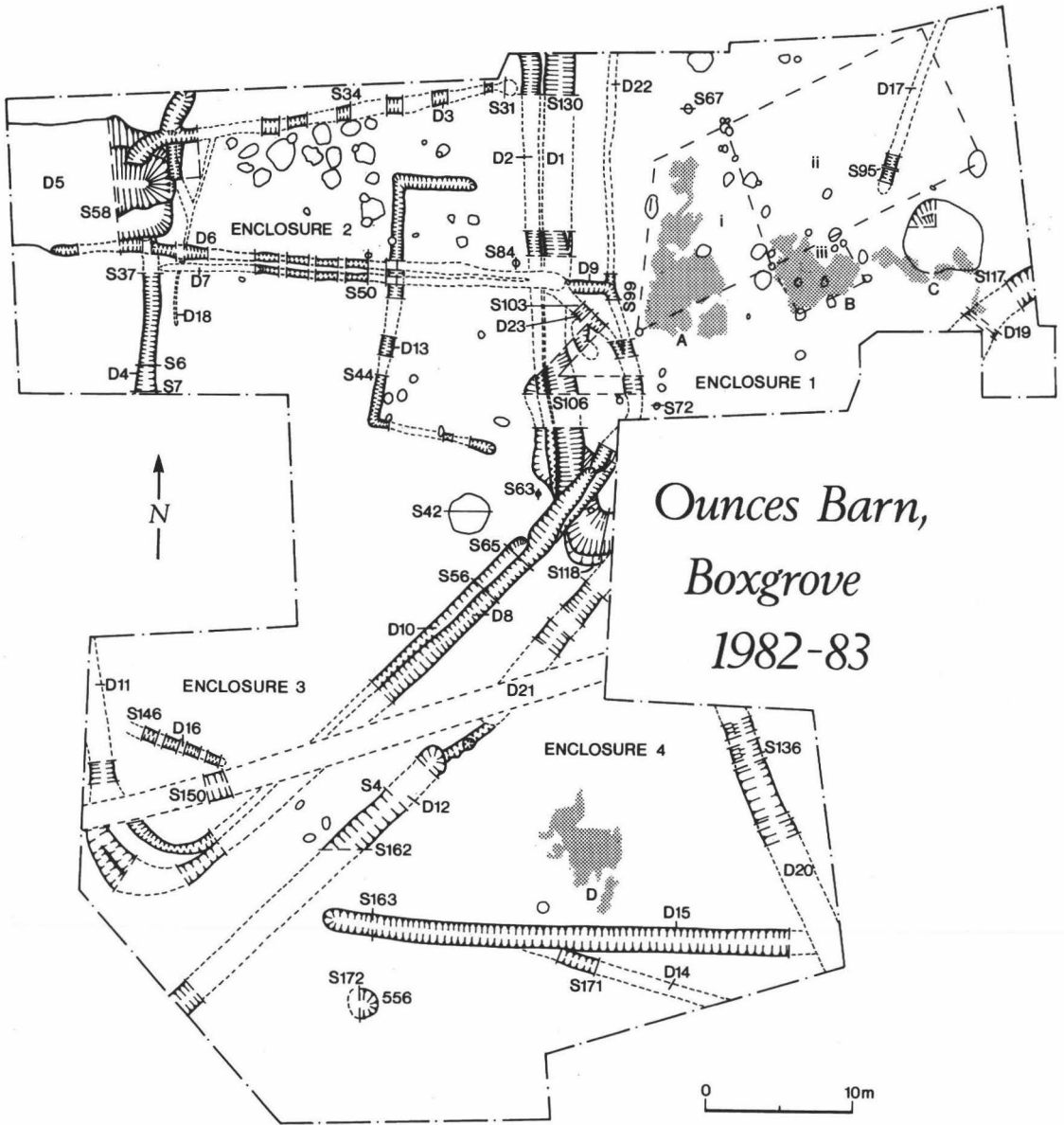
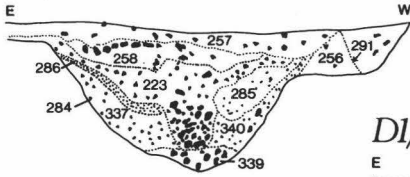


Fig. 4. Ounces Barn, Boxgrove 1982-83: the excavated area.

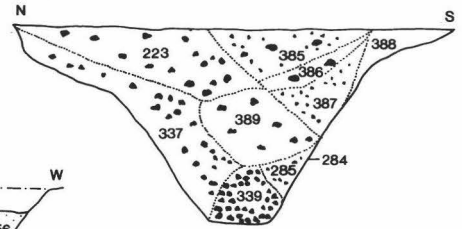
- the north-south ditch.
4. There is rapid primary silting in the Devil's Ditch, corresponding to sterile Layers 161 and 159 (not illustrated).
 5. There then follows deliberate filling of the Devil's Ditch. On the basis of the pottery, this episode is dated to *c.* AD 50-60.
 6. The Devil's Ditch is then recut, *c.* AD 60. The reason for this is unclear, but one author (C. O.) speculated that it could be seen in the context of a Boudiccan panic.
 7. This is followed by filling (i.e. silting and dumping) of the Ditch (Contexts 207, 208, 130, 192 & 131) and the north-south ditch, dated to *c.* AD 60-70.
 8. Finally, the Devil's Ditch is levelled up and

Ditch Sections

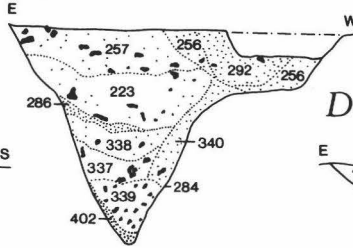
D1/2 S106



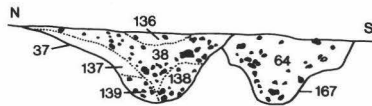
D1/2 S118



D1/2 S130

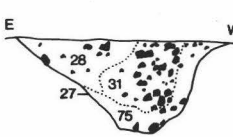


D3 S34

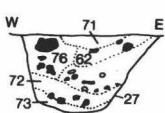


D4

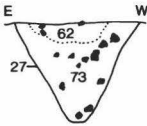
S6



D4 S7



D4 S37



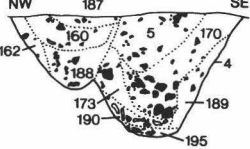
D6/7 S1



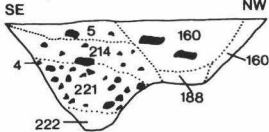
D6/7 S50



D8/10 S56



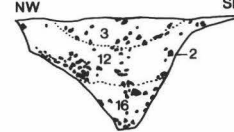
D8/10 S65



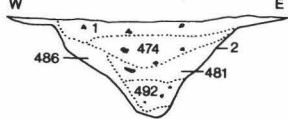
D9 S99



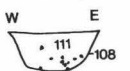
D12 S4



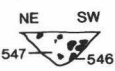
D12 S162



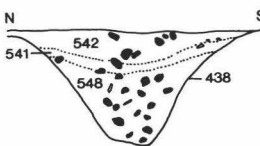
D13 S44



D14 S171



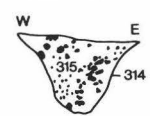
D15 S163



D16 S146



D17 S95



● Flint

0 1m

Fig. 5. Ounces Barn, Boxgrove 1982-83: excavated sections, ditches.

consolidated with Context 7, from *c.* AD 70 to possibly the early 2nd century.

Excavation from the 1983 season does little to modify the initial conclusions though some added detail is possible. A Claudio-Neronian date for some of the primary silts of Ditch 4 is now suggested, with

the inference that this feature must have been cut immediately prior to this date. However, this strictly only dates the silting of this feature away from that area backfilled in Phase 3, and does not help us in securing a *terminus post quem* for the cutting of the Devil's Ditch. Therefore, this does not affect the date

for the Devil's Ditch proposed by Bedwin and Orton and does little to clarify the pre-/post-conquest date issue for the Devil's Ditch.

The asymmetry of the ditch fill (Bedwin & Orton 1984, fig. 4) suggests the presence of a bank on the south side, as would be expected. However, there now seems little evidence to support the initial suggestion of a recut (Episode 6) within the recorded sections and Episodes 5 and 7 could be combined into one continuum. The final episodes still stand as initially conceived, with a late-1st- to early-2nd-century date for Ditch 3 conforming with the date for Episode 8. One of Ditch 5's fills (Context 130, Fig. 7) contained a fragment of crucible (catalogue of metallurgical remains, No. 6).

Ditch 6/7 (Contexts 23 & 77) (D6, Figs. 4 & 5)

Two east to west aligned parallel ditches converge at their east end. They are both shallow (0.20 m–0.50 m) and display a 'U' profile. They are stratigraphically late in the sequence with a 3rd- to 4th-century date suggested by pottery, though this may represent a redefining of an earlier boundary between Enclosures 2 and 3. However, note the alternative hypothesis in the period synopsis.

Ditch 8 (Context 4) (D8, Figs. 4 & 5)

This feature is aligned south-west to north-east and may represent one side of the possible Enclosure 3. The sections reveal a variable feature with a tendency towards a 'V' profile. The ditch is between 1.00 m and 1.10 m wide and 0.60 m and 0.80 m deep. The primary silts (e.g. Context 488) contain Flavian pottery, with late-1st- to early-2nd-century pottery in the secondary silts (Context 170). One sherd of 3rd- to 4th-century pottery is present in the primary silts excavated from one section, this may be intrusive. 3rd- and 4th-century pottery was also present in the tertiary fills (Context 5) which suggests that this ditch was not completely infilled by this date. Context 5 also contained a rim fragment from a crucible (Fig. 26, No. 19; see catalogue of metallurgical remains, No. 5).

Ditch 9 (Context 229) (D9, Figs. 4 & 5)

This is a shallow (0.25 m–0.40 m) ditch 'joining' Ditches 6/7 and 8, and thus constituting a part of the possible Enclosure 3. Two sections were excavated, one recording a 'V' profile the other a 'U' profile. The direct stratigraphic relationship to Ditch 8 was not recorded; a 3rd- to 4th-century date is suggested by the pottery, though this may imply

a subsequent redefining of the feature rather than an entirely new feature.

Ditch 10 (Context 4) (D10, Figs. 4 & 5)

This feature is parallel to, and stratigraphically later than, Ditch 8. It was not given a separate feature number during excavation. It is about 0.80 m wide and 0.60 m deep, with a 'U' profile and might constitute a redefining of one edge of Enclosure 3. It contains pottery dated from the mid-1st to the mid-2nd century in its primary silts. 3rd- to 4th-century pottery in the upper silts (Context 160) suggests that this ditch was a long-lived feature of the site. One context (162) contained fragments of either furnace debris or crucible (catalogue of metallurgical remains, No. 9).

Ditch 11 (Context 443) (D11, Figs. 4 & 5)

This is a shallow, north to south aligned feature, 0.60 m deep and 1.60 m wide. The recorded section illustrates a 'V' profile. The relationship to Ditches 8 and 10 is lost (cut away by Ditch 20/21). Pottery suggests a Claudio-Neronian date. This ditch would form the west edge of Enclosure 3.

Ditch 12 (Context 2) (D12, Figs. 4 & 5)

This is a south-west to north-east aligned ditch with a 3 m wide causeway; the two terminals are joined by a shallow gully. The ditch has a marked 'V' profile with a squared base. The dimensions are variable; up to 0.90 m deep and 1.90 m wide. There is no dating from the primary silts, though there is Claudio-Neronian pottery in the secondary silts (Contexts 12) and Neronian to mid-2nd century pottery in the uppermost fills (Context 474). Both 'halves' of the ditch appear to be contemporary. Ditch 12 is stratigraphically later than Ditch 1, which supports the suggested prehistoric date for Enclosure 1. This ditch must either terminate or turn to the east under the unexcavated land on the east side of the excavated area.

Ditch 13 (Contexts 108, 110 & 193) (D13, Figs. 4 & 5)

This is a shallow, 'U' profile, gully (0.30 m deep) forming three sides of a rectilinear enclosure. The silts contain some prehistoric pottery, though coarse Romano-British local wares, 1st- to 4th-century, provide the *terminus post quem*. The ditch is stratigraphically earlier than Ditch 6/7.

Ditch 14 (Context 546) (D14, Figs. 4 & 5)

This feature is a north-west to south-east aligned

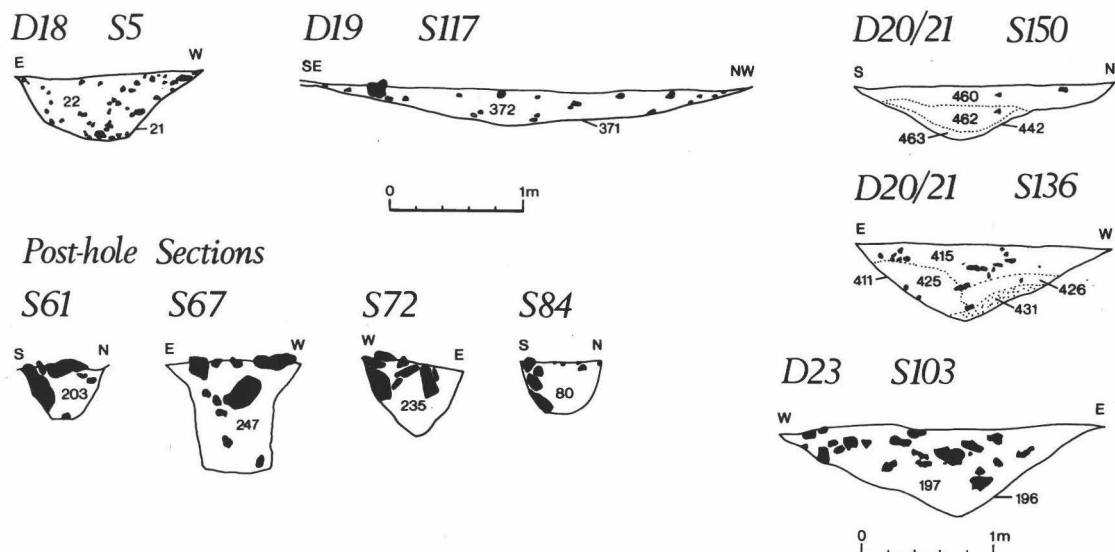
shallow (0.20 m) ditch/gully with a slight 'V' profile. Stratigraphically earlier than Ditch 15 it is dated to the mid-2nd century by one sherd of stamped Samian (DR. 33; MASVETI).

Ditch 15 (Context 438) (D15, Figs. 4 & 5)

Aligned approximately east-west, this substantial ditch is up to 1.20 m wide and 0.80 m deep. Excavated sections revealed a predominantly 'V' shaped profile with a flat bottom, though one section was markedly asymmetrical. Ditch 15

contains a substantial collection of pottery predominantly dating from the mid- to late 1st century, but also including fabrics which could date as late as the mid-2nd century. One sherd of New Forest Ware was recovered from an upper fill (Context 439). The latest fabrics are confined to the upper fills (e.g. Context 541) suggesting a mid- to late-1st-century date for the primary fills (e.g. Context 541). However, it is somewhat problematical that Ditch 15 is stratigraphically later than Ditch 14 which is potentially dateable to the mid-2nd

Ditch Sections



Post-hole Sections



Pit Sections

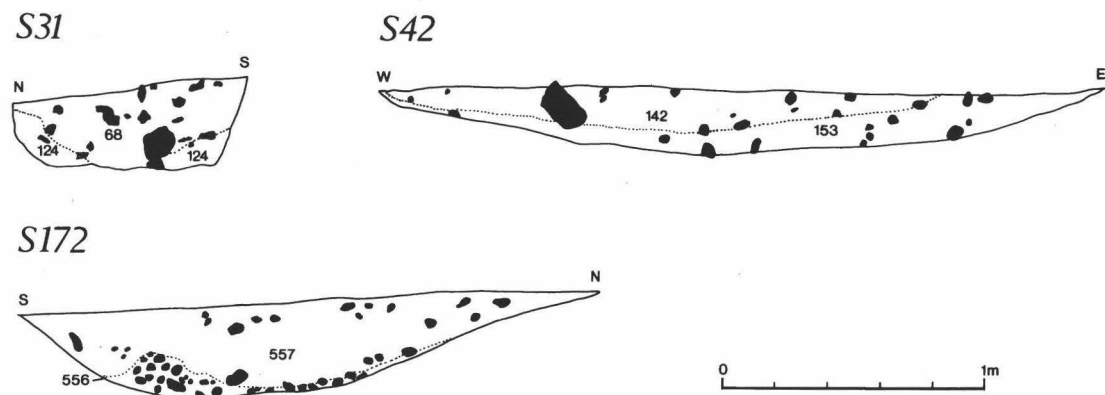


Fig. 6. Ounces Barn, Boxgrove 1982-83: excavated sections, ditches, post-holes and pits.

Devil's Ditch S58

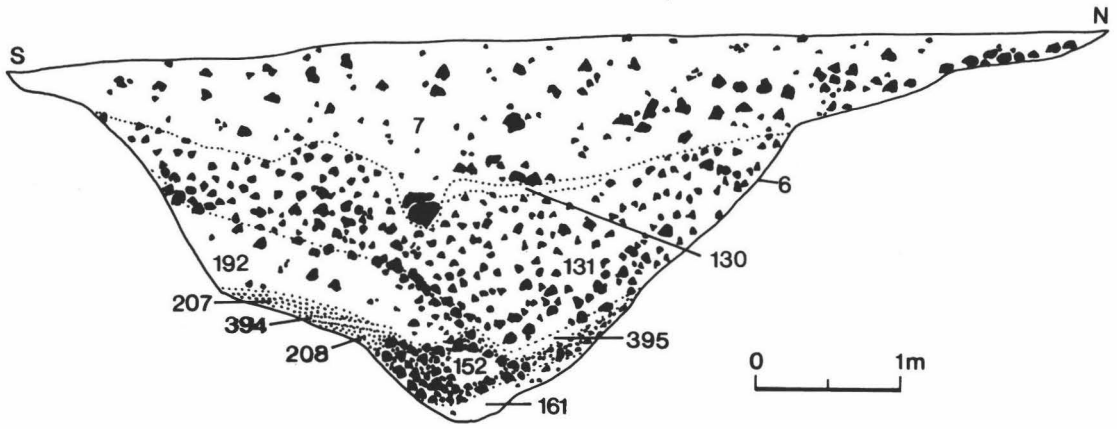


Fig. 7. Ounces Barn, Boxgrove 1982-83: excavated sections, the Devil's Ditch.

century (*see above*). There is only one fill for Ditch 14 and the position of the Samian within the ditch was not recorded. Thus, it is not possible to conclude with any confidence if the Samian was in a primary or later 'context'; the possibility also still remains that it is intrusive.

Ditch 16 (Context 444) (D16, Figs. 4 & 5)

Aligned north-west-south-east this shallow, 'U' profiled gully is approximately 0.20 m deep. A Hadrianic date is suggested on pottery evidence.

Ditch 17 (Context 314) (D17, Figs. 4 & 5)

This is a north-east to south-west aligned ditch with a markedly 'U' shaped profile and is between 0.50 m and 0.60 m deep. It is dated to the late 1st to early 2nd century.

Ditch 18 (Contexts 18 & 21) (D18, Figs. 4 & 6)

This is a shallow ditch aligned north to south, 'S' shaped in plan and rapidly attenuating to the south. Stratigraphically earlier than Ditch 3, it is dated to the late 1st to early 2nd centuries.

Ditch 19 (Context 371) (D19, Figs. 4 & 6)

This feature is a curvilinear ditch or depression over 3 m wide but only 0.30 m deep; dated to the 1st to 4th centuries.

Ditches 20 & 21 (Contexts 411 & 442) (D 20 & 21 Figs. 4 & 6)

These two ditches form the north and west sides of

a post-medieval enclosure (Enclosure 4) of 17th- to 18th-century date. This enclosure can be identified on the first map of the area which dates to the late 18th century (F. G. Aldsworth, pers. comm.).

Ditch 22 (Context 355) (D22, Fig. 4)

This unexcavated ditch is aligned north to south and is approximately 0.30 m wide. It forms the east side of Enclosure 2.

Ditch 23 (Context 196) (D23, Figs. 4 & 6)

This is a shallow, 'V' profiled ditch, 1.20 m wide and 0.35 m deep. It is stratigraphically later than Ditch 1, but has an uncertain relationship to Ditches 8 and 9. It is dated to the 1st to 4th century.

OTHER CUT FEATURES

The excavated area contains numerous 'circular' cut features which, morphologically, might be thought to extend across the range of small pits, post-holes and scoops or depressions. One hundred and three features were recorded in plan (of which 76 were excavated and recorded in section) making it the most numerous 'feature class'. However, within this sample there are few contexts or associated artefacts which suggest a common function or association. In addition, few of the features contain sufficient dateable material, or have stratigraphic relationships, which would allow relative or absolute dates to be concluded.

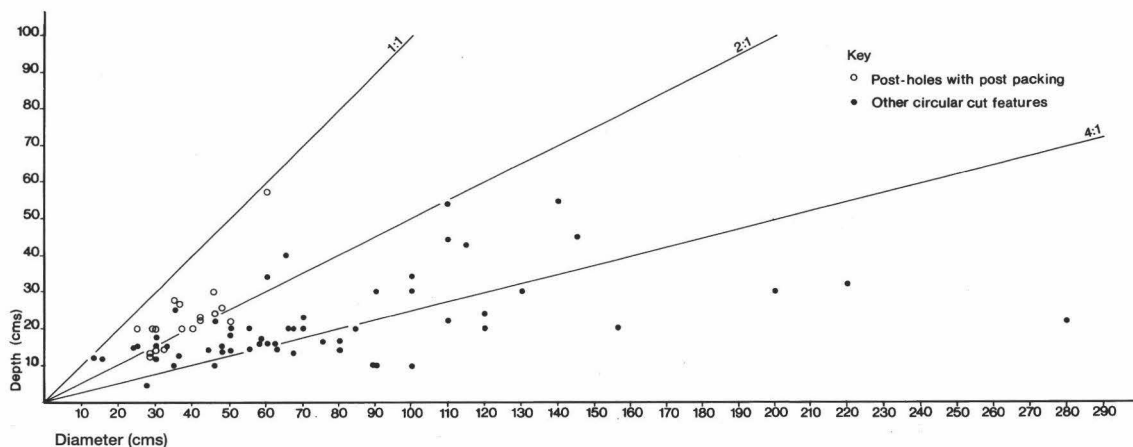


Fig. 8. Ounces Barn, Boxgrove 1982-83: circular features, depth:diameter ratios.

Figure 8 is a plot of feature depth against 'diameter', diameter being used to denote feature width recorded along the section. Table 1 records the cumulative frequencies, means and standard deviations for each. Whereas feature diameter varies from 13 cm to 280 cm, feature depth varies from 5 cm to only 57 cm; approximately 90% of all features are less than 32 cm deep and no feature has a greater depth than diameter. This may be a function of surface truncation, though the presence of horizontal stratigraphy, see below, and the substantial depth of several of the linear features suggests that this is not the case. Consequently, it is suggested that none of the circular features excavated were ever of a substantial depth, and that other than the preference for shallow rather than deep features, there appears to be no other obvious grouping based on depth alone. With regard to feature diameter, two main groups are tentatively suggested. Group 1 includes diameters between 22 cm and 70 cm, Group 2 includes diameters of 90 cm and above.

Group 1 contains all those features classed as post-holes. These are distinguished by the presence of *'in situ'* post packing, usually flint nodules (e.g. Fig. 6, S61, S67, S72 & S84), or flint nodules which might reasonably be assumed to be disturbed packing. Figure 8 illustrates that all of these features, with the exception of one (Context 511), form a distinct group and that the majority of these features have a diameter:depth ratio of 2:1 or less. The remaining features which are of a similar size and ratio might, therefore, be considered functionally akin, though the abundance of similar packing

material in the natural subsoil suggests that its absence from these features indicates a different function. Of those features that remain in Group 1 almost all have a diameter:depth ratio of 2:1 or greater. The generic term 'small shallow pit' can be used for the majority, with 'shallow scoop' used for those features with a ratio of 4:1 or above. With the exception of the post-holes there are no indications of function for any of the features. The majority of the Group 1 features are in the north half of the site, with a concentration in Enclosure 1. These are discussed below in their association with the gravelled areas.

Group 2 contains those features which can be described with the generic terms 'large shallow pit' and 'large shallow scoop'; scoops are classed as those features with a diameter:depth ratio of 4:1 or greater. There are no indications for the primary function of the pits, though one pit (Context 67, Fig. 6, S31) contains 618 pot sherds in its upper fills and has presumably been used for rubbish disposal. However, only 7 sherds were recovered from the primary fill of this feature and this would not suggest that this is an original function. The shallow scoops are similarly lacking in evidence for function, though 141 and 289 (Fig. 6, S42) contain sufficient pottery to appear to have been utilized for rubbish disposal. The Group 2 features cluster along the edge of Ditch 3 and may suggest a localized area of activity; the only two closely dateable features are 2nd century (Hadrian-Antonine). The shallow scoops 141 and 556 (Fig. 6, S42 & S172) are two of the few features dateable to the 3rd to 4th centuries.

FLINT-GRAVELLED AREAS (Figs. 4 & 9)

During the course of the excavation, four distinct gravelled areas (A, B, C & D) were excavated and recorded, which represented a relatively unusual opportunity to observe 'horizontal' stratigraphy on a rural site. Whilst there are variations in detail, all the areas are sufficiently alike to consider them as morphologically, if not functionally, similar. The gravelled areas consist predominantly of coarse, well-worn, tight-packed flint gravel set in a compact silty matrix. The flint gravel, which has a size range of 20-50 mm, also contains some infrequent sandstone, tile and pottery. Although there appears to have been little attempt to produce a true horizontal surface, the effect is of a well packed fairly even surface. Three of the gravel areas (A, B & C) (Fig. 9), were located in hollows beneath accumulations of dark, humic soil rich in pottery (see Fig. 9 for limits of these contexts). An upper gravel layer is recorded above Area A, though the excavator (OB) suggests that this is the disturbed surface of the gravelled area rather than another true surface. The fourth area is slightly different in that its associated pottery-rich context is adjacent to, rather than overlying it (Fig. 9).

The gravelled areas lack a distinct rectilinear form, though Area D does display a suggestion of regularity, with evidence for straight edges. However, the extent to which the recorded contexts resemble in plan and extent their 'original' form is debateable. Post-depositional transformation, both natural and anthropogenic, biased by the protection afforded by the hollows, is likely to have distorted their original morphology. This is an important caveat and it should also be borne in mind when discussing the overlying pottery-rich contexts.

The gravel areas and their overlying levels are all open contexts and cannot confidently be said to contain true groups of artefacts. On-site activity is likely to have mixed contexts and residual and intrusive elements are to be expected. Therefore, the dating of these areas is problematic. Pottery from Area A and its overlying context suggests a date within the 2nd to 4th centuries and 2nd century respectively, though the 4th-century material is sparse and a 2nd-century date for both is more likely. Area B contains no material dateable more closely than to the 1st to 4th centuries, though its overlying context contains a late 1st-century (Flavian?) pottery assemblage. Likewise, Area C contains no dateable

Table 1. Feature diameter and depth cumulative frequencies.

Feature Diameter				Feature Depth			
Diameter cm	Cumulative Percentage	Diameter cm	Cumulative Percentage	Depth cm	Cumulative Percentage	Depth cm	Cumulative Percentage
13	1.3	65	63.1	5	1.3	43	93.3
15	2.6	66	64.4	10	7.8	44	94.6
24	3.9	67	65.7	12	13.1	45	95.9
25	7.8	68	67.0	13	14.4	54	97.2
28	11.8	70	69.7	14	21.0	55	98.5
30	19.7	75	71.0	15	28.9	57	100
32	22.3	80	73.6	16	35.5		
34	23.6	86	74.9	17	39.4		
35	26.3	90	78.9	18	42.1		
36	28.9	100	82.8	20	61.8		
37	30.2	110	86.8	21	63.1		
40	31.5	115	88.1	22	69.7		
42	34.2	120	90.7	23	73.6		
44	35.5	130	92.0	24	76.3		
46	40.7	140	93.3	25	77.6		
48	44.7	145	94.6	26	78.9		
50	50.0	156	95.9	28	80.2		
55	52.6	200	97.2	30	86.8		
58	55.2	220	98.5	32	88.1		
60	59.2	280	100	34	90.7		
62	61.8			40	92.0		
Mean = 68 cm Standard Deviation = 47 cm				Mean = 22 cm Standard Deviation = 10 cm			

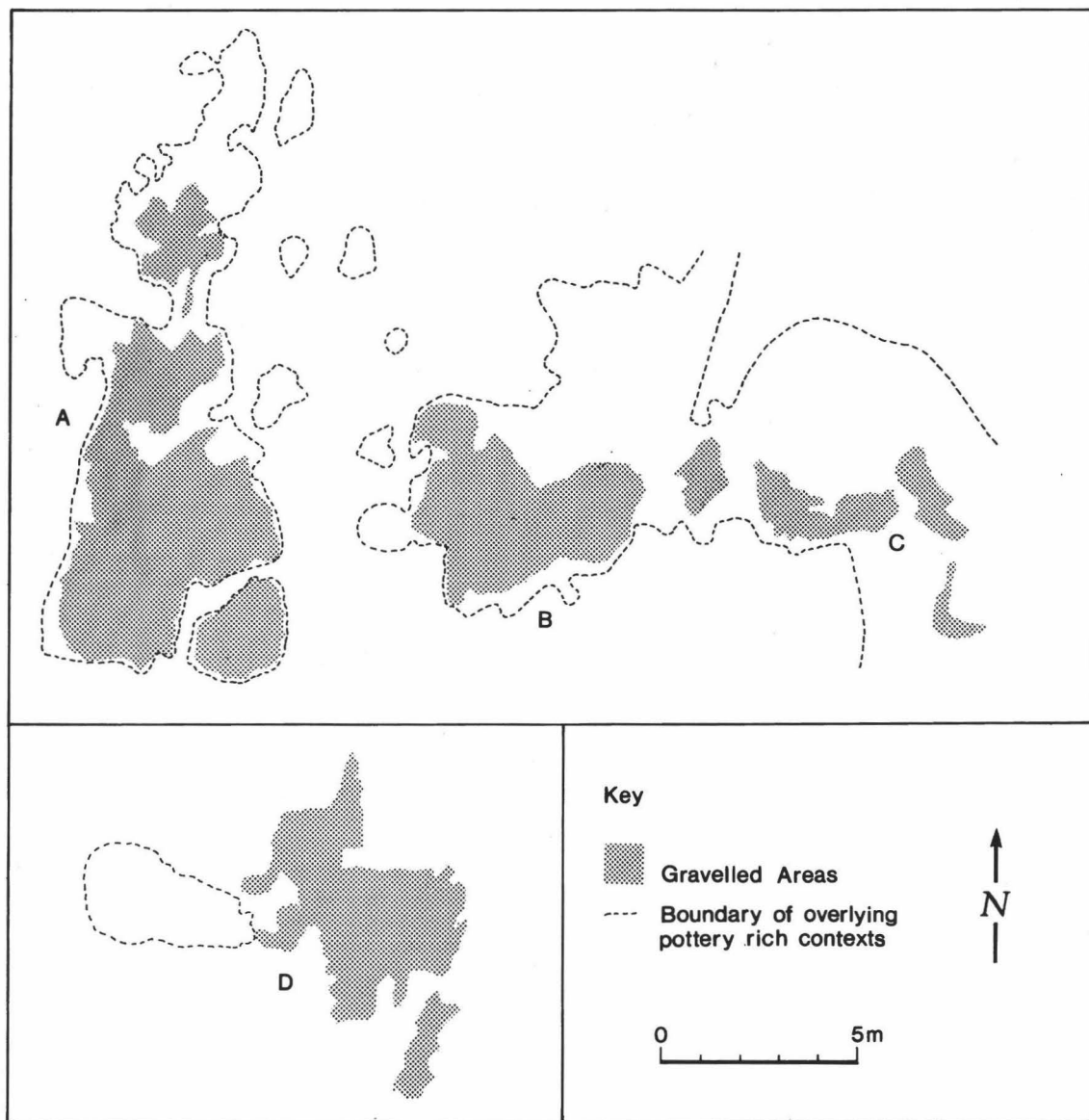


Fig. 9. Ounces Barn, Boxgrove 1982-83: gravelled areas, A-D.

material, but is overlain by contexts with a 3rd- to 4th-century *terminus post quem*; though there is also abundant pottery of a Claudio-Neronian date. The remaining gravel area (D) contains material dateable no more closely than to the 1st to 4th centuries, though its adjacent pottery rich context contains sherds of Flavian date. Therefore, of the four gravel areas, only 'A' contains useful dateable material. The other three areas must be dated by association with

overlying contexts, and this is itself not possible with Area D. The dating evidence is weak however it is interpreted, and much depends on the association between the gravel areas and their pottery-rich overburden. However, there appears evidence to suggest that not all the areas are broadly contemporary in origin, and that the focus of activity shifted. It can tentatively be proposed that activity commenced around Areas B and C in the

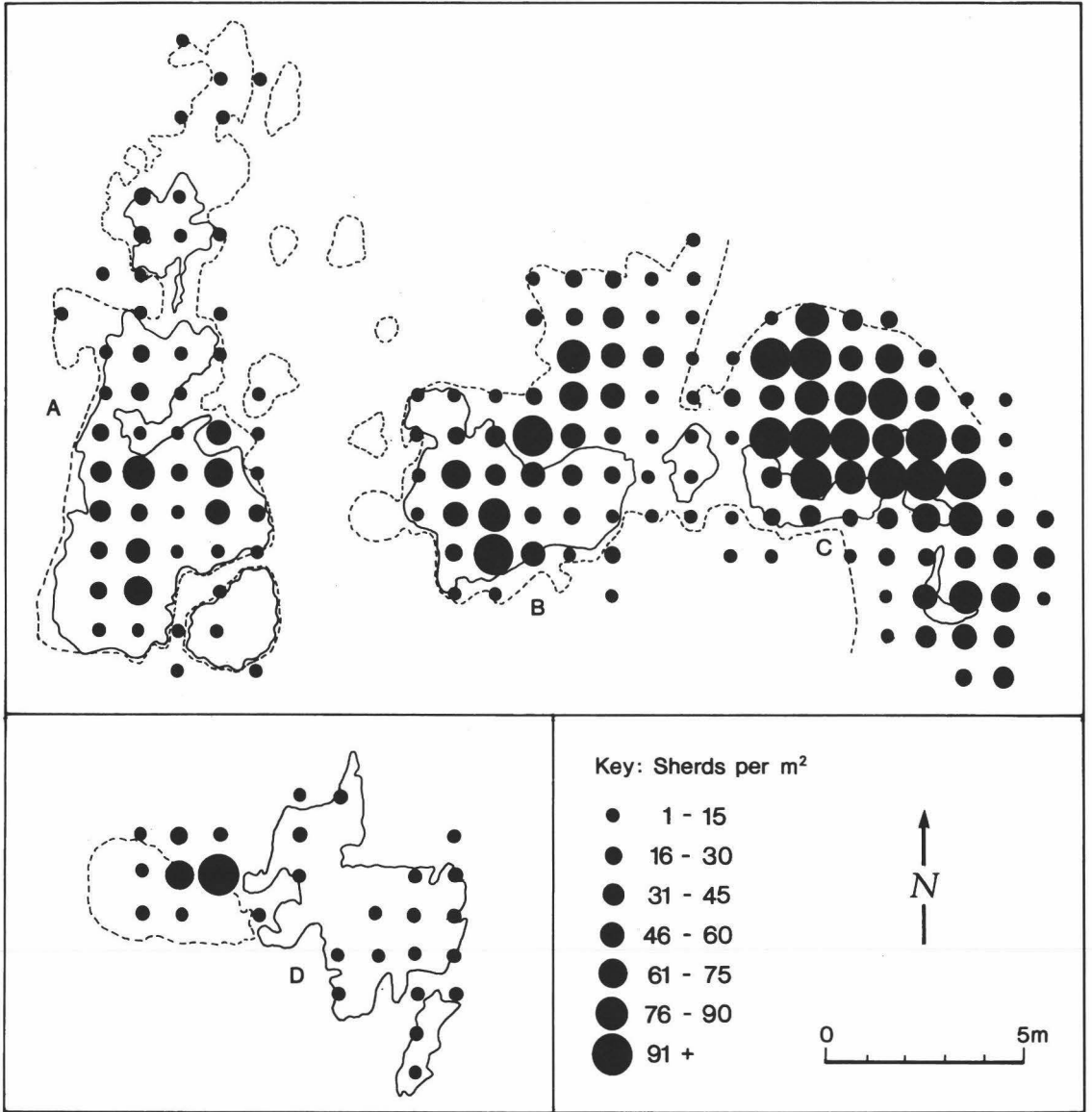


Fig. 10. Ounces Barn, Boxgrove 1982-83: gravelled areas, A-D, sherd counts per m².

mid-1st century, expanded to incorporate Area A in the 2nd century and may then have contracted back to Areas B and C in the 3rd and 4th centuries. Area D may be contemporary with Areas B and C.

The stratigraphic relationship between the gravelled areas and the pottery-rich contexts appears unequivocal, the upper contexts lie directly upon the gravels and adjacent areas. However, whether these contexts represent the detritus of use

associated with the gravels or subsequent *ad hoc* rubbish disposal is uncertain. To examine the possibility that the spatial variation of pottery discard and its relationship with the gravelled surfaces may reveal 'activity areas', sherd densities per metre square were recorded for a sample grid which included the contexts overlying the gravelled surfaces and the surrounding areas. All of the squares within the grid were sampled for pottery and a zero

score is a true reflection of its absence. No contexts were found to overlie Area D and the pottery totals are for that context itself and the adjacent contexts. The results are plotted in Figure 10; where contexts overlap, the total number of sherds is given.

The presence or absence of pottery is, for the most part, related to the presence of those contexts overlying or associated with the gravel areas, though note that in some areas pottery extends beyond the boundaries of these contexts. Within the zone encompassing Areas A, B, and C, three concentrations of sherds are apparent, one for each of the gravel areas. With regard to Area C, note how the north edge of the gravel area marks a 'boundary' between low density squares and squares containing the highest densities of pottery. The picture is less clear for the remainder of the grid. Areas A and B contain squares with both high and low sherd densities. The absence of an overlying context for Area D makes comparisons with the other areas difficult to make. However, Area D does contain the two main elements of the other three areas: a gravel area with relatively few sherds, and an adjacent area of high sherd density.

There are difficulties with the interpretation of these results, not the least of which is the lack of comparative material from other excavations. A similar sampling approach was adopted at the 1st- to mid-2nd-century Romano-British farmstead at West Elsted (Redknap & Millet 1980) for contexts overlying a gravel farmyard. The authors interpreted these layers as *'the build-up of muck during the use of the yard'*. Unfortunately the strategy *'failed to produce any valuable results relating to activity areas within the courtyard'*, and there appear to be no other parallels to this approach for comparison. Problems also arise from the absence of a contour survey for the surface of the subsoil to isolate the dispersal and concentrating effects of slope on artefacts. In addition, it should also be noted that hollows may provide protection from ploughing and further bias the vertical and lateral extent of the contexts in question. Therefore, the degree to which spatial patterning for sherd density can be attributed to contemporary processes is inversely dependent on the weight attached to the above caveats.

It has been noted above that the gravel areas and associated contexts are in slight hollows, and it is likely that this has been a factor in determining the overall extent of the contexts in question and their associated artefacts. However, it has also been

noted that the presence of sherds is not totally dependent on the overlying contexts, and that their overall distribution may, therefore, be independent of micro-topography. In addition, sherd density varies from 1 sherd/m² to 176 sherds/m² and it is hard to interpret this as collection bias, sample size bias or the effects of slope. Therefore, whilst there are caveats which need to be considered, it does seem possible that variation in pottery density on and around the gravel areas may be due to factors other than slope and sample bias etc.

If, as the dating evidence suggests, activity at these areas may have taken place over some considerable time, then it is not impossible that the pottery distribution as recorded is in response to some preferred pattern of activity. It is suggested that this may be a result of the deliberate 'clearing' of the gravelled areas or the restricting influence of fence or 'wall' lines. Sherd densities would remain low with clearance or in 'restricted' areas, and high in adjacent areas of disposal. Unfortunately, the evidence is equivocal and firm conclusions do not appear possible.

Whilst it is easy to use terms such as 'activity areas' or 'gravelled areas', there is little to suggest their actual function. However, by examining them in conjunction with the evidence for pottery distribution and the locations of all potential post-holes it is possible to suggest an interpretation. In Figure 11 (which excludes Area D) the 'post-holes' define three broadly rectilinear 'enclosures', (I), (II) and (III). Whether (I) and (II) are fully enclosed remains conjectural. The north-west corner of (II) is characterized by several small post-holes, presumably replacements, and this might suggest a location of some importance. However, there is no feature at the potential north-east corner. 'Enclosure' (I), if truly enclosed, would be more irregular in shape, with a north side at 2 potential locations.

Gravel Area B 'fits' moderately well within (III). There is no gravel within (II), and (I) may be half-gravelled. Note the two linear 'cuts' in Area A; Y is aligned with post-holes 242-87, suggesting a barrier or wall, and X is also parallel, possibly representing a sub-division. 'Enclosures' (I), (II) and (III) are interpreted as contemporary in origin, though there is no conclusive evidence why this should be; the lack of finds from the majority of features makes dating very difficult, and the absence of extensive stratification prevents useful relative correlations. In any event, by the number of 'paired' and recut

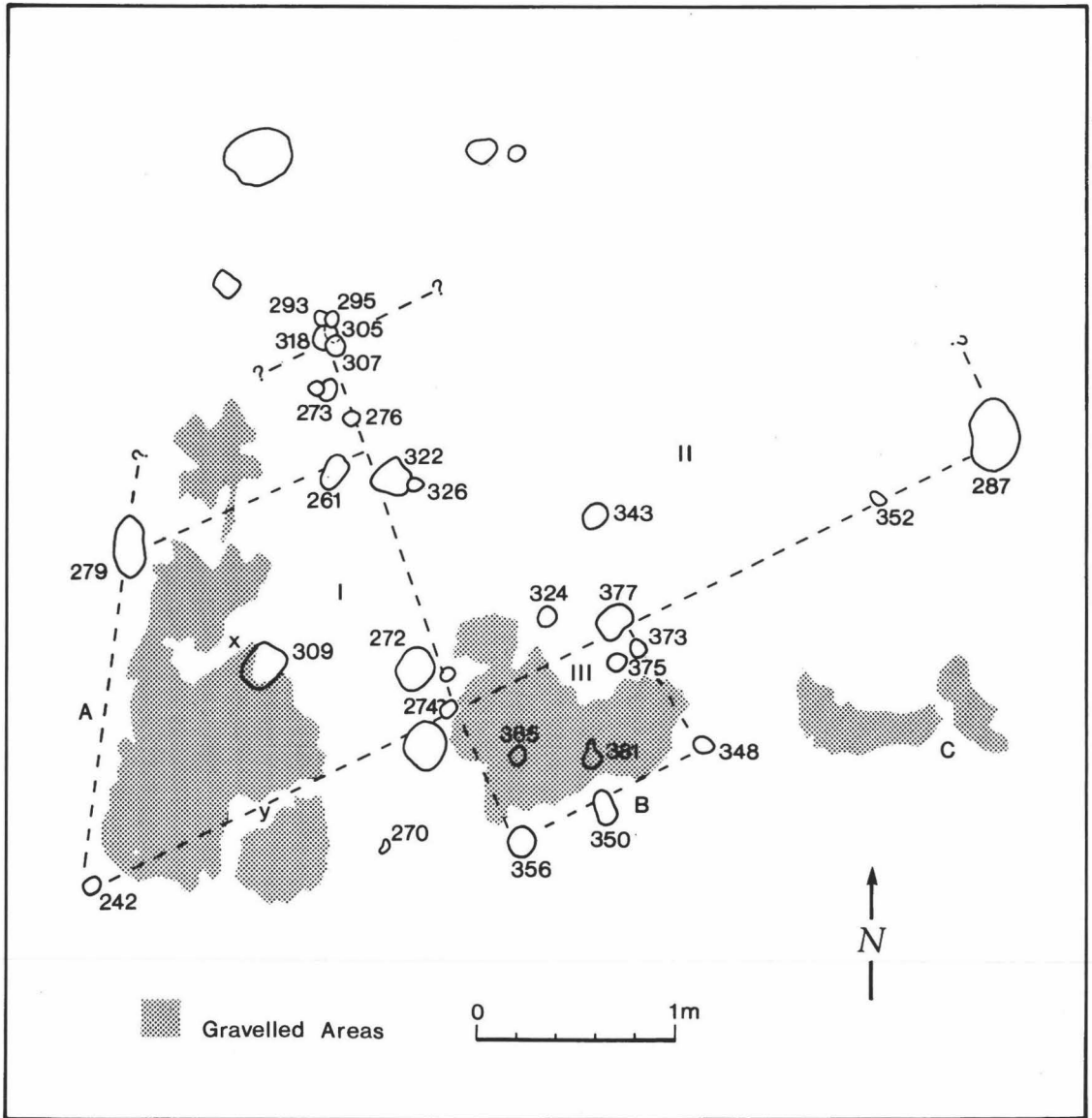


Fig. 11. Ounces Barn, Boxgrove 1982-83: enclosed areas, I, II and III.

post-holes (e.g. 293 & 295, 307 & 318, 373 & 375) several phases would appear to be present, most notably in the division between (I) and (II).

Except for the south-west corner, (II) is devoid of a gravel surface and, for the most part, free of pottery. It has already been proposed that rubbish, represented by pottery, accumulated over the gravelled areas from the mid-1st to the 4th century, and it seems not unreasonable to propose that for

much of this period the sides of (II) acted as an effective barrier to its accumulation. The same can not be said for (I) and (III) and this may suggest that they have a short life span as enclosures; note that the pottery for Area A starts later in the sequence than that over Areas B and C and may suggest a 2nd-century date for the disuse of this 'enclosed' area.

In synopsis, the following relative sequence is suggested:

- 1) (I), (II) and (III) are constructed, probably as enclosed units and are contemporary with the gravelled areas. Area C was probably external to the enclosed areas. Rubbish, including pottery, accumulates to the south of (II) and (III).
- 2) (I), and possibly (III) are no longer acting as barriers to rubbish accumulation. (II) is still defined; note that the north-south aligned divide between (I) and (II) shows evidence for redefinition which may date to this phase. All gravel areas, except possibly B, are now external. Rubbish continues to accumulate outside of (II).
- 3) (II) is partially breached and rubbish accumulates within. Gravel Areas B and C may still be maintained as relatively rubbish-free areas.

Parallels for this juxtaposition of gravelled areas and small enclosures are found at Skeleton Green (Partridge 1981, figs. 6 & 7). The closest parallel is for the Period I (pre-conquest) features, though the Boxgrove enclosures would be about half as large again. At Skeleton Green, the author interpreted them as buildings with both internal and external gravelled surfaces, with post-holes and sill beams having been used to support walls. The Period II structures were far more regular and lacked associated post-holes; the author suggested that sill beams alone were utilized in this period. The Boxgrove structures may represent buildings, but the evidence does not put the issue beyond doubt. For example, fenced enclosures with gravel working areas, possibly open on one or more sides, can be postulated and this would explain the lack of 'corner posts' in some instances. Alternatively, the evidence might suggest a composite structure which had ground-resting sill beams for some walls and posts for the remainder (Note 'cuts' X & Y, Fig. 11). However, the comparison with Skeleton Green is attractive, suggesting Romano-British utilization of the late Iron Age Enclosure 1 as a settlement area. It can also be noted that the trackway terminates at these structures, though this need not imply settlement, merely a desire to channel access to this point.

The form and structure of the potential Romano-British buildings must remain conjectural, though the evidence so far discussed does little to suggest high status or any degree of 'Romanization'. However, the excavation did record *tegula*, *imbrex*, box-flue and flat tile/brick. Their primary function would be in a structure of some substance (villa, bath

house) and the proximity of such a building to the excavation is not unfeasible, though perhaps unlikely, given the relative lack of such building material.

SITE ECONOMY AND ENVIRONMENTAL UTILIZATION

The evidence for the economic basis of the site and utilization of the local environment is both poorly represented and poorly preserved. Therefore, detailed analysis has not been undertaken and only general conclusions are included here. Quantification of identified plant and animal remains is tabulated and included with the specialist reports.

Wheat, barley and oats are present as charred remains though species identification was often difficult; for instance, the oats may be a wild form. Wheat glume fragments suggest on-site processing, as do the numerous quernstone fragments. Other seeds suggest a wide range of arable weed species and the possible collection of wild fruits such as sloe and blackberry. The latter could have been present as on-site hedge species. A range of tree species is preserved as charcoal and it is dominated by oak and hazel, usually in the form of twigs. The species identified may indicate the mixed hedges which might be expected along enclosure boundaries rather than off-site 'cropping'. The animal bones were so poorly preserved that no more than presence or absence can be noted. Table 5 records the dominance of cattle over sheep/goat, then pig and then horse.

In addition to the evidence for coin production (see below), other metallurgical remains indicate bronze casting and iron smithing, though there is no direct evidence for on-site production. All of the material was recovered from post-conquest contexts, though arguments concerning date, similar to those outlined for the coin moulds (see below), could apply, and much of the material might be pre-conquest. The great majority of the remains listed in the metallurgical catalogue were recovered from the proximity of Enclosure 1 and the 'Devil's Ditch' and this may suggest the presence of a metal working area in the immediate environs. A parallel would exist with Copse Farm, Oving where there was good evidence for on-site iron smithing and possibly a bronze foundry (Oldham 1985, 229) in the late Iron Age.

PERIOD SYNOPSIS

PRE-2000 BC, PHASE I

A Lower Palaeolithic bi-face (Fig. 25:1) and bi-face thinning flakes are the earliest archaeological evidence from excavated contexts. A Neolithic (3rd millennium BC) ground axe (Fig. 25:2) and an earlier Bronze Age (first half, 2nd millennium BC) barbed-and-tanged arrow head (Fig. 25:5) are also recorded, though there is no evidence for any other contemporary flint. All of the artefacts are in residual contexts and are considered no further.

2000 BC-600 BC, PHASE II

Although, in common with the preceding phase, there is no evidence to suggest that contemporary contexts are present, there are sufficient artefacts to warrant a closer examination. Excluding the flint work already discussed, there is a sizeable collection (165 pieces) of humanly struck flint, including tools (Fig. 25:3 & 4) and waste flakes, which would not be out of place in this phase. In addition, several fragments of what are probably middle Bronze Age 'bun shaped' loomweights were also recorded from four contexts. Twenty-seven sherds of probable Bronze Age pottery (Orton's Fabric J [Bedwin & Orton 1984, 72]; and Fabric 1, pottery catalogue) were also recovered. Whilst no concentrations of artefacts of this phase were noted by the excavators, their recovery was from contexts preponderantly located in the north half of the site in the area of the Devil's Ditch terminal and Enclosure 1.

600 BC-EARLY 1ST CENTURY AD, PHASE III

The earliest on-site archaeological features date from this phase and pottery analysis has identified 5 fabrics and 108 sherds from this period (Table 2). In common with the preceding phase, there is a tendency for contemporary artefacts to concentrate in the north half of the excavated area. Evidence has already been proposed to suggest that Enclosure 1 dates from this phase and that Ditch 1 may have remained open, at the level of its upper fills, into the late 1st century; it is only at this latter phase

that substantial amounts of pottery start to accumulate. However, owing to the paucity of material and a lack of resolution in ceramic dating, it is difficult to determine if there is a discontinuity between this phase and the burst of activity which commences at or about the conquest.

PRE-CLAUDIAN TO EARLY POST-CONQUEST, PHASE IV

Evidence has been forwarded to propose that Ditch 1 was still open in the mid-1st century, though to what extent is still uncertain, as it appeared necessary or desirable to redefine the western edge of the enclosure with a shallow gully (Ditch 2). It is also likely that it was during this phase that the Devil's Ditch (Ditch 5) was cut, or at least redefined for the last time (i.e. that part which was excavated and recorded in 1982/83). The interim discussion of these results (Bedwin & Orton 1984) proposed an episode of deliberate partial refilling of the ditch in c. AD 50-60 after initial undated primary silting; the authors postulated that the cutting or recutting of this length of the ditch was likely to predate this by a 'few' years. Therefore, although the Devil's Ditch is included in this phase, which may be correct, the dateable events more accurately describe its disuse rather than its use. Therefore, there is still no reason why the Ditch should not have had its active life within the preceding phase.

It was originally suggested that after the period of backfilling of the Devil's Ditch there was a recut. The evidence now appears equivocal and the section could be interpreted as a normal asymmetrical silting profile associated with the proximity of a bank. The proximity of the Devil's Ditch terminal and Enclosure 1 may be more than a coincidence, and this will require further consideration in the discussion. However, from a site development perspective it seems plausible that Enclosure 1 was still a visible, if not functional, monument within the landscape when the Devil's Ditch was constructed.

Ditch 4 may also belong to this phase. It is stratigraphically earlier than the Devil's Ditch, though not necessarily by any substantial amount.

Table 2. Late prehistoric pottery fabrics.

Fabric	Date	Quantity
2a	late Bronze Age-Iron Age	10
2b	3rd century BC-early 1st century AD	80
2c	late Iron Age	6
2d	late 1st century BC-early 1st century AD	12
Dressel 1b	first quarter 1st century BC-last decade 1st century BC	2

There is no direct stratigraphic relationship with Ditch 2, but there is no reason why they could not be contemporary.

MID-1ST CENTURY ONWARDS, PHASE V

Strong evidence was provided by the 1982/83 excavation to suggest that by AD 60-70 there was substantial natural and deliberate infilling of the Devil's Ditch and that the feature was about 50-75% full. The beginning of this phase of 'disuse' can probably be traced to the earlier backfilling of c. AD 50-60 and both may represent a continuum rather than two separate periods. Enclosure 1 contains late-1st-century pottery in its upper fills, and the suggestion is that the features of the earliest phases may at this date have been obsolete in terms of their original purpose. However, there is no obvious hiatus in the archaeological record, and as if to emphasize the redundancy of Enclosure 1, Ditch 12 is dug across its southern arm. Pottery from the secondary fills of Ditch 12 suggests a Claudio-Neronian date range.

Stratigraphically, from this point, there is no clear picture of the development or the contemporaneity of features, though almost all can be ascribed to some stage within the mid-/late-1st-century to late-2nd-century bracket with evidence for continuation into the 3rd to 4th centuries. On the basis of the quantity of closely dateable pottery forms and fabrics alone, Table 3 (excluding Samian and Amphora) suggests greatest loss/activity in the earlier two centuries of this range.

This protracted phase involves the development of several enclosures (Enclosures 2 & 3), a trackway (?), the gravelled areas and, presumably, the majority of the other cut features; the general plan is simple. However, there is a dateable sequence of recutting and realigning, which gives an incremental appearance to the site and the impression of piecemeal development, in effect a series of 'sub-phases'. It is probable, though, that this represents the redefining of existing features rather than new components in their own right; the individual 'sub-phases' make little coherent sense as entities separated from the whole. Likewise, the gravelled areas mirror the linear features and would indicate

activity from the Flavian, through the 2nd century, to possibly the 3rd and 4th centuries. The break from the earliest phases of the site is reinforced and whereas Ditch 3 appears to respect Enclosure 1 and the Devil's Ditch, and may incorporate the line of the latter into Enclosure 2, the remainder are superimposed, highlighting the redundancy of their original function.

However, an alternative development can be sustained by the evidence. The Romano-British ditches in the southern half of the site (e.g. 8, 12 & 15) are more substantial than those in the northern half. For example, note the change of character where Ditch 8 crosses Enclosure 1. In addition, they are also, on the whole, earlier in the sequence. The northern ditches, effectively Enclosure 2 and the north-east corner of Enclosure 3, by contrast, are slighter and could be dated to the 3rd to 4th centuries. The alternative development would suggest a trackway leading up to and stopping opposite the gravelled areas in Enclosure 1, by then possibly a redundant feature. There would be a large enclosure to the north-east formed by Ditch 8 on the south, Ditch 1 on the east, possibly supplemented by a hedge or fence if this was partially infilled at this stage, and Ditches 3 and 5 on the north. Later, in the 3rd to 4th centuries, Ditch 3 would go out of use and the slighter ditches (Ditches 6, 7, 9 & 22) would be inserted to make Enclosures 2 and 3 as illustrated in Figure 4.

MEDIEVAL AND POST-MEDIEVAL, PHASE VI

Thirty-three sherds of medieval pottery were recognized, of which the majority are in stratified contexts, though most of these can be considered as tertiary. There is no reason why features of Romano-British date should not still act as loss traps for medieval or later pottery and the presence of such finds need not alter their *terminus post quem*. Those sherds that are within other contexts are few in number and are considered to be intrusive, though two post-holes may be medieval.

Ditches 20 and 21 form the north and west sides of an enclosure (Enclosure 4) which can be considered the only unequivocal post-Roman feature recorded. This enclosure can be identified

Table 3. Dateable pottery sherds: prehistoric and Roman.

Period	Pre-AD 50	Mid-1st century	Late 1st-mid-2nd century	2nd-4th century
Sherd Numbers	58	439	313	131

on the first map of the area, dating to the late 18th century. The feature itself is considered to be post-medieval; 17 sherds of post-medieval pottery were recovered.

DISCUSSION

THE PREHISTORIC PERIOD

The prehistoric archaeological potential of the West Sussex Coastal Plain has been noted for some time (Bedwin 1978, 48), though historically it has tended to receive less attention than discoveries of sites from the Romano-British period (e.g. the early villas at Fishbourne, Southwick, Angmering and Arundel). Our knowledge of prehistoric settlement for the area was last summarized in 1983 and 1988 (Bedwin 1983; Drewett *et al.* 1988) and, with one or two exceptions there is little major to add to the picture. Stratified late Bronze Age/early Iron Age material was recovered during excavations by the Field Archaeology Unit at Northbrook College, Worthing, though further comment must await post-excavation analysis. Excavations by Wessex Archaeology on the line of the Westhampnett bypass (Andrew Fitzpatrick, Wessex Archaeology pers. comm.) recorded a major late Iron Age cemetery and settlement area (Fig. 2:A & B respectively). Stratified late Bronze Age pottery was recovered from a small cluster of pits at Yapton (Rudling 1987, 51-67) (Fig. 2:C), and an associated surface artefact collection survey (2.8 ha) recovered abundant fire-cracked flint, though there was only one sherd of prehistoric pottery. Recent watching brief/excavations at Rustington (Rudling 1990) recorded late Bronze Age pottery and flint debitage in association with potential round huts.

The nature of what might be termed the Bronze Age activity at Boxgrove is hard to determine as there is no stratified material. However, the presence of flint debitage and tools, loom weights and pottery would seem to indicate the proximity of a middle to late Bronze Age settlement. The chance nature of the discovery of this material mirrors the finding of early Bronze Age material at North Bersted (Bedwin & Pitts 1978) and highlights the difficulty of detecting such activity even with systematic fieldwork. Slight features will not be detectable by air photography, especially on Coastal Plain soils. Artefacts are not abundant and pottery often degrades in the acidic soil making detection by surface artefact collection difficult. Thus Bronze Age

artefact find spots tend to be dominated by metalwork (Ellison 1978, fig. 14; Bedwin 1983, fig. 2) owing to its greater durability and visibility; the latter increasing with the increased use of metal detectors, e.g. recent discoveries at Yapton (Aldsworth 1983) and Rustington (Rudling 1990).

Following an hiatus with the late Bronze Age, late Iron Age activity at Boxgrove is dominated by Enclosure 1, which would appear to have two contemporary parallels in the Coastal Plain: Copse Farm Oving, Enclosure complex 1 (Bedwin & Holgate 1985) and Oldplace Farm, Westhampnett, Enclosure 1 (Bedwin & Holgate 1985). The overall dimensions at Boxgrove are not known, though a minimum size for the enclosure would be c. 36 m × 33 m and this would match the two examples well. The ditch morphology of Copse Farm is not dissimilar, though there is not the same pronounced narrowing at the base. If the Boxgrove enclosure is approximately this size, then it cannot be interpreted as a settlement, unless it has an external round house similar to Oving, and is therefore functionally different to these examples. However, it is possible that Boxgrove is substantially larger and is the first Coastal Plain example of the larger type of the Iron Age square or 'kite' shaped enclosure which includes, in the central southern counties for example, Bishopstone (Bell 1977) in Sussex, Rucstalls Hill (Oliver & Applin 1979) in Hampshire and The Packway in Wiltshire (Wainwright & Longworth 1971; Graham & Newman 1993). The nearest potential parallel is the enclosure at Madehurst (West Sussex SMR, No. 1758). One of the authors has previously noted that some of the smaller hillforts, such as Harrow Hill (0.4 ha) and Highdown (1.0 ha) are probably not much more than defended settlements and could be included in this category (Bedwin 1978, 42). The settlement areas of the published examples are enclosed by substantial 'V' profiled ditches between 1 m and 2 m deep and at Bishopstone over 2.5 m wide. In addition to extensive settlement activity, both Bishopstone and Rucstalls Hill contain areas devoid of subsoil features. At Bishopstone it was noted that few artefacts accumulated in the ditch away from the settlement area and a parallel may be valid with Boxgrove. Of the examples quoted, the Packway, Wiltshire is unique in producing no evidence for settlement activity and has a ditch section most similar to that at Boxgrove. The original excavators of the Packway noted the constriction at the base of the ditch and

postulated that it might have been to accommodate a palisade. There is no conclusive evidence for this from either of the reports, and likewise it is not thought that the ditches of Boxgrove, Enclosure 1 contained a palisade.

The temporal relationship of the Devil's Ditch to Enclosure 1 is not beyond doubt, but the recorded evidence appears to favour a relatively later date for the Ditch as excavated, though it may have been redefined throughout its functional life and the pottery included within it only dates its disuse. The Ditch unquestionably terminates at Enclosure 1, and the possibility exists, therefore, that the enclosure was either the predetermined end for the earthwork and was, in effect, a 'marker point', or that the two are contemporary, the latter suggesting that the enclosure could be considered an integral part of the Chichester Entrenchments, interpreted by Bradley (Bradley, in Cunliffe 1971) as a territorial oppidum.

The presence of moulds for producing coin flans (Fig. 26:19-25) in Ditch 1 suggests the possibility for the on-site production of coinage. The moulds have not been subjected to detailed analysis and it is not yet possible to determine the metals involved. However, it is expected that this will be undertaken and the results published in a later volume of the *Sussex Archaeological Collections*. Despite this, parallels with known Atrebatian coins (Van Arsdell 1989, 111-83) suggest that the larger moulds would have been for gold flans and the smaller moulds for silver. The recovery of several crucible fragments (e.g. Fig. 26:13, 14 & 16) and possible furnace debris, would appear to strengthen the argument for on-site coin production. However, without the presence of *in situ* furnaces, for example, there must always remain a doubt that the objects have been introduced to the site from elsewhere. The authors are unaware of any published *in situ* furnaces from other sites, and although coin flan moulds may be found in great quantities, e.g. Old Sleaford (Jones *et al.* 1976), there is still no conclusive evidence for associated working areas. The Boxgrove coin moulds are the first from Sussex and join a short list including Rochester and Silchester in the south-east.

Coin flan moulds similar to the Boxgrove examples are conventionally accorded a pre-conquest date, though minting may have occurred within the region of the Iceni until the Boudiccan period (c. AD 60/61) (Van Arsdell 1989, 185, 213). Almost identical examples are recorded from Belgic contexts at Verulamium (Frere 1983), Camulodunum

(Hawkes & Hull 1947) and Winchester (Biddle 1966). Several of the examples from Silchester (Corney 1984) are from residual contexts, though two fragments of flan mould were found during systematic surface artefact collection in association with pottery dated to the second half of the first century BC. In addition, excavation in levels below the basilica recovered crucible and coin mould fragments from a burial dated to c. AD 15-35 (Fulford 1987, 275). A few fragments of flan mould were recorded in a post-conquest/'pre-Boudiccan' context at Needham, Norfolk (Frere 1941) and this might indicate a time span extending into the Roman period. Several of the Boxgrove coin flan mould and crucible fragments were recovered from contexts containing Romano-British pottery, and none came from unequivocally prehistoric deposits. The earliest context (223) is given a *terminus post quem* by a single sherd of Hardham/Pulborough colour-coated ware, dated to the late 1st to early 2nd centuries. Although coarse Romano-British sherds, dateable only to the 1st to 4th centuries, were present in Context 223, mid-1st-century pottery, which is elsewhere extremely abundant, was absent. This context also contains a concentration of late Iron Age pottery and the two Dressel 1(b?) sherds which indicate that residual elements are present. It would seem probable, therefore, that the moulds are pre-conquest in date, but are residual in the contexts from which they were recovered.

The juxtaposition of Enclosure 1 and the Devil's Ditch has already been noted, and in this context the possibility is raised that it might be appropriate to view Enclosure 1 as a coin production site within a territorial oppidum rather than as an isolated late Iron Age enclosure. This is not to infer that coin production need be the original function of Enclosure 1, or that it is contemporary in construction with the Chichester Entrenchments, which are themselves probably of several phases. It has already been noted that the enclosure may pre-date the Devil's Ditch, and it is, therefore, feasible that coin production represents an adaptation of an existing enclosure of unknown function.

THE ROMANO-BRITISH PERIOD

The evidence for the Romano-British period at Boxgrove suggests a small rural settlement or farmstead with at least one possible building, perhaps rebuilt, associated enclosures and a trackway. On-site activity appears to concentrate

from the mid-1st to the mid-2nd centuries, though there is evidence for it continuing, possibly at a reduced level, into the 3rd and 4th centuries. Whether there is direct continuity with the Iron Age phase must remain an open question, as much due to the paucity of information on the character of the Iron Age site as to the problems of dating the pottery in this period.

Occupation of the West Sussex Coastal Plain in the Romano-British period was probably even and quite dense (Pitts 1979) and there are numerous 'findspots' for this area in the West Sussex SMR. However, few of the recorded 'occupation' or 'settlement' sites have been the subject of systematic excavation and thus there are few published excavations for sites contemporary with this phase of Boxgrove. Pitts (1979) notes two areas of possible settlement at North Bersted, Poplars Farm and Hazel Road (Fig. 2:E & F). The former included 2nd-century cobbled areas overlying ditches and the latter was

described as a 1st- to 3rd-century farmstead. The only major excavation of a contemporary site on the West Sussex coastal plain is Copse Farm Oving (Bedwin & Holgate 1985, 215-46). Here, a complex of enclosures and associated trackways (1985, fig. 2) are similar to those at Boxgrove, and the Romano-British pottery is broadly contemporary (1985, 236). However, no occupation focus for this phase was excavated, and a comparison with the organization of the Boxgrove 'farmstead' is not possible. Immediately north of the plain on the chalk downs there is also, surprisingly, a dearth of comparative material, though crop marks at Warehead Farm and Bushy Copse (West Sussex SMR nos. 1288 & 1699) (Fig. 2:G & I) are similar in plan. In the future the imbalance that exists between excavations of low and high status sites will perhaps be redressed, and a better understanding of all aspects of the transition from the late Iron Age to the Romano-British periods will follow.

THE FINDS

THE POTTERY By H. Robert Middleton & David Rudling Introduction

A total of 25,067 sherds was recovered from the excavations of the Romano-British settlement adjacent to the Devil's Ditch terminal and Ditch 4 (see Bedwin & Orton 1984). The bulk of the material came from two principal sources: the ditches which produced fresh and unabraded sherds, and the surface features (such as Contexts 249, 282 and the areas of cobbling), the pottery from which was heavily abraded.

Aims and methods

This report was undertaken principally in order to provide a date range for the features making up the site, and secondly as a guide to the range of material available for more detailed study.

All of the material not examined by Clive Orton (Bedwin & Orton 1984) was sorted into fabric groups (by visual examination only) and form types (jars, bowls, etc.) within these groups. The sherds in each fabric group were weighed and counted and the rim sherds used to estimate vessel equivalents (eves). This detailed data was recorded on pottery record sheets and has been archived. However, for summary tables of fabric quantities (sherd counts) by context, see the microfiche.

Fabric types

A. The prehistoric pottery (incorporating comments by S. Hamilton).

1. Soft grey fabric with numerous organic voids (13 sherds). Only occurs as very small sherds. ?Bronze Age. Orton Fabric J.
2. Flint and sand-tempered fabrics.
This group includes Orton's Fabric Group I (114 sherds). The group can be subdivided into four types:

2a. Abundant very coarse flint tempering. Late Bronze Age/Iron Age.

2b. Medium-fine flint tempering. Finer walled vessels than for type 2a. Sometimes with burnished surfaces. Such fabrics, which are generally reduced, are often found associated with 'Saucepan' type pottery *c.* 3rd century BC to early 1st century AD. Catalogue nos.: 1-3.

2c. Medium-fine flint and sand tempering. Grey/black in colour. Late Iron Age.

2d. Predominantly sand tempering, but occasionally with some fine flint as well. Grey/black in colour and wheel-turned. This fabric type is well represented at the late Iron Age settlement site at Copse Farm, Oving (Sue Hamilton pers. comm.) and is also present at the Cattle Market site, Chichester (Alec Down pers. comm.). Late 1st century BC/early 1st century AD. Catalogue no.: 4.

B. The Roman pottery

3. Samian Ware or Terra Sigillata (319 sherds)

Out of 319 sherds of Samian Ware there are 193 identifiable pieces. The majority of the identifications were made by Mr G. Dannell, and his identification lists form part of the pottery archive. Of the 193 identifiable sherds/chips, 116 were manufactured in South Gaul and the rest in Central Gaul. There was one example of Black Samian. The various vessel forms are listed below by source of manufacture and date.

i. South Gaul

a. Claudian
Forms: Ritt. 1; Dr 15/17; Dr 18; Dr 24/5; ?Dr 27.

b. Claudian/Neronian

Forms: ?Dr 15/17R; Dr 18; ?Dr 18R; Dr 24/5; Dr 27.

- c. Neronian/early Flavian (time of Vespasian)
Forms: ?Dr 15/17; ?Dr 15/17R or 18R; Dr 18.
- d. Flavian
Forms: Curle 11; Dr 18; Dr 18R; ?Dr 24/5; Dr 27; Dr 35/6;
Dr 36; Dr 37; Dr 42.
- e. 1st century
Forms: Dr 18 (riveted); Dr 29; Dr 33; Dr 35; ?Dr 67.
- ii. Central Gaul
- a. Les Martres-de-Veyre: Trajanic
Form: Dr 37 (the decoration involves an ovolo pattern:
probably Rogers' type B.38. c. AD 100-120).
- b. ?Les Martres-de-Veyre: ?Trajanic
Forms: Dr 18 or 18/31; Dr 37.
- c. Hadrianic
Forms: Dr 18/31; Dr 33; Dr 37 (one sherd is decorated with
an ovolo pattern: probably Rogers' type B.31. c. AD 125-140);
?Dr 38.
- d. Lezoux: Hadrianic/Antonine
Forms: Dr 33 (stamped MASVETI, i.e. the pottery
MANSVETUS OR MASVETUS — see Cat. No. 73); ?Dr 64 (Black
Samian).
- e. Hadrianic/Antonine
Forms: Dr 18/31; Dr 18/31R; Dr 33; Dr 35/?36; Dr 37; ?Dr 38.
- f. Antonine
Forms: Dr 31; Dr 33; Dr 38; Dr 43 or 45; Dr 81.
- iii. ?Central Gaul-Late Antonine
Form: Dr 31R.
4. Terra Rubra (39 sherds)
All pre-Claudian. Fabrics present: TR1A, a cream fabric with
a red slip; TR1C, orange fabric with a red slip; TR2, orange fabric
with self-coloured surfaces; TR3 a fine-grained fabric with
polished self-coloured surfaces (only used for beakers).
Forms: CAM 8 platter; CAM 56A bell-shaped cup; CAM
72-9 pedestal beaker; CAM 84 girth beaker; CAM 91 globular
beaker; CAM 112 butt beaker; CAM 112cb butt beaker; misc.
platters. Catalogue nos.: 133, 138, 139, 140, 141, 172, 181,
190, 191, 194, 195, 199, 200, 219, 250, 254.
5. Terra Nigra (23 sherds)
Range in date from pre-Claudian to post-conquest.
Forms: CAM 1 platter; CAM 8 platter; CAM 14 platter.
Catalogue nos.: 109, 110, 208, 252.
6. Gallo-Belgic White Wares (146 sherds)
This group are all of the form CAM 113 butt beakers in a
fine, hard white fabric. Either a continental source or they are
the product of Gallo-Belgic potters at Braughing-Puckeridge
or Camulodunum (Rigby, in Partridge 1981). Examples from
Contexts 5 (Group 6), 475 (Group 1) and 497 (Group 1),
however, were made in coarser, pink/red fabrics with numerous
small quartz and grog inclusions and were probably copies from
southern Britain or northern France. The examples from Contexts
495a and 495 have a late-1st-century date. Catalogue no.: 53.
7. North Gaulish White Wares (134 sherds) (Orton Fabric F1)
Fine white fabric with abundant, very fine quartz and
sparse red iron ore inclusions. Mainly flagon forms from north
Gaul of 1st-century date. One CAM 140/161 form (Context 1)
and one CAM 161 (Context 483) dating to pre-60 AD. Catalogue
nos.: 146A, 192, 193, 220.
8. Miscellaneous White Ware flagons (65 sherds)
Various flagon forms in fine white/off white fabrics. Date
range of Neronian-mid-2nd century. Southern British or north
Gaulish origin, except for that from Context 31 (Group 1)
which may have originated in Rheims. Catalogue no.: 218.
9. Miscellaneous flagons in oxidized fabrics (209 sherds)
This group includes various flagon forms in fine red/brown
oxidized fabrics. A 3rd-century type is the only datable
example. Catalogue nos.: 2, 221, 241.
10. Chapel Street, Chichester products (oxidized) (160 sherds)
(Down 1978)
Fine red/orange fabric with frequent mica inclusions and
variable amounts of sand and natural clay pellets. Can have a
grey core, and usually has white slipped surfaces. Some
examples may be from a contemporary kiln in Chichester. Date:
Claudio-Neronian. Forms present: rusticated beaker; two-
handled jar ('honey pot'); two-handled flagon; misc. flagons.
Catalogue nos.: 9, 52, 58, 142, 149, 179, 180, 182, 237, 239,
256.
11. Chapel Street, Chichester products (reduced) (160 sherds)
(Down 1978)
Same fabric as Fabric 10, but reduced to a dark blue/grey
with margins sometimes oxidized to light brown. Forms
present: beakers; bowls; ?dish; jars; lids. Catalogue nos.: 7, 37,
65.
12. Miscellaneous local fine wares (12 sherds)
This type includes various fine sandy fabrics from off-
white/grey to orange.
Forms: most are unidentifiable but do include a fine grey
poppy head beaker with applied pellets. Catalogue nos.: 26,
205, 206.
13. Chichester products (100 sherds)
Fine red/brown 'gritty' wares often with an off-white/pale
cream slip. Probably from an unlocated kiln in Chichester, later
than that at Chapel Street, probably late 1st century.
Forms present: rusticated beaker; flagon. Forms similar to
those from the Chapel Street kiln. Catalogue nos.: 111, 112,
132, 143a, 143b, 144, 146, 147.
14. 'Nene Valley' type colour-coated wares (4 sherds)
Very dark brown/black colour coat with a soft white/pale
cream fabric. Mid-2nd century to 4th-century date.
Forms present: beaker.
15. Central Gaulish 'Rhenish' Ware (14 sherds)
Fine red fabric with a metallic dark brown/black colour
coat. Mid-2nd to 3rd-century.
Forms present: beaker.
16. Central Gaulish or Colchester type colour-coated wares
(16 sherds)

- Fine brown fabric with a dark brown colour coat. Mid-2nd to 3rd century.
Forms present: beaker. Catalogue nos.: 202, 222.
17. ?Hardham/Pulborough colour-coated wares (5 sherds) (Green 1977)
Red/brown fabric with a dark brown colour coat. Four small sherds of the same vessel from Context 1 with stamped and combed decoration. Late 1st-early 2nd century. Catalogue no.: 226.
18. 'Pulborough tradition' fine wares (55 sherds)
Fine, sandy micaceous fabric, fired to grey on interior and brown exterior. All sherds are from fine, thin-walled vessels. Late 1st-early 2nd century.
Forms: jar.
19. New Forest products (87 sherds) (Fulford 1975)
Late 3rd-4th century.
Forms present: Fabric 1: 1 (globular flask); 7 (flask); 27.13-14 (indented beaker); 35 (globular beaker); 44 (bag-bodied beaker); 1-10 (flasks); 11.4 (flagon); Fabric 2: uncertain forms.
20. Oxford colour-coated wares (9 sherds) (Young 1977)
Late 3rd-4th century.
Forms present: C? carinated bowl; C? beaker; C97-C100 mortaria.
Catalogue no.: 247.
21. Miscellaneous fine wares (250 sherds)
Most of this group were too small and/or abraded to be diagnostic of either form or fabric.
Catalogue nos.: 64, 177, 196, 201, 203, 204, 207, 240, 248, 259.
22. Alice Holt products (6 sherds) (Lyne & Jeffries 1979)
Fine, grey sandy ware with burnished surfaces and a white slip on the rim. Dated to after 270 AD.
Forms present: Class 3B (everted rim jar); Class 6A (straight or convex-sided dishes); Class 1C (large, cordoned storage jars).
23. Grey sandy wares (12,977 sherds)
Broad group covering vessels in reduced medium/coarse sandy fabrics. Various local sources are likely, including those identified by Hodder (1974). The batch marks present on some vessels indicate sources at the Rowlands Castle and Havant kilns. A source local to the site is also likely.
Forms present: dish; bowl; beaker; jar; lid. Catalogue nos.: 3, 8, 12, 14, 15, 16, 18, 24, 25, 27, 28, 29, 30, 31, 32, 34, 38, 39, 43, 46, 47, 48, 49, 51, 54, 56, 57, 59, 60, 62, 63, 66, 67, 68, 69, 76, 80, 81, 82, 84, 86, 89, 90, 94, 95, 98, 100, 102, 103, 104, 114, 117, 121, 123, 124, 125, 127, 131, 134, 135, 136, 137, 145, 153, 154, 155, 156, 157, 158, 159, 166, 170, 171, 178, 183, 186, 188, 189, 197, 198, 210, 211, 212, 213, 214, 224, 227, 242, 245, 258.
24. Black sandy wares (3972 sherds)
Medium/coarse sandy fabric with red core and margins and black surfaces. Often burnished and decorated with burnished lines and/or lattice decoration. Probably locally made. No clear division between Fabrics 23 and 24.
Forms present: platter; dish; bowl; beaker; cup; jar; lid. Catalogue nos.: 11, 13, 19, 20, 22, 23, 40, 41, 42, 72, 85, 87, 88, 91, 92, 93, 97, 99, 101, 116, 118, 119, 120, 122, 150, 167, 168, 169, 176, 185, 187, 209, 223, 225, 244, 249, 253, 257.
25. Light, self-coloured sandy wares (4076 sherds)
Same as Fabric 23, but oxidized to red/brown.
Forms present: dish; bowl; flask; jar; lid. Catalogue nos.: 33, 35, 74, 75, 77, 78, 79, 108, 115, 173, 246, 255, 260.
26. Grey sandy wares with added flint (750 sherds)
Same fabric as no. 23, but with numerous inclusions of small/medium calcined flint. Probably locally made.
Forms present: (large) jar. Catalogue nos.: 10, 106, 129, 151, 152, 162, 163, 164, 165, 175.
27. Light, self-coloured sandy wares with added flint (144 sherds)
Same fabric as no. 25, but with numerous small/medium calcined flint inclusions. Probably locally made.
Forms present: (large) jar; lid. Catalogue nos.: 107, 160.
28. Grey sandy wares with red/brown iron wash (42 sherds)
Same fabric as no. 23, but with light red/brown iron wash. Probably locally made.
Forms present: jar; lid. Catalogue nos.: 126, 130, 161.
29. Light, self-coloured sandy wares with grey wash (42 sherds)
Same fabric as no. 25 but with light reduced iron wash. Locally made.
Forms present: jar. Catalogue nos.: 36, 55.
30. Grey sandy wares with added grog (336 sherds)
Same fabric as no. 23, but with numerous large (c. 1.5 mm) grog inclusions and frequent small iron oxide inclusions. Probably locally made. No clear division between Fabrics 23 and 30.
Forms present: bowl; jar. Catalogue nos.: 4, 5, 6, 44, 45, 50, 96.
31. Reddish-brown fine sandy fabric (77 sherds)
Has frequent grog and sparse iron oxide inclusions. Probably locally made.
Forms present: platter; bowl. Catalogue nos.: 71.
32. Dark grey/black, fairly hard, fine sandy fabric (189 sherds)
Has abundant, even small inclusions of calcined flint. Probably locally made.
Forms present: bowl; jar; lid. Catalogue nos.: 21.
33. Black, brown or grey fabric, grog-tempered (122 sherds)
Handmade with abundant grog tempering. Similar to 'East Sussex Ware' (Green 1977). Late Iron Age/Roman.
Forms present: bowl; jar. Catalogue nos.: 17, 105, 128.
34. Mortaria (31 sherds)
The small sample makes generalizations difficult, but the mortaria appear to cover the period Claudian-4th century. The bulk of them are from 3rd- to 4th-century sources, including Verulamium, New Forest, Oxford and local kilns.
Catalogue nos.: 113, 174, 215, 216, 217, 228, 229, 230, 231, 232, 233, 234, 235, 236, 238, 243, 261.
35. Amphorae (62 sherds)
Various sources.

Forms present: Dressel 1; Dressel 2-4; Dressel 20; Camulodunum 185a; Camulodunum 186a and 186sp; Pelichet 47.

For a discussion of the amphorae see separate report by David Williams. A listing of the amphorae finds is on microfiche. Catalogue nos.: 2a, 6a, 18a, 18b.

36. Red/orange fabric (19 sherds)

Has abundant small flint inclusions. Probably locally made.

No diagnostic forms. ?Medieval.

37. Miscellaneous sherds (8 sherds)

Category including all sherds which cannot be fitted into the above categories, and do not form coherent groups. Usually too small for positive identification.

Catalogue no.: 70.

38. Medieval (14 sherds)

Sandy orange fabric with external green glaze. Medieval. See also fabric type 36.

39. Post-medieval (17 sherds)

a. Fine hard orange fabric with internal green glaze. Graffham Ware. 17th century.

b. Various wares. 18th-20th century.

Acknowledgements

We would like to thank the following specialists for their help in the preparation of this report: Sue Hamilton (Iron Age pottery); Valerie Rigby (fine wares and mortaria); Geoff Dannell and Catherine Johns (Samian); David Williams (amphorae); and Alec Down (fine wares and Graffham Ware).

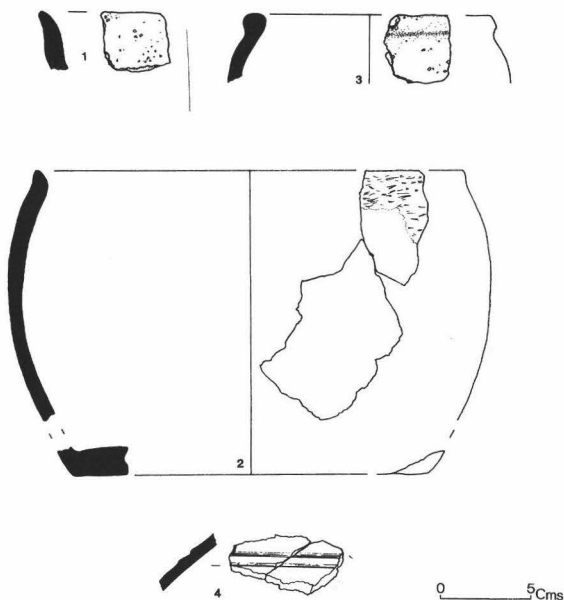


Fig. 12. Ounces Barn, Boxgrove 1982-83: prehistoric pottery.

THE PREHISTORIC POTTERY CATALOGUE

By David Rudling (Fig. 12)

1. Jar. Fine-medium flint-tempered orange fabric with black core. Fabric 2b. Context 1.

2. Round-shouldered jar. Fine-medium flint-tempered grey fabric with some buff coloured areas on the exterior surface. The exterior is partially burnished. Fabric 2b. Context 56.

3. Round-shouldered jar. Medium flint-tempered black fabric. External burnishing. Fabric 2b. Context 248.

4. Cordoned jar. Sand-tempered grey fabric with darker surfaces. Wheel-made and burnished. Probably a local copy of Belgic (Aylesford-Swarling type) cordoned urns. Late 1st century BC/early 1st century AD. Fabric 2d. Context 223.

THE ROMAN POTTERY CATALOGUE

By H. Robert Middleton (Figs. 13-24)

Group 1: Ditch 4. Miscellaneous sherds not analyzed by Orton (Bedwin & Orton 1984)

1. Strainer in fine buff fabric with occasional grog and quartz inclusions. Fabric type 8. Context 28.

2. Flagon in fine pink fabric with off-white exterior surfaces. Frequent small grog and quartz inclusions. 1st century. Fabric type 9. Context 475.

2a. Amphora. Form Pelichet 47. Post AD 60-early 4th century. Context 475. (Not illus.).

3. Carinated bowl in light grey medium sandy fabric. Fabric type 23. Context 498.

4. Necked jar with heavy rim. Grey, medium sandy fabric with small grog inclusions. Fabric type 30. Context 498.

5. Necked jar with bead rim in grey medium sandy fabric. Similar form to Bedwin & Orton (1984) no. 55. Fabric type 30. Context 498. (Not illus.).

6. Everted rim jar. Grey, medium sandy fabric. Fabric type 30. Context 498.

Group 2: Devil's Ditch terminal ditch 5

(see also Bedwin & Orton 1984)

6a. Amphora. Form Dressel 1 or Dressel 2-4. 1st century BC-mid-2nd century AD. Pierced for re-use as a ?loomweight. Context 7. (Not illus.).

Group 3: Ditch 3

7. Carinated bowl, Chapel Street kiln product type K4.2 (Down 1978, 205-6). Claudio-Neronian. Fabric type 11. Context 38.

8. Slightly carinated bowl in coarse, sandy fabric with dark grey core and red exterior margins and surfaces. Slightly burnt. Roughly parallel vertical burnished lines below carination. Fabric type 23. Context 38.

9. Bowl. Red micaceous fabric with dark brown surfaces. Chapel Street kiln, Chichester. Similar in form to type K6.9 (Down 1978, 207). Fabric 10. Context 38.

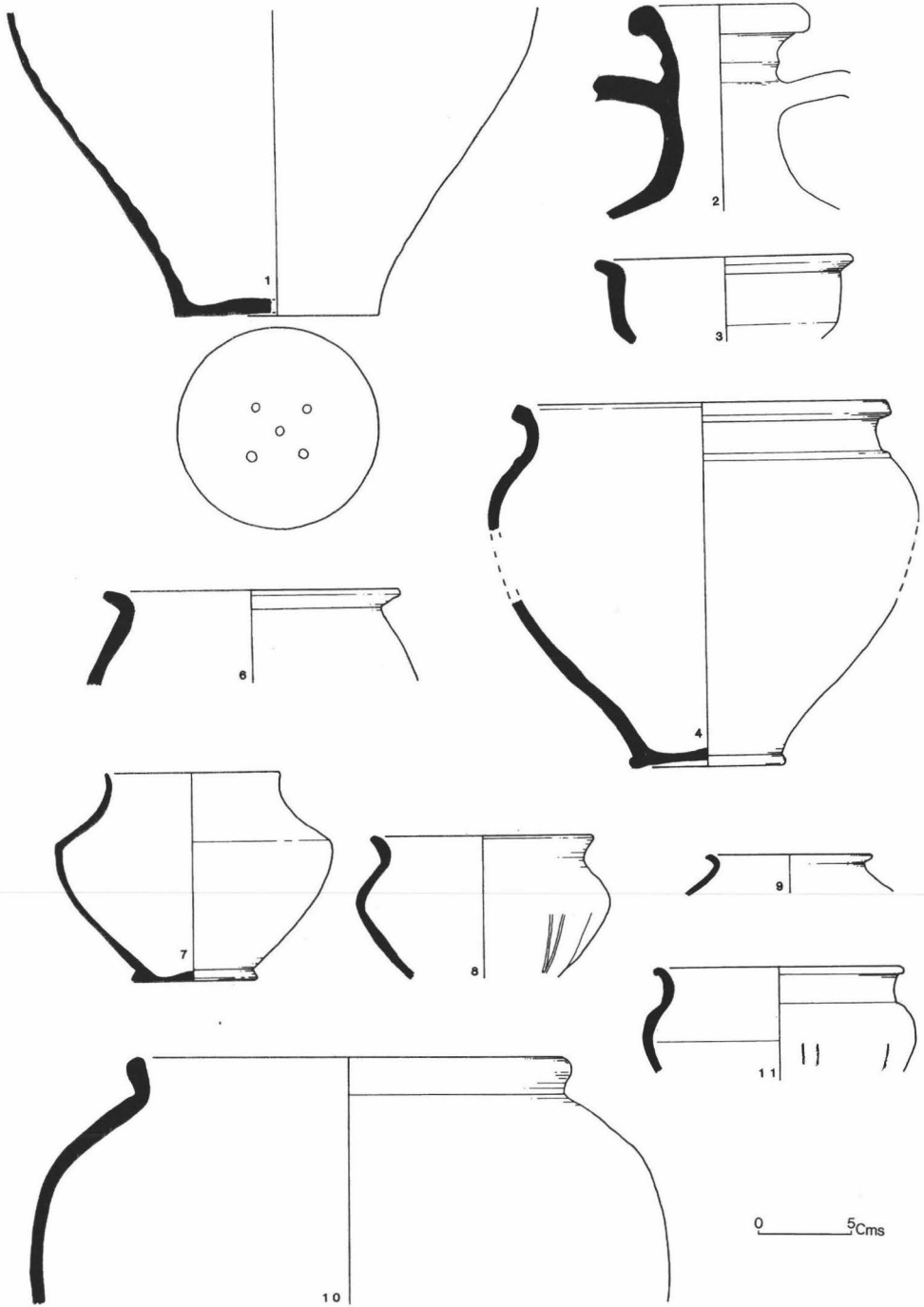


Fig. 13. Ounces Barn, Boxgrove 1982-83: Romano-British pottery.

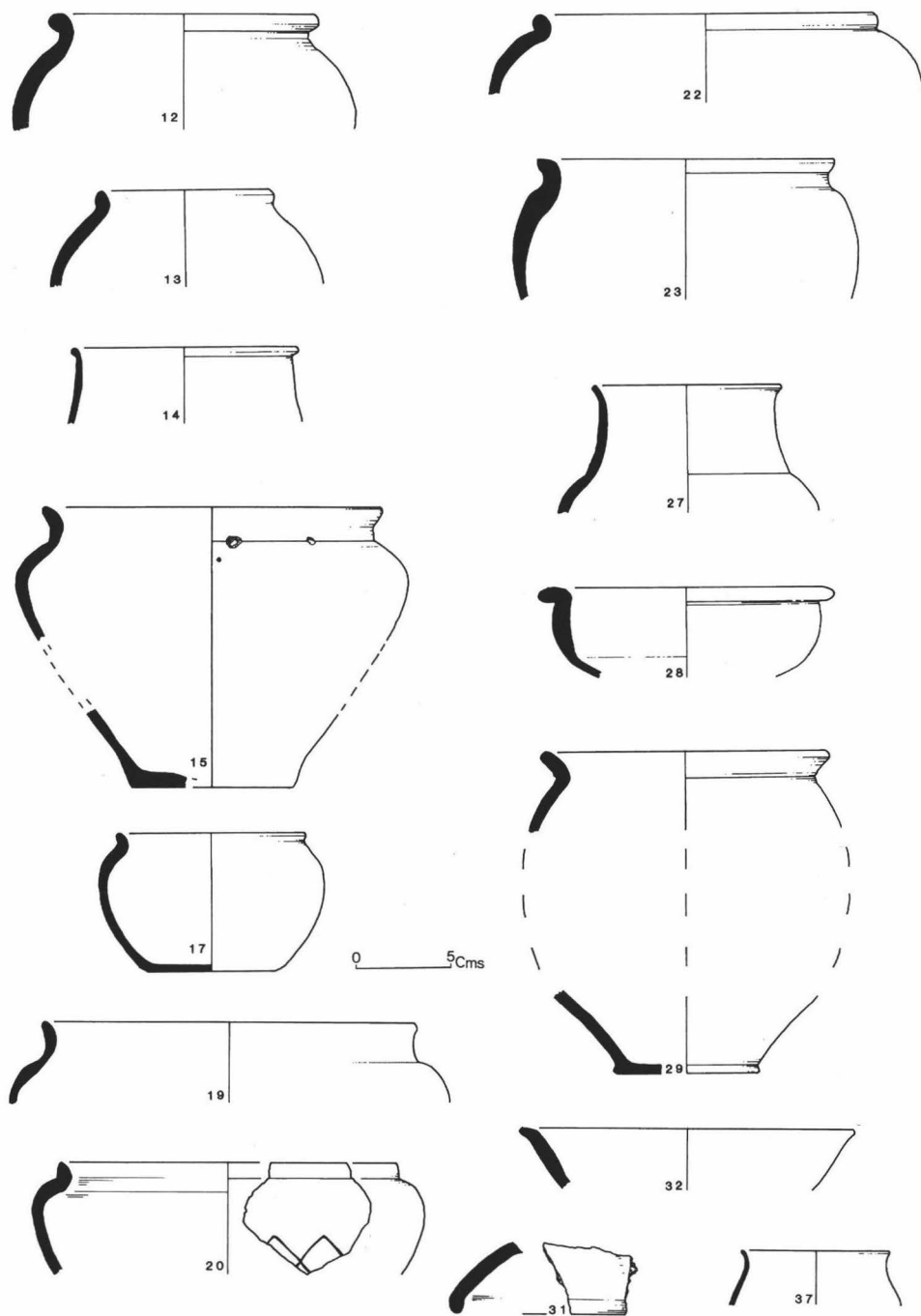


Fig. 14. Ounces Barn, Boxgrove 1982-83: Romano-British pottery.

Group 4: Ditch 2

10. Large jar. Grey fabric with red margins and black surfaces. Abundant medium sized calcined flint inclusions. Burnishing on exterior and interior of rim. Fabric type 26. Context 292.

11. Necked jar. Medium sandy grey fabric with red margins and burnished black surfaces. Fabric type 26. Context 292.

12. Jar. Coarse sandy light grey fabric with dark grey exterior surface. Fabric type 23. Context 292.

13. Jar. Medium sandy fabric with red core and black, burnished surfaces. Fabric 24. Context 292.

14. Beaker. Coarse sandy buff fabric with occasional mica. Exterior smoothed. Fabric 23. Context 292.

15. Jar. Medium sandy light grey fabric. Base of rim pierced in two places by drilling for ?suspension. (Not illus.). Fabric 23. Context 292.

16. Two sherds of a ?jar. Both pierced, slightly off-centre in each case, by drilling. Possibly re-used after pot fragmented. Fabric 23. Context 191 (Not illus.).

17. Small jar/beaker in grog-tempered fabric. Fabric 33. Context 292. See also no. 250.

Group 5: Ditch 1

18. Jar. Medium sandy fabric with black surfaces. Fabric 23. Context 286. (Not illus.).

18a. Amphora. Form Dressel 1, probably 1B. 1st century BC. Context 223. (Not illus.).

18b. Amphora. Form Dressel 1 or Dressel 2-4. 1st century BC-mid-2nd century AD. Context 285. (Not illus.).

19. Jar. Medium sandy fabric with dark grey core, red margins and black surfaces. Frequent mica inclusions. Fabric 24. Context 286.

20. Bead-rimmed jar with high shoulder. Coarse sandy grey fabric. Heavily burnt. Fabric 24. Context 286.

21. Jar. Medium sandy fabric with abundant small flint inclusions. Red core and black surfaces. Fabric 32. Context 285. (Not illus.).

22. Bead-rimmed jar in slightly sandy fabric with frequent grog inclusions. Black core and surfaces. Fabric 24. Context 285.

23. Jar. Grey sandy fabric with frequent small flint inclusions, mica and organic voids. Heavily burnt exterior. Fabric 24. Context 285.

24. Two sherds of grey sandy fabric with frequent small flint inclusions. Both pierced. Evidence of third hole on edge of one sherd — part of ?strainer. Fabric 23. Context 295. (Not illus.).

25. Large wide-mouthed, straight-sided vessel. Grey sandy

fabric with occasional very small flint inclusions. Black exterior. Decorated with numerous incised lines around vessel. Fabric 23. Context 338. (Not illus.).

Group 6: Ditches 8, 9, 10 & 11

26. Poppy head beaker in fine, hard grey fabric. White slip and applied pellets on exterior. Probably local product. Fabric type 12. Context 162. (Not illus.).

27. Necked jar in hard fine sandy fabric. Light grey core and surfaces. Fabric type 23. Context 188.

28. Flange rim bowl in medium sandy grey fabric with sparse quartz inclusions. Fabric type 23. Context 188.

29. Everted rim jar in hard grey fabric. Fabric type 23. Context 188.

30. Large everted rim jar in medium sandy grey fabric with frequent quartz inclusions. Fabric 23. Context 188. (Fig. 15).

31. Lid. Medium sandy fabric with dark grey core and black surfaces. Fabric 23. Context 188.

32. Dish with bevelled rim in light brown/grey medium sandy fabric. Fabric 23. Context 188.

33. Simple rim dish in medium sandy fabric with occasional quartz inclusions. Light grey core with red/brown surfaces. Fabric 25. Context 188. (Not illus.).

34. Lid in coarse sandy fabric with sparse rounded quartz inclusions. Fabric 23. Context 188. (Not illus.).

35. Everted rim jar in medium sandy fabric with occasional small grog and flint inclusions. Dark grey/brown core with light brown surfaces. Fabric 25. Context 188. (Not illus.).

36. Everted rim jar in medium sandy fabric with frequent grog inclusions. Dark grey/brown core, light brown surfaces and grey iron wash. Fabric 29. Context 188. (Not illus.).

37. High necked beaker from the Chapel Street kiln, Chichester, type 4.2 (Down 1978, 205-6). Claudio-Neronian. Fabric 11. Context 188.

38. Bead-rimmed jar in medium sandy fabric with red core. Fabric 23. Context 5.

39. Globular jar. Medium sandy fabric with red core, black margins and light grey surfaces. Fabric 23. Context 5.

40. Jar. Medium sandy fabric with red core and black surfaces. Thicker rim and smaller body than no. 27. Fabric 24. Context 5. (Not illus.).

41. Lid. Medium sandy fabric with light grey core, red margins and black surfaces. Fabric 24. Context 5.

42. Necked jar with slightly globular body. Medium sandy fabric with dark red core and black surfaces. Fabric 24. Context 5. (Not illus.).

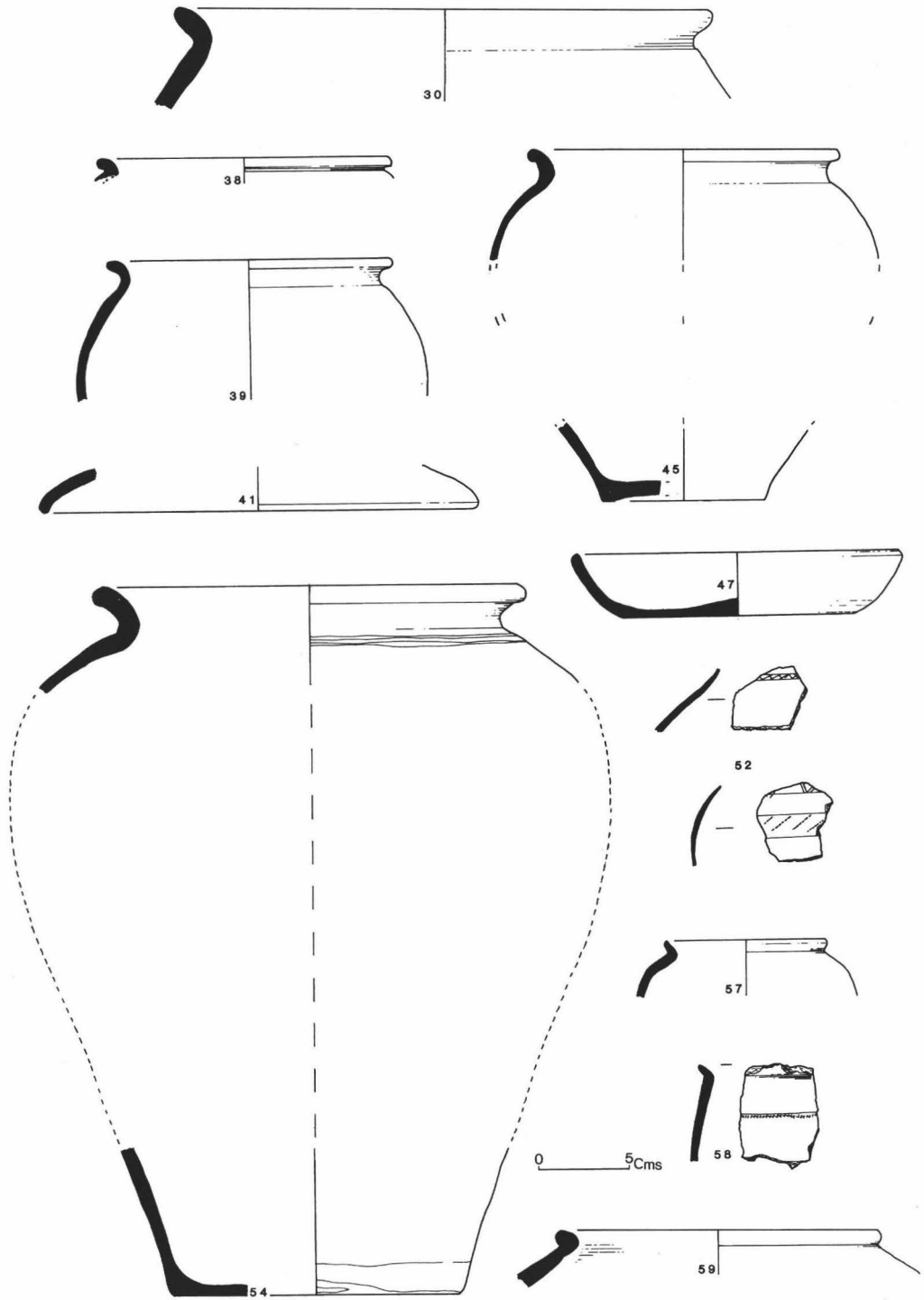


Fig. 15. Ounces Barn, Boxgrove 1982-83: Romano-British pottery.

43. Jar with slight neck and globular body. Light grey, coarse sandy fabric with numerous large ill-sorted quartz and flint inclusions. Fabric 23. Context 5. (Not illus.).
44. Necked jar with angular bead rim. Medium grey sandy fabric with frequent small grog inclusions. Fabric 30. Context 5. (Not illus.).
45. Necked jar similar in form to no. 32, but has a globular instead of shouldered body. Same fabric as no. 32, but has red core and grey surfaces. Fabric 30. Context 5.
46. Small fragment of a strainer with small (c. 1-2 mm) holes made before vessel was fired. Light brown/grey medium sandy fabric. Fabric 23. Context 5. (Not illus.).
47. Platter with simple rim. Medium sandy fabric with dark grey core and light grey surfaces. Fabric 23. Context 5.
48. Large necked jar with flaring, beaded rim. Coarse sandy fabric with dark grey core and light grey surfaces. Fabric 23. Context 5. (Not illus.).
49. Small necked jar with beaded rim. Medium sandy grey fabric. Fabric 23. Context 5. (Not illus.).
50. Large necked jar with heavy beaded rim. Light grey medium sandy fabric with frequent small/medium grog inclusions. Fabric 30. Context 5. (Not illus.).
51. Jar with similar rim to no. 38, in coarse sandy fabric with abundant ill-sorted quartz inclusions. Fabric 23. Context 5. (Not illus.).
52. Two ?jar sherds from Chapel Street, Chichester, kiln. Red core and dark brown surfaces. Rouletted and incised decoration. Claudio-Neronian. Fabric 10. Context 5.
53. Late copy of form CAM 113 butt beaker in a fine buff fabric with frequent rounded quartz inclusions. May originally have had a brown colour coat. Rouletted decoration. Late 1st-early 2nd century. Fabric 6. Context 5. (Not illus.).
54. Large storage jar with flaring rim. Medium sandy grey fabric. Fabric 23. Context 190.
55. Large necked storage jar with heavy bead rim. Dark brown sandy fabric with black surfaces. Frequent small and medium flint inclusions. Fabric 29. Context 190.
56. Large necked jar with heavy angular rim. Medium sandy grey fabric with occasional small black iron oxide inclusions. Fabric 23. Context 190.
57. Small carinated jar with everted rim. Medium sandy grey fabric with sparse medium sized quartz inclusions. Fabric 23. Context 190.
58. High necked jar in fine sandy fabric. Light grey core, red/brown margins and black surfaces. Rouletted decoration on neck. Frequent mica inclusions. ?Chapel Street, Chichester, product, type 8.10 (Down 1978, 207-8). Burnished exterior. Fabric 10. Context 190.
59. Jar with flattened beaded rim in off-white medium sandy fabric with buff margins and grey surfaces. Fabric 23. Context 190.
60. Flaring rim jar in hard medium sandy grey fabric with frequent mica inclusions. Fabric 23. Context 190.
61. Necked jar with slightly beaded rim. Hard fine sandy fabric with dark grey core and black surfaces. Burnished exterior. Fabric 23. Context 190. (Not illus.).
62. Jar with slight neck and heavy beaded rim in coarse off-white sandy fabric with dark grey surfaces. Fabric 23. Context 190. (Not illus.).
63. Jar with moderately everted rim. Dark brown sandy fabric with occasional ill-sorted medium sized quartz inclusions. Fabric 23. Context 190. (Not illus.).
64. CAM 165 jug in red/brown, fine sandy fabric with numerous mica inclusions. Grey core with white slip. Fabric 231. Context 190. (Not illus.).
65. Carinated jar. Chapel Street, Chichester, product, type 4 (Down 1978). Burnished exterior and rim. Fabric 11. Context 221.
66. Part of a bowl base in a black sandy fabric with evidence of burning. Perforation through centre and rounded edges indicate use as a spindle-whorl. Burnished on exterior. Fabric 23. Context 221.

Group 7: Ditch 12 and gully/beam slot Context 539, probably contemporary with Group 6

67. Necked jar. Medium sandy fabric with grey core, red margins and light grey surfaces. Beaded rim. Fabric 23. Context 12.
68. Small jar in coarse sandy grey fabric with light grey core and interior and dark grey exterior surface. Fabric with light grey core and interior and dark grey exterior surface. Fabric 23. Context 12.
69. Necked jar with high shoulder and groove at base of neck. Medium sandy grey fabric with occasional small grog inclusions. Fabric 23. Context 12.
70. High necked jar in fine sandy fabric with dark grey core, light brown margins and dark brown surfaces. Incised shoulder grooves. Fabric similar to that from the Chapel Street, Chichester, kiln but could be from a later kiln. Fabric 37. Context 12.
71. Platter in red/brown sandy fabric with grog inclusions. Local copy of form CAM 14. Heavily burnt. 1st century. Fabric 31. Context 12.
72. Necked jar with beaded rim in coarse sandy dark grey fabric with black surfaces. Burnt. Fabric 24. Context 16. (Not illus.).

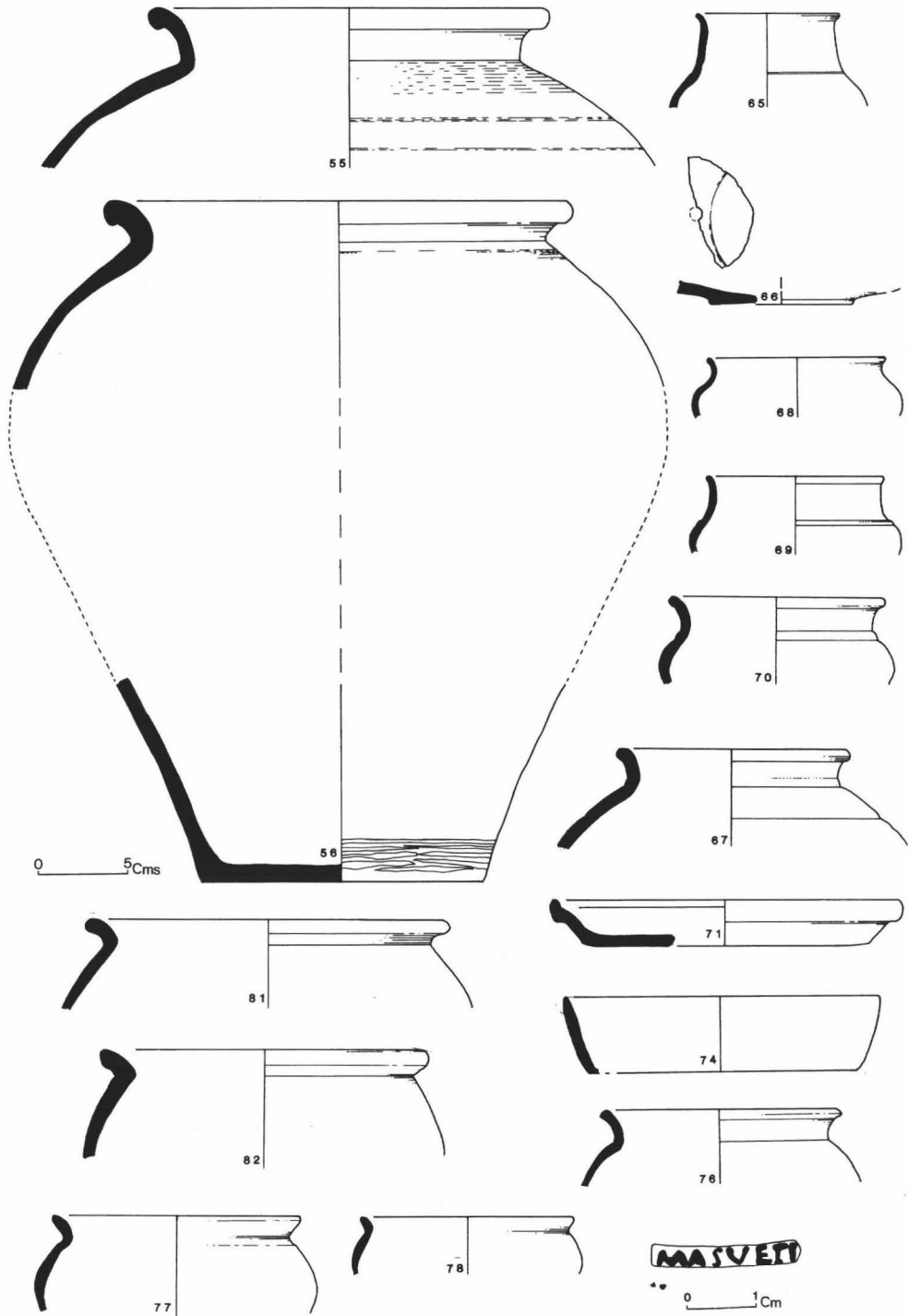


Fig. 16. Ounces Barn, Boxgrove 1982-83: Romano-British pottery.

Group 8: Ditch 14

73. Base of Samian form Dr 33. Stamped MASVETI by potter MANSVETUS or MASVETUS of Lezoux. Hadrianic-Antonine. Fabric 3. Context 547.

74. Dish in coarse sandy brown/buff fabric with frequent grog inclusions. Fabric 25. Context 547.

75. Dish in medium sandy fabric. More angled and lower sides than no. 74. Fabric 25. Context 547. (Not illus.).

76. Small, necked jar in coarse sandy fabric. Burnt. Fabric 23. Context 547.

77. Everted rim jar with globular body. Brown sandy fabric with evidence of external burning. Fabric 25. Context 547.

78. Small everted rim jar in medium sandy fabric with sparse grog inclusions. Fabric 25. Context 547.

79. High necked jar with flaring rim. Medium sandy oxidized fabric with light brown core and brown surfaces. Fabric 25. Context 547. (Not illus.).

80. Everted rim jar with angular rim. Off-white medium sandy fabric with black surfaces. Fabric 23. Context 547. (Not illus.).

81. Everted rim jar in light grey/brown medium sandy fabric with frequent grog and black iron oxide inclusions. Fabric 23. Context 547.

82. Jar with everted expanded rim in medium sandy grey fabric. Evidence of external burning. Fabric 23. Context 547.

83. Flange rim jar in medium sandy grey fabric. Fabric 23. Context 547.

84. Flange rim jar in medium sandy fabric with off-white core and black surfaces. Lighter rim than no. 83. Fabric 23. Context 547.

85. Flange rim jar in medium sandy fabric with light grey/brown core and black surfaces. Frequent rounded quartz inclusions. Incised decoration on rim and girth. Burnished lattice decoration between rim and girth. Fabric 24. Context 547. See also no. 258.

Group 9: Ditch 15

86. Small jar with beaded rim in coarse sandy grey fabric. Fabric 23. Context 439.

87. Small, necked jar with out-turned rim. Medium sandy fabric with red/brown core and black surfaces. Burnished on exterior. Fabric 24. Context 439.

88. Necked jar with out-turned beaded rim and high shoulder. Slightly larger than no. 87. Dark grey medium sandy fabric with black surfaces and burnished exterior. Fabric 24. Context 439. (Not illus.).

89. Bead rim jar in medium sandy fabric with light grey core and dark grey surfaces. Fabric 23. Context 439.

90. Jar similar to no. 89 but with slight neck and slightly larger body. Dark grey medium sandy fabric. Fabric 23. Context 439. (Not illus.).

91. Jar with upright rim and large bead. Medium sandy fabric with red core and black surfaces. Occasional medium flint inclusions. Fabric 24. Context 439.

92. Jar similar to no. 91 but with out-turned rim. Medium sandy fabric with black core and brown/black surfaces. Occasional large quartz inclusions. Burnt. Fabric 24. Context 439. (Not illus.).

93. Necked jar with flaring rim and small bead in medium sandy fabric with red core and brown surfaces. Fabric 24. Context 439. (Not illus.).

94. Everted rim jar with thick rim in medium sandy fabric. Fabric 23. Context 439. (Not illus.).

95. Necked jar with flaring rim, similar to no. 92 but with higher neck. Medium sandy fabric with dark grey core, off-white margins and black surface. Fabric 23. Context 439. (Not illus.).

96. Necked jar with flaring rim in medium sandy fabric with numerous large grog inclusions. Dark grey core with light grey surfaces. Fabric 30. Context 439. (Not illus.).

97. Jar with high neck and small beaded rim. Medium sandy fabric with dark grey core and black surfaces. Fabric 24. Context 439.

98. Jar similar to no. 97, but with thicker neck and larger bead on rim. Medium sandy fabric with grey core and red margins and exterior surface (in places). Fabric 23. Context 439. (Not illus.).

99. Lid with simple lip in dark grey/black medium sandy fabric. Fabric 24. Context 439. (Not illus.).

100. Lid with down-turned lip in medium sandy fabric. Occasional small flint inclusions. Heavily burnt. Fabric 23. Context 439.

101. Lid similar to no. 100, but with more pronounced groove beneath lip on under side. Medium sandy fabric with occasional small flint inclusions. Black core, off-white margins and red surfaces. Fabric 24?. Context 439.

102. Platter with simple rim in medium sandy grey fabric. Fabric 23. Context 439.

103. Platter possible CAM 8 imitation in medium sandy fabric with off-white core, red margins and dark grey/black surfaces. Fabric 23. Context 439.

104. Flanged bowl in medium sandy fabric. Fabric 23. Context 439. (Not illus.).

105. Lid with out-turned rim in grog-tempered fabric. Black core and interior surface (burnt). Brown exterior. Fabric 33. Context 439.

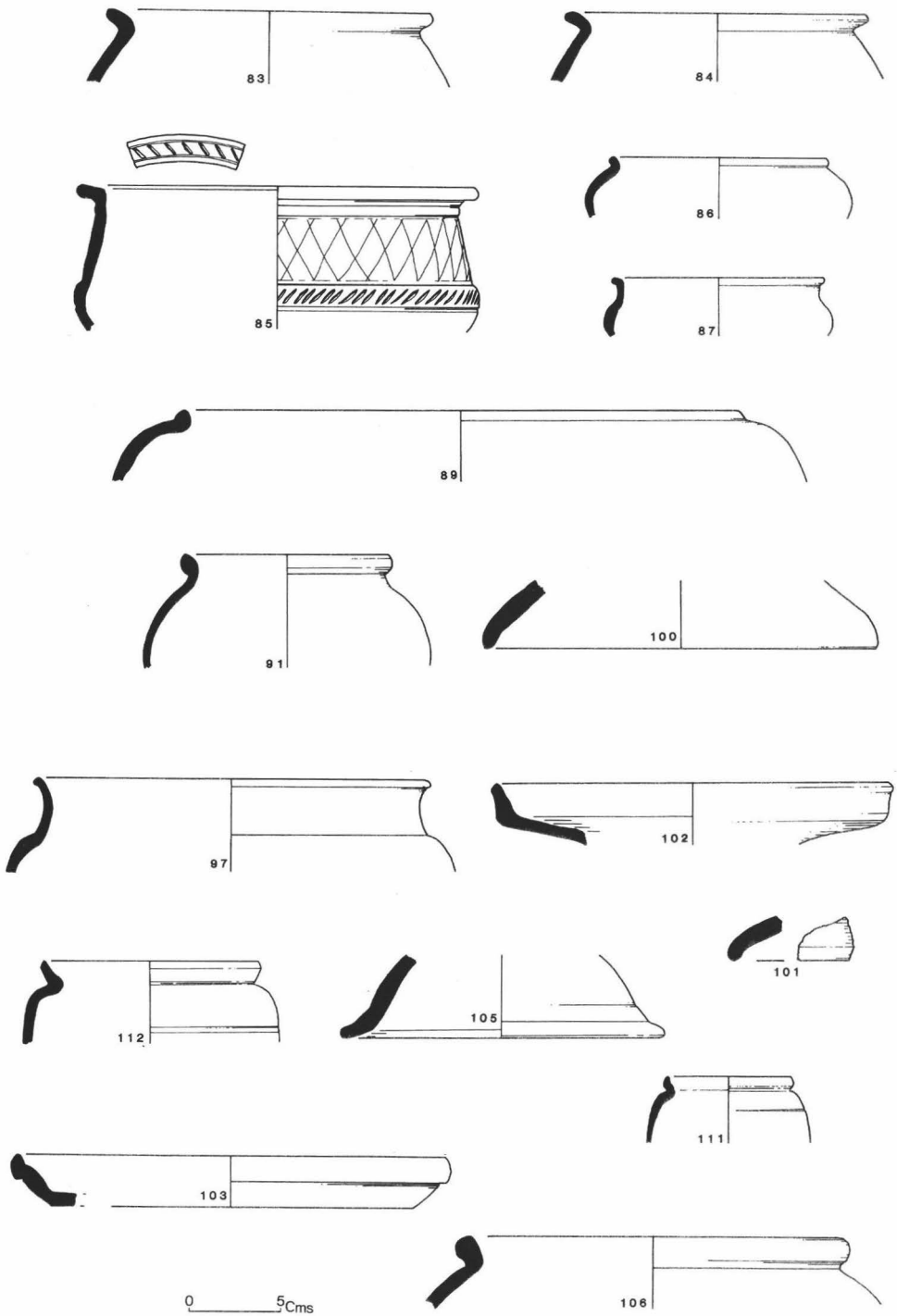


Fig. 17. Ounces Barn, Boxgrove 1982-83: Romano-British pottery.

106. Jar with expanded upright rim in medium sandy fabric with abundant small and medium flint inclusions. Black core and brown surfaces. Fabric 267. Context 439.
107. Large, necked jar with flaring rim in medium sandy fabric with frequent medium and large flint inclusions. Fabric 27. Context 439. (Not illus.).
108. Strainer in brown medium sandy fabric with small (c. 102 mm) perforations. Vessel form unknown. Fabric 25. Context 439. (Not illus.).
109. Platter, of form CAM 1, in micaceous TN. Central Gaulish. Pre-Claudian. Fabric 5. Context 439. (Not illus.).
110. TN platter, form CAM 14. AD 50-70. Fabric 5. Context 439. (Not illus.).
111. Beaker in red 'gritty' ware from kiln in Chichester later than that at Chapel Street. Post Claudio-Neronian. Fabric 13. Context 439.
112. Beaker in same fabric as no. 111, with everted rim and high shoulder. Girth groove and traces of white slip. Fabric 13. Context 439.
113. Bowl with internal flange below rim. Brown, paint decoration on interior. Coarse white sandy fabric. New Forest parchment ware bowl, type 89 (Fulford 1975, 70-72, 75). AD 345-400. Fabric 34. Context 439. (Not illus.).
114. Upright rim jar in medium sandy fabric with occasional, small flint inclusions. Exterior and rim burnt. Fabric 23. Context 499.
115. Jar with slightly out-turned rim. Medium sandy fabric with grey core and brown surfaces. Burnt on exterior of base. Fabric 25. Context 499.
116. Flaring rim jar in medium sandy fabric with occasional small quartz inclusions. Grey core, red/brown margins and black surfaces. Fabric 24. Context 499. (Not illus.).
117. Simple rim dish in medium sandy fabric with light grey core and dark grey/black surfaces. Burnt on exterior. Occasional small quartz inclusions. Fabric 23. Context TT2/3. (Not illus.).
118. Everted rim jar in medium sandy fabric with frequent small quartz inclusions. Dark grey/black core, red margins and black surfaces. Burnished on exterior. Fabric 24. Context TT2/3.
119. Everted rim jar with carination, in dark brown/black medium sandy fabric. Burnished line decoration below carination. Fabric 24. Context TT2/3.
120. Jar with slightly out-turned rim. Medium sandy fabric with frequent small quartz inclusions. Dark brown core and interior surface. Black exterior. Base perforated with three holes to make strainer. Fabric 24. Context TT2/3.
121. Jar with everted rim in medium sandy grey fabric. Burnished exterior and rim. Fabric 23. Context TT2/3.
122. Jar with everted rim in medium sandy fabric with light grey core, red margins and black surfaces. Burnished exterior. Fabric 24. Context TT2/3. (Not illus.).
123. Jar similar to no. 122 but with taller and less steeply everted rim. Medium sandy brown fabric with occasional small quartz inclusions. Burnt exterior. Fabric 23. Context TT2/3. (Not illus.).
124. Jar, similar to nos. 122 and 123 but with heavier rim. Medium sandy fabric with light grey core, red margins and dark grey surfaces. Burnt exterior. Fabric 23. Context TT2/3. (Not illus.).
125. Upright rim jar with interior groove in medium dark grey sandy fabric. Burnt. Interior thickening indicates that the rim was added to the body. Fabric 23. Context TT2/3.
126. Jar with thickened everted rim in medium sandy fabric with light grey core and dark grey surfaces. Oxidized iron wash. Fabric 28. Context TT2/3.
127. Necked jar with flaring rim in medium sandy light grey fabric. Flattening of rim may indicate a firing fault. Fabric 23. Context TT2/3.
128. Flaring rim jar in a grog-tempered fabric. Light grey core and black surfaces. Burnished on exterior and over rim. Grooved decoration on shoulder. Fabric 33. Context TT2/3.
129. Necked jar with slightly out-turned rim in medium sandy fabric with frequent medium and large quartz and flint inclusions. Light grey core and black surfaces. Fabric 26. Context TT2/3. (Not illus.).
130. High necked jar with flange rim in grey, medium sandy fabric with oxidized iron wash. Fabric 28. Context TT2/3.
131. Jar with slight neck and beaded rim in medium sandy fabric, with frequent small and medium quartz and flint inclusions. Burnt exterior. Fabric 23. Context TT2/3.
132. Flagon in red/brown micaceous 'gritty' fabric from kiln in Chichester later than that at Chapel Street. Flavian. Fabric 13. Context TT2/3.
133. TR platter with overhanging rim. CAM 3 variant. Made by Dannomarus between before AD 9-c. AD 25. Stamp of Dannomarus recorded from Fishbourne (Cunliffe 1971, 169, 176-7) in a post-conquest context. Fabric 4. Context TT2/3.
134. Platter, possibly a CAM 3 imitation, in a medium sandy fabric with light grey core and dark grey surfaces. Fabric 23. Context 483.
135. Platter, similar in form to CAM 14, in a medium sandy fabric. Light grey core and dark grey surfaces. Fabric 23. Context 483.
136. Platter, similar to no. 71, but in medium sandy fabric with light grey margins and dark grey surfaces. Fabric 23. Context 483. (Not illus.).

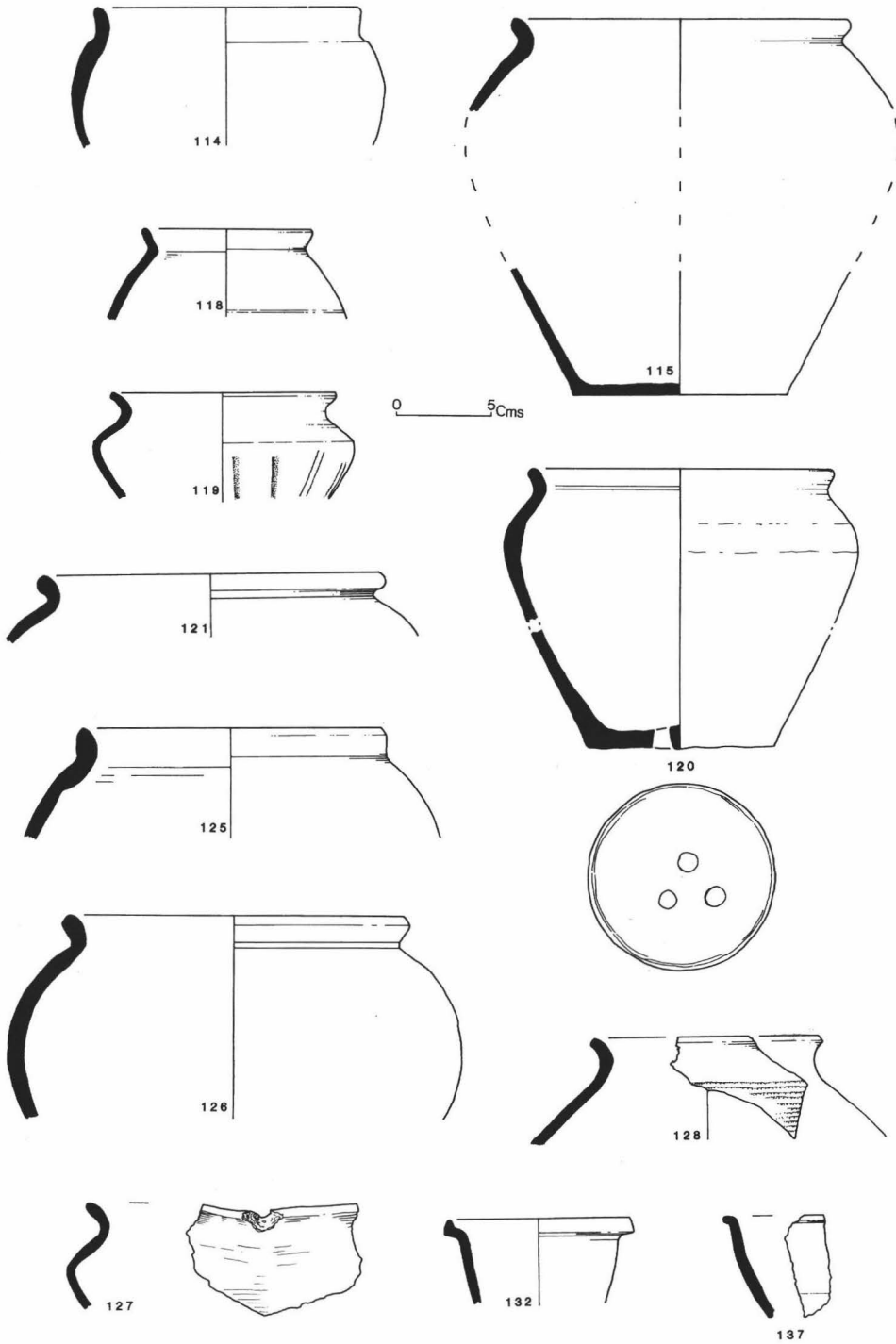


Fig. 18. Ounces Barn, Boxgrove 1982-83: Romano-British pottery.

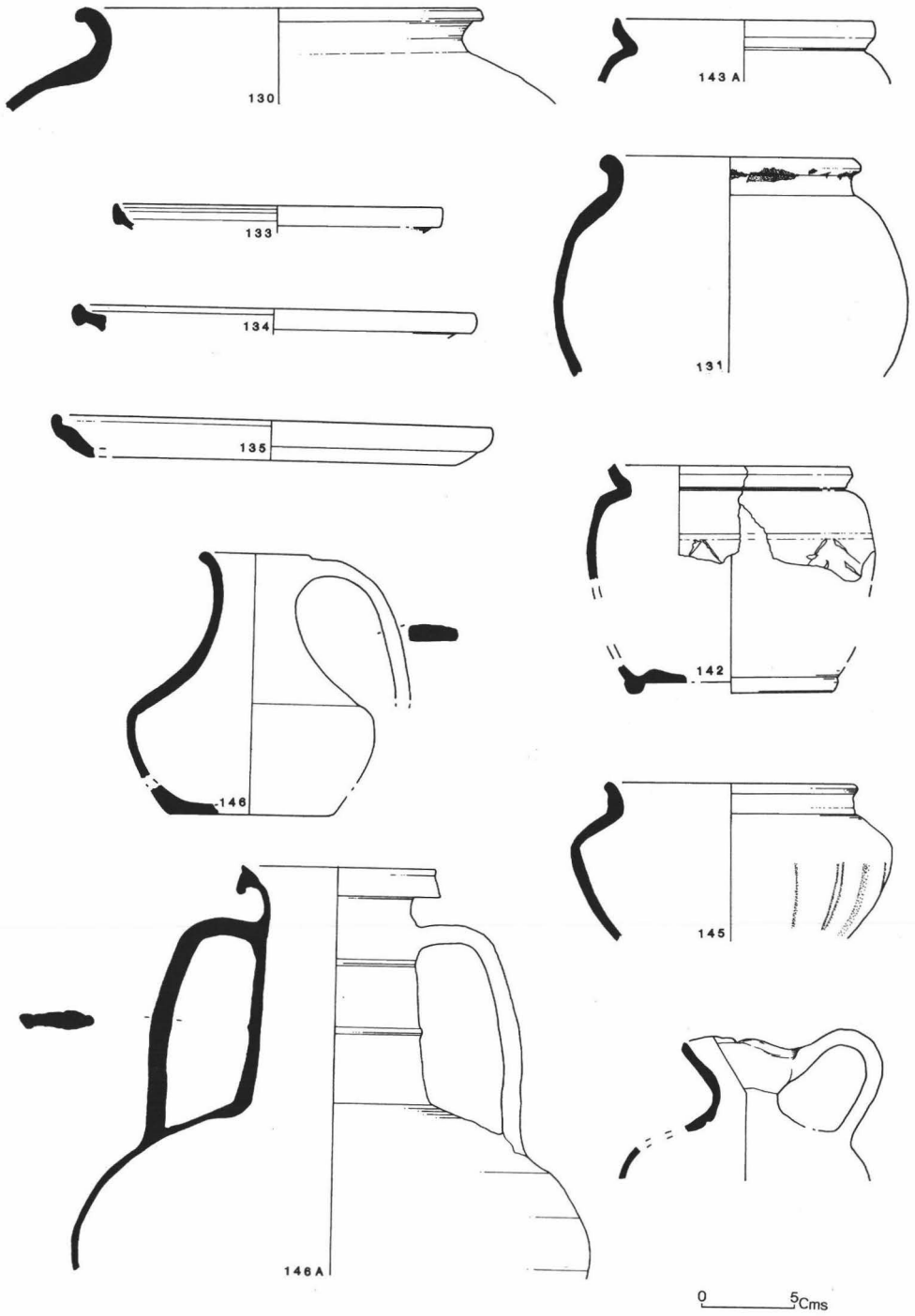


Fig. 19. Ounces Barn, Boxgrove 1982-83: Romano-British pottery.

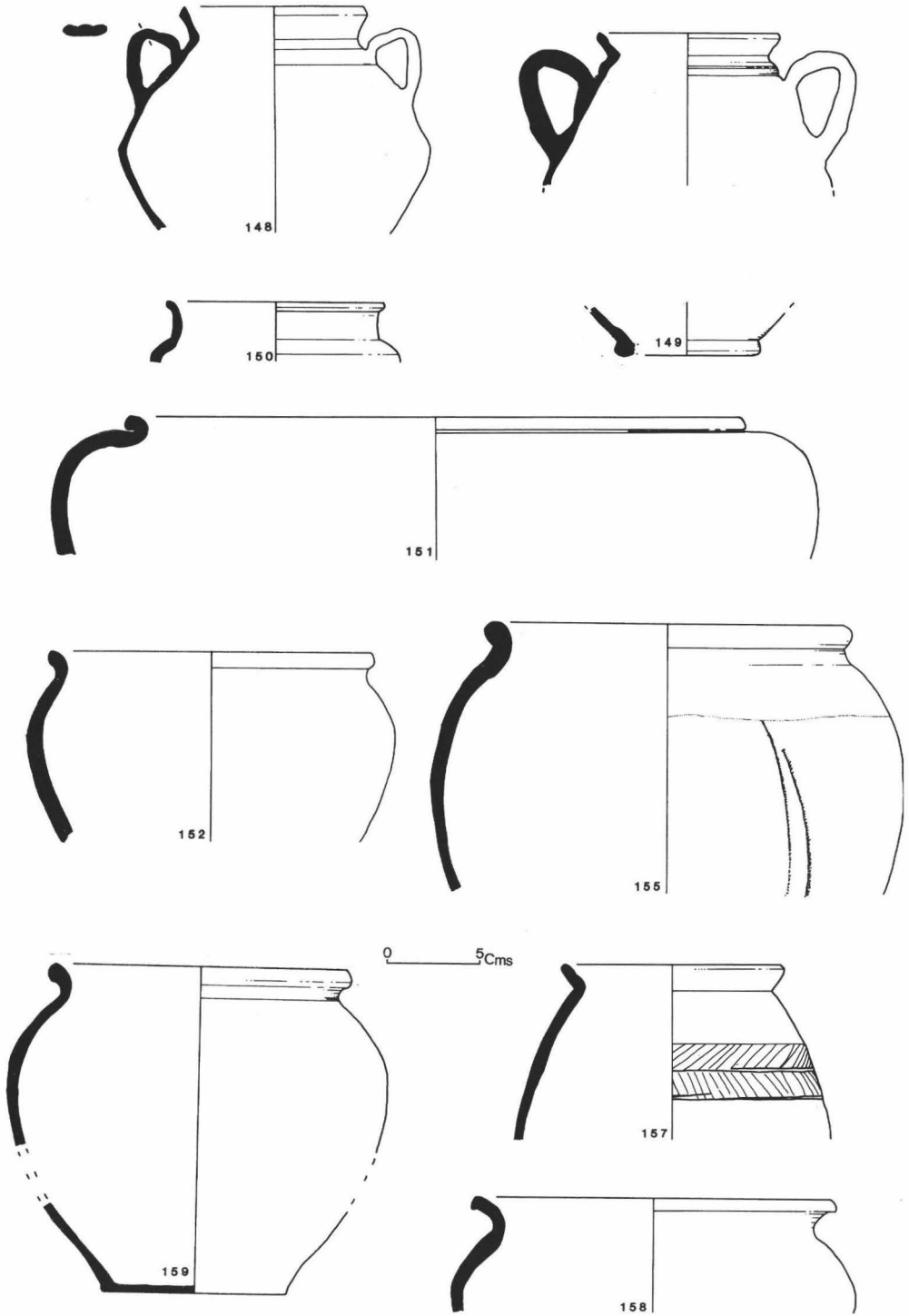


Fig. 20. Ounces Barn, Boxgrove 1982-83: Romano-British pottery.

137. Dish with small out-turned rim. Same fabric as nos. 134-6. Fabric 23. Context 483.
138. Cup form CAM 56A in TR. Post-conquest. Fabric 4. Context 483. (Not illus.).
139. Butt beaker, form CAM 112, in TR3. Fabric 4. Context 483. (Not illus.).
140. Pedestal beaker, form CAM 72-9, in TR1A. Fabric 4. Context 483. (Not illus.).
141. Girth beaker form CAM 84, in TR3. Tiberio-Claudian. Fabric 4. Contexts 483 and 484 (same vessel in both). (Not illus.).
142. Beaker with everted rim and rusticated decoration. Sandy fabric with grey core and red/brown margins and surfaces. Chapel Street kiln, Chichester, type 21 (Down 1978). Claudio-Neronian. Fabric 10. Context 483.
- 143a. Beaker in red 'gritty' fabric from kiln later than that at Chapel Street, Chichester. Traces of off-white slip. Post Claudio-Neronian. Fabric 13. Context 483.
- 143b. Beaker with small everted rim and girth groove. Traces of off-white slip. Same fabric as no. 143a. Same vessel in Context 494 (no. 180). Fabric 13. Context 483. (Not illus.).
144. Beaker, similar to no. 143, but in slightly coarser fabric, though probably from the same source. Trace of off-white slip. Fabric 13. Context 483. (Not illus.).
145. Carinated bowl in medium sandy grey fabric. Burnished lines below carination. Fabric 23. Context 483.
146. Flagon with flat-topped rim in hard red/brown 'gritty' fabric from post-Chapel Street, Chichester, kiln. Form similar to Fishbourne type 116 (Cunliffe 1971). Fabric 14. Context 483.
- 146A. Hofheim flagon (CAM 161). Fine white fabric. Claudio-Neronian. Fabric 7. Context 483.
147. Trefoil jug in the same red/brown 'gritty' fabric as No. 146. Fishbourne type 115 (Cunliffe 1971). Fabric 13. Context 483.
148. Two-handled jug ('honey pot') made at the Chapel Street kiln, Chichester. Off-white slip on exterior and rim. Claudio-Neronian. Fabric 10. Context 483.
149. Two-handled jug ('honey pot') from Chapel Street kiln, Chichester. Off-white over brown slip on exterior and rim. Same vessel in Context 494 (no. 179). Fabric 10. Context 483.
150. Small, necked jar in coarse sandy fabric with brown core and black surfaces. Fabric 24. Context 483.
151. Large bead-rim jar with high shoulder. Black medium sandy fabric with occasional medium calcined flint inclusions. Fabric 26. Context 483.
152. Jar with slight neck and out-turned rim. Black medium sandy fabric with frequent, small flint inclusions. Fabric 26. Context 483.
153. Jar with small neck and beaded rim. Grey medium sandy fabric with black surfaces. Burnt on exterior. Fabric 23. Context 483. (Not illus.).
154. Jar, similar to no. 153 but with larger beaded rim. Dark grey interior, off-white and red margins and dark brown/black surfaces. Fabric 23. Context 483. (Not illus.).
155. Thick-walled jar with slight neck and heavy beaded rim in coarse sandy grey fabric with black exterior. Lightly burnished lines below girth. Fabric 23. Context 483.
156. Similar to No. 155, but with slightly smaller rim and in medium sandy grey fabric. Fabric 23. Context 483. (Not illus.).
157. Everted rim jar in medium sandy grey fabric. Burnished herring-bone pattern below rim. Fabric 23. Context 483.
158. Flaring rim jar in medium sandy grey fabric. Fabric 23. Context 483.
159. Necked jar with angular beaded rim in medium sandy grey fabric. Burnt exterior. Fabric 23. Context 483.
160. Jar with upright neck in medium flint and quartz-gritted medium sandy fabric. Fabric 27. Context 483.
161. Necked jar in medium sandy fabric with oxidized iron wash on exterior. Red core with grey surfaces. Fabric 28. Context 483. (Not illus.).
162. Large jar with beaded rim in medium sandy fabric with numerous medium and large flint inclusions. Fabric 26. Context 483.
163. Necked jar with large bead rim in medium sandy fabric with sparse, medium sized flint inclusions. Fabric 26. Context 483.
164. Large jar with slight neck and large beaded rim in medium sandy grey fabric with sparse medium to large flint inclusions. Fabric 26. Context 483. Same vessel form in similar fabric with abundant grit inclusions. Fabric 26. Context 483.
165. Similar vessel to no. 164 but with smaller rim. Medium sandy fabric with frequent small/medium flint inclusions. Light grey core with dark grey margins. Decorated with lightly burnished vertical lines. Fabric 26. Context 483.
166. Jar with high neck and small beaded rim in light grey medium sandy fabric with dark grey surfaces. Abundant small iron oxide inclusions. Fabric 23. Context 483. (Not illus.).
167. Carinated jar with tall neck in medium sandy fabric with light grey core, pink margins and black surfaces. Burnished on exterior. Fabric 24. Context 483.
168. Lid with simple lip. Light grey, medium sandy fabric with numerous small iron oxide inclusions and black surfaces. Fabric 24. Context 483. (Not illus.).
169. Lid handle with central depression. Medium sandy fabric with pink core and black surfaces. Fabric 24. Context 483.

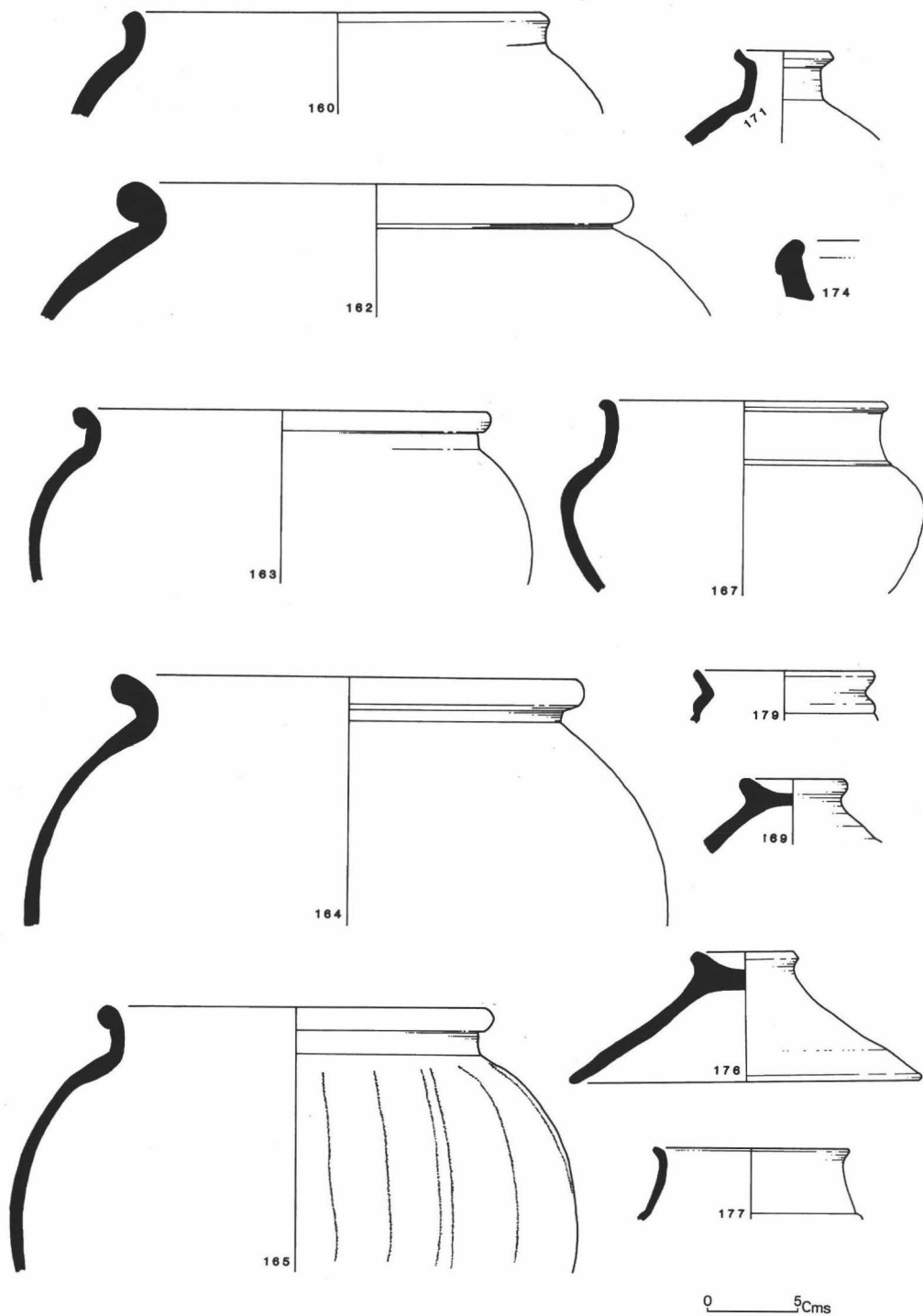


Fig. 21. Ounces Barn, Boxgrove 1982-83: Romano-British pottery.

170. Strainer with small (c. 1-2 mm) holes made before firing. Hard medium sandy fabric with light grey core and dark grey surfaces. Fabric 23. Context 483. (Not illus.).
171. Flagon/bottle in medium sandy fabric with light grey core, off-white margins and black surfaces. Fabric 23. Context 500.
172. Platter in TR1C. Claudian or earlier. Fabric 4. Context 506. (Not illus.).
173. Strainer with small (1-2 mm) perforations in medium sandy fabric with brown surfaces. Fabric 25. Context 541. (Not illus.).
174. Wall-sided mortarium in off-white fine sandy fabric. Fishbourne type 144 (Cunliffe 1971). Source in S.E. England or an import. Claudian. Fabric 34. Context 541.
175. Jar with small beaded rim and high shoulder in grey sandy fabric with black exterior. Frequent small and medium flint inclusions. Fabric 26. Context 495.
176. Lid with simple rim and handle. Medium sandy fabric with red/pink core and black surfaces. Fabric 24. Context 495.
177. Beaker in fine sandy fabric with frequent quartz and black iron oxide inclusions. Burnt. Fabric 21. Context 495.
178. Strainer with small perforations (1-2 mm). Vessel form probably a round-based bowl. Fabric 23. Context 495. (Not illus.).
179. 'Honey pot' jug from the Chapel Street, Chichester, kiln. White slip present. Claudio-Neronian. Same vessel in Context 484. Fabric 10. Context 494. (Not illus.).
180. Everted rim beaker from the Chapel Street kiln, Chichester. Girth groove and traces of off-white slip. Same vessel in Context 483 (no. 143). Fabric 10. Context 494.
181. Platter in TR1C. Rouletted inner circle. Claudian or earlier. Fabric 4. Context 548. (Not illus.).
182. Pulley neck flagon from Chapel Street, Chichester, kiln. Light brown/off-white slip. Fabric 10. Context 548.
183. Flange rim bowl in medium sandy fabric. Colour disguised by heavy burning. Fabric 23. Context 548.
184. Small, necked jar with flaring rim in medium sandy fabric with light grey core and dark grey surfaces. Fabric 23. Context 548.
185. Necked jar in fine sandy black fabric. Groove on shoulder. Burnished exterior and rim. Burnished lattice decoration below groove. Fabric 24. Context 548.
186. High necked jar/?beaker with small rim in medium sandy fabric with light grey core and dark grey surfaces. Two impressed grooves on neck. Fabric 23. Context 548.
187. Lid with hooked lip in black medium sandy fabric with occasional small quartz inclusions. Burnished lip. Fabric 24. Context 548.
- Group 10: Gravelled areas, Contexts 231, 232, 311, 312, 313, 360**
188. Handle of a jug or flagon in medium sandy fabric with numerous small iron oxide inclusions. Fabric 23. Context 232. (Not illus.).
189. Part of handle of a jug or flagon in same fabric as no. 188. This sherd shows how the handle was pressed into the vessel, causing a swelling on the inside of the body. Fabric 23. Context 232. (Not illus.).
- Group 11: Layer of domestic debris 282, and the features underlying it, 162, 356, 375, 377, 381 and pit 383 and associated fills.**
190. CAM 112 butt beaker with fern leaf rouletting in TR3. Fabric 4. Context 282. (Not illus.).
191. CAM 112 butt beaker in TR3 with scroll decoration. Exterior fired white. Fabric 4. Context 282. (Not illus.).
192. Imported butt beaker in fine white fabric. Claudio-Neronian. Fabric 7. Context 282. (Not illus.).
193. North Gaulish butt beaker in fine sandy white fabric. Claudio-Neronian, probably post-conquest. Fabric 7. Context 282.
194. CAM 84 girth beaker in TR3 decorated with two-tooth comb. Fabric 4. Context 282. (Not illus.).
195. CAM 84 girth beaker in TR3 with three-tooth comb decoration. Fabric 4. Context 282. (Not illus.).
196. Spout in fine sandy fabric with light grey core and light orange margins. Frequent small grog inclusions. Fabric 21. Context 282. (Not illus.).
197. Everted rim jar in coarse sandy dark brown fabric with burnt exterior. Fabric 23. Context 162.
198. Everted rim bowl with carination in medium sandy fabric with abundant small ill-sorted quartz inclusions. Light grey core and dark grey surfaces. Fabric 23. Context 162.
199. CAM 112b butt beaker in TR. Fabric 4. Context 249. (Not illus.).
200. CAM 91 globular beaker in TR3. Fabric 4. Context 282.
201. Ring and dot or early painted beaker in fine sandy white fabric with occasional small grog inclusions. Flavian. Fabric 21. Context 249. (Not illus.).
202. Beaker with out-turned rim in fine red fabric with dark brown/black colour coat. Colchester origin. Fabric 16. Context 249. (Not illus.).
203. CAM 161 jug in fine white sandy fabric with occasional grog inclusions. Fabric 21. Context 249. (Not illus.).
204. Flanged bowl in fine sandy orange fabric with frequent small grog inclusions. Flavian-Trajanic. Fabric 21. Context 249.
205. Flanged bowl in off-white/light brown fine fabric with

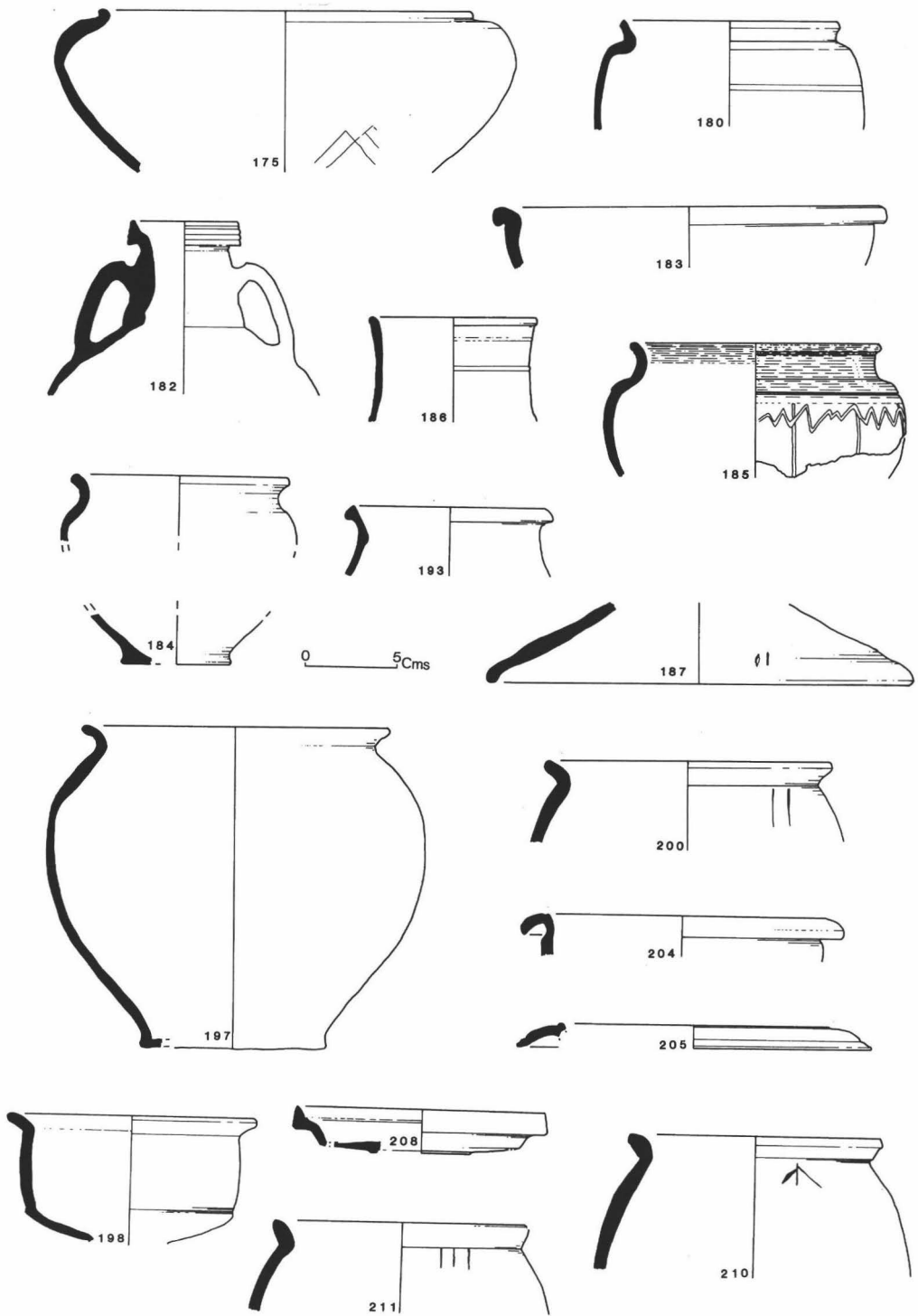


Fig. 22. Ounces Barn, Boxgrove 1982-83: Romano-British pottery.

frequent small grog inclusions. Local product. 1st-early 2nd century. Fabric 12. Context 249.

206. ?Beaker in fine, dark grey fabric with white margins and brown surfaces. Slightly micaceous. Rouletted decoration. 'Pulborough tradition'. Fabric 12. Context 249. (Not illus.).

207. Lid in fine off-white fabric with orange colour coat. Rouletted decoration on lip. ?Pre-Flavian. Fabric 21. Context 249. (Not illus.).

208. Platter of form CAM 8 in TN. Fabric 5. Context 249.

209. Simple rim dish with handle in dark grey, medium sandy fabric with abundant small quartz inclusions. Light grey margins and black surfaces. Fishbourne type 201 (Cunliffe 1971). AD 150-200. Fabric 24. Context 249. (Not illus.).

210. Everted rim jar in medium sandy fabric with batch mark impressed below rim. Fabric 23. Context 249.

211. Everted rim jar in medium sandy fabric with light grey core and dark grey surfaces. Batch mark below rim similar to those from Havant (Hodder 1974). Fabric 23. Context 249.

212. Everted rim jar in off-white/light grey medium sandy fabric with frequent small iron oxide inclusions. Batch mark present, similar to those from Burbrook (Hodder 1974). Fabric 23. Context 249.

213. Lid in coarse sandy light grey fabric. Hole present in centre of handle, possibly the result of a manufacturing fault. Fabric 23. Context 249.

214. Sherd of hard grey medium sandy fabric with seven-tooth comb and impressed dot decoration. Fabric 23. Context 249. (Not illus.).

215. Mortarium with plain wall sides in medium sandy fabric with abundant ill-sorted quartz inclusions. Light grey core and pink/buff margins and surfaces. Angular flint trituration grits. Fishbourne type 292 (Cunliffe 1971). Gillam 280. Local copy of Harshill-Mancetter type *c.* AD 270-370. Fabric 34. Context 249.

216. Mortarium with plain horizontal flange in sandy, off-white fabric. New Forest parchment ware (Fabric 2a) Type 103 (Fulford 1975, 74, 79). AD 270-c. 350. Fabric 34. Context 249.

217. Mortarium with stub flange in white sandy fabric. New Forest parchment ware (Fabric 2a) (Fulford 1975). Angular flint trituration grits. 3rd-4th century AD. Fabric 34. Context 249.

218. Base of flagon in fine sandy fabric with frequent medium sized iron oxide inclusions. Fabric 8. Context 249. (Not illus.).

Group 12: Miscellaneous sherds

219. Platter, form CAM 8, in TR2. Tiberio-Claudian. Post-conquest. Fabric 4. Context 1. (Not illus.).

220. Jug/flagon form CAM 140 or 161 in hard white fine sandy fabric. North Gaulish. Pre-60 AD. Fabric 7. Context 1. (Not illus.).

221. Flagon in fine sandy fabric with numerous small grog,

iron oxide and quartz inclusions. Pink core with buff surfaces. Late 1st-early 2nd century. Fabric 9. Context 1.

222. Base of roughcast beaker from East Gaul, ?Argonnish. Hard fine red fabric with interior red slip and dark brown exterior slip with quartz roughcasting. Fabric 16. Context 1. (Not illus.).

223. Bowl in medium sandy fabric with frequent small flint inclusions. Dark grey/brown core and surfaces. Burnt exterior. Strainer base. Fabric 24. Context 1.

224. Lid in medium sandy fabric. Slightly micaceous. Fabric 23. Context 1.

225. Lid in medium sandy fabric with abundant small and medium flint inclusions. Dark grey core, light grey margins and black surfaces. Fabric 24. Context 1.

226. Four sherds of fine sandy micaceous fabric with red core and black surfaces. Combed and stamped decoration. Possibly from Hardham/Pulborough. Fabric 17. Context 1. (Not illus.).

227. Jar with vertical rim and internal ?lid seating in medium sandy grey fabric. Dark grey core with light grey surfaces. Fabric 23. Context 1.

228. Mortarium in fine fabric with light grey core, dark grey margins and red/orange surfaces. Upright rim and angular flange. Oxford red colour-coated ware type C100 (Young 1977). AD 300-400. Fabric 34. Context 1. (Not illus.).

229. Mortarium in the same fabric as no. 228. Oxford type C97 (Young 1977). AD 240-400. Fabric 34. Context 1. (Not illus.).

230. Mortarium with curved wall sides, in off-white sandy fabric with numerous rounded quartz inclusions. Fishbourne type 190 (Cunliffe 1971). Gillam 272. Southern English sources. Late 2nd-early 3rd century. Fabric 34. Context 1.

231. Wall-sided mortarium with grooved rim in medium sandy fabric with occasional small/medium quartz inclusions. Pink core, white margins and surfaces. Form same as Fishbourne type 291 (Cunliffe 1971) and Verulamium type 1036 (Frere 1972?). Probably local source. AD 150-200. Fabric 34. Context 12.

232. Mortarium with small flange in fine white sandy fabric. Rounded white and clear quartz grits. Oxford white ware product, with features of both types M.13 and M.14 (Young 1977). AD 180-240. Fabric 34. Context TT1/1.

233. Mortarium with small flange and narrow rim in coarse sandy white/pink fabric. New Forest parchment ware (Fabric 2a) (Fulford 1975). 3rd-4th centuries. Fabric 34. Context 1.

234. Mortarium with wide flange in off-white sandy fabric. Angular flint trituration grits. New Forest parchment ware (Fabric 2a) type 81 (Fulford 1975). AD 345-400. Fabric 34. Context 1.

235. Mortarium with small rounded flange in off-white fabric with dark grey core and light grey margins. New Forest

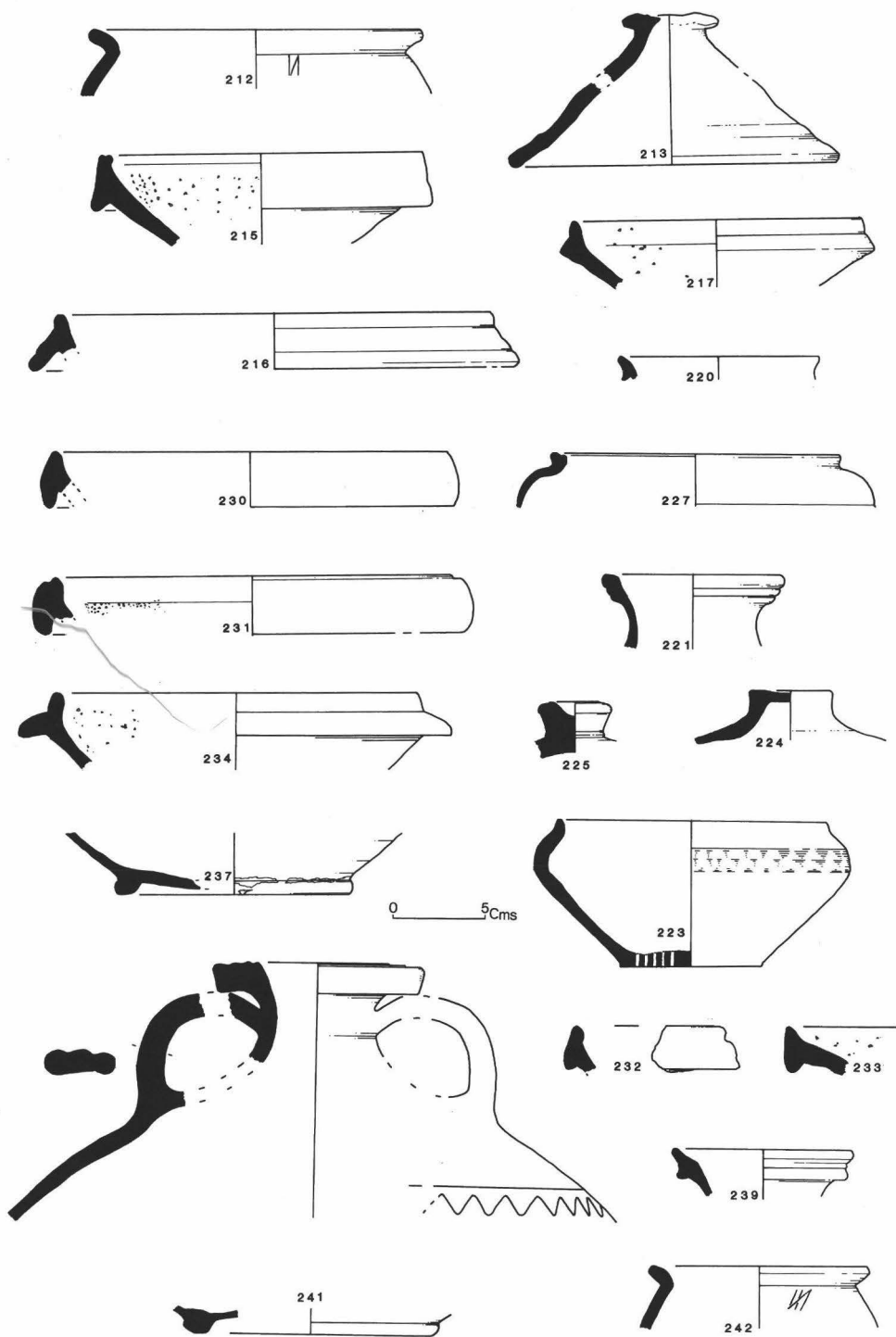


Fig. 23. Ounces Barn, Boxgrove 1982-83: Romano-British pottery.

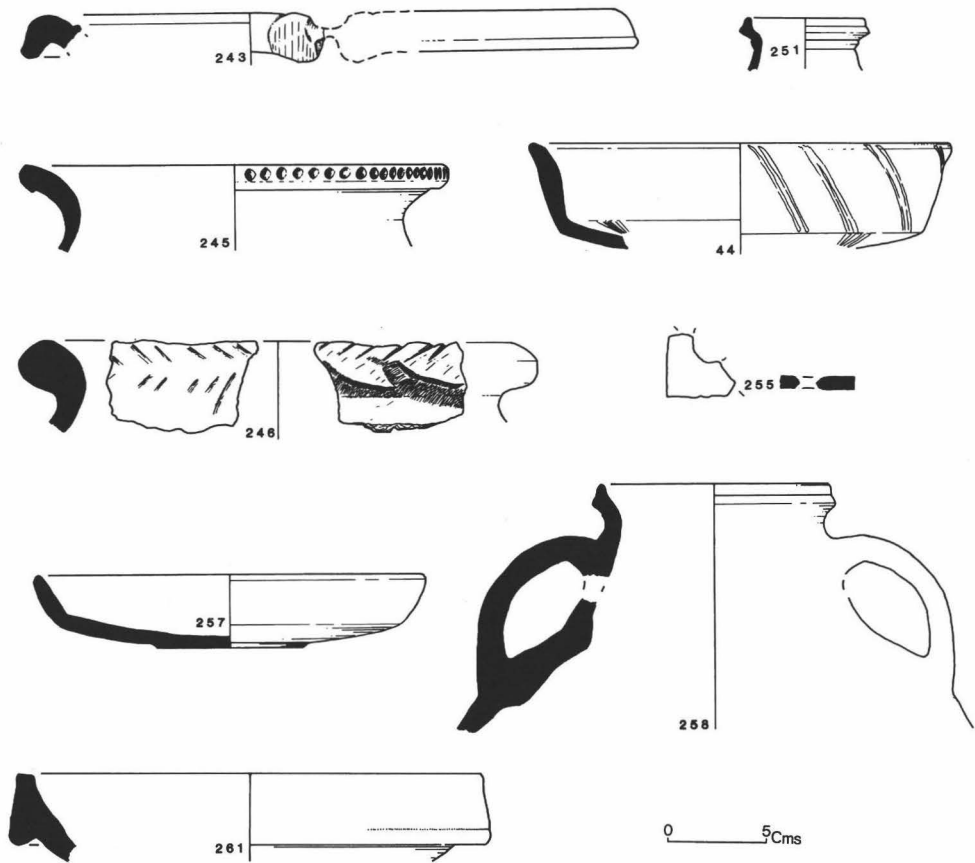


Fig. 24. Ounces Barn, Boxgrove 1982-83: Romano-British pottery.

parchment ware (Fabric 2a) (Fulford 1975). 3rd-4th century. Fabric 34. Context 1. (Not illus.).

236. Mortarium in fine cream fabric with frequent small grog and iron oxide inclusions. Angular flint grits. Rilled body. Probably S.E. English origin. Flavian-Late Antonine. Fabric 34. Context 1. (Not illus.).

237. Flagon with foot-ring base from Chapel Street kiln, Chichester. Traces of off-white slip. Many natural clay pellets in the fabric to give it a 'smooth' feel. Claudio-Neronian date. Fabric 10. Context 22.

238. Mortarium in dark brown fine sandy fabric. Rounded brown and white quartz. Oxford red colour coated product. Form indeterminate. Burnt. Fabric 34. Context 24. (Not illus.).

239. Flagon from Chapel Street kiln, Chichester. Sandy red/brown micaceous fabric with traces of off-white slip. Claudio-Neronian. Fabric 10. Context 35.

240. Poppy head beaker in fine hard dark grey fabric with

white slip on exterior and rim. Possibly from Verulamium. Fabric 21. Context 66. (Not illus.).

241. Flagon in fine soft orange/brown fabric. Grooved, flanged rim and foot-ring. Incised decoration on body. ?3rd century. Fabric 9. Contexts 1 and 68 (same vessel in both contexts).

242. Everted rim jar in medium sandy fabric. Light grey core and surfaces and red/brown margins. Batch mark present. Fabric 23. Context 68.

243. Flanged mortarium with spout in coarse white sandy fabric with numerous iron oxide inclusions. Large angular flint grits. Verulamium type 764 (Frere 1972?). Verulamium origin. AD 100-150. Fabric 34. Context 68.

244. Dish in medium sandy red/brown fabric with brown/black exterior. Burnished surfaces with line decoration. Fishbourne type 202 (Cunliffe 1971). ?2nd century. Fabric 24. Context 142.

245. Large jar with finger-impressed decoration on outside

of rim in grey sandy fabric. Fabric 23.

246. Large jar with roped rim in medium sandy red/brown fabric with frequent small and medium iron oxide and grog inclusions. Fabric 25. Context 142.

247. Beaker in fine hard grey fabric with orange surfaces and red colour coat. Oxford red colour-coated ware (Young 1977). Mid-3rd-4th century. Fabric 20. Context 142. (Not illus.).

248. Beaker of form Cam 116 in fine white fabric with pink core. Fabric 21. Context 192. (Not illus.).

249. Mortarium in medium sandy white fabric. Rounded white, brown and clear quartz grits. Oxford white ware product, type M22 (Young 1977, 76-7). AD 240-400. Fabric 24. Context 199. (Not illus.).

250. Girth beaker form CAM 84, in TR3. Burnt. Three-tooth comb decoration. AD 1-50. Fabric 4. Context 292. (Not illus.).

251. Flagon in dark brown medium sandy fabric. Burnt. Fabric 25. Context 304.

252. Platter, form CAM 8 in TN. Tiberio-Claudian. Fabric 5. Context 304. (Not illus.).

253. Base of strainer in medium sandy black fabric with burnished exterior. Large (c. 5 mm) perforations. Fabric 24. Context 346. (Not illus.).

254. Beaker, form CAM 91 in TR3. Post-conquest. Fabric 4. Context 366. (Not illus.).

255. ?Square piece of pottery in pale buff, medium sandy fabric with abundant small, ill-sorted quartz inclusions. Micaceous. Central drilled hole. Unknown function. Fabric 25. Context 428.

256. Flagon in fine sandy micaceous orange fabric with dark grey core from Chapel Street, Chichester, kiln. Claudio-Neronian. Fabric 10. Context 456. (Not illus.).

257. Platter with simple rim in medium sandy fabric with black/dark grey core, red/brown margins and black surfaces. Fabric 24. Context 529.

258. Flagon in medium sandy light grey fabric. Dark grey slip. 2nd century. Fabric 21. Context 550.

259. Poppy head beaker in fine hard grey fabric. Dark grey slip. 2nd century. Fabric 21. Context 550. (Not illus.).

260. Everted rim jar in red/brown medium sandy fabric with small grog inclusions. Batch mark present below rim, possibly from Rowlands Castle (Hodder 1974). Fabric 25. Context 550. (Not illus.).

261. Wall-sided mortarium in pale buff sandy fabric. New Forest parchment ware (Fabric 2a) (Fulford 1975). AD 300-400. Fabric 34. Context 550.

Discussion

In this section the dating of each of the pottery groups will be discussed.

Group 1

Sometime well before AD 50-60 (Bedwin & Orton 1984).

Group 2

Before AD 50-60 to early 2nd century (Bedwin & Orton 1984).

Group 3

The small sample that is datable from this group indicates a date between AD 44-68. (Claudio-Neronian) on the basis of the presence of products from the Chapel Street kiln in Chichester. It is likely that this initial Romano-British settlement post-dates the last re-cut of the Devil's Ditch in c. AD 60 (Bedwin & Orton 1984).

Group 4

The bulk of this group consists of largely undatable forms and fabrics. However, the presence of a CAM 84 girth beaker in TR3 (no. 250) and a pre-Flavian platter in TN would indicate a 1st-century date for this group as a whole.

Group 5

The small amount of material from this group makes dating difficult. However, the presence of a sherd from the Hardham/Pulborough kilns (Context 223) would not be inconsistent with a late-1st- to early-2nd-century date, while a sherd of South Gaulish Samian (Context 257) is 1st-century.

Group 6

The cutting and initial silting of Ditch 8 probably occurred in the late 1st century, as it cuts the Group 5 deposits and contains 1st-century pottery such as Chapel Street kiln products in Contexts 221 (no. 65), 214, 190 (no. 58), 5 (no. 52) and 418; a sherd of South Gaulish Samian (?pre-Flavian) from Context 424, and a North Gaulish White Ware flagon from Context 420.

The silting of the feature may have continued into the early 2nd century. The finds include South Gaulish Samian from Contexts 214, 170, 417 and 5, and a late-1st- to early-2nd-century copy of form CAM 113, also from Context 5.

Two Gallo-Belgic sherds form Context 190 (no. 64 and a pre-Flavian platter in TN) are probably residual, and a sherd of New Forest colour coat from Context 5 may be intrusive from the top-soil.

The re-cutting of this ditch also occurred in the early 2nd century.

Group 7

The lack of finds from this group makes it undatable, but the 1st-century date for nos. 70 and 71 from Context 12, and the Chapel Street products from Context 50 would not contradict the hypothesis that Groups 6 and 7 are contemporary. A sherd of TN platter from Context 514 is probably residual.

Group 8

The best dating for this group is provided by an unabraded Central Gaulish Samian base, Form Dr 33 stamped MASVETI, with a Hadrianic-Antonine date. There is little other datable material, except for the other Samian sherds which also occur in this group.

Group 9

The size of this assemblage from Ditch 15 allows a closer dating of the feature and its fills than has been possible with the other groups.

The primary and secondary silts (Contexts 483, 484, 489, 494, 541, 543, 544 & 548) contain a range of fabrics and forms, all of which give a mid-1st-century date. These include Gallo-Belgic forms from Contexts 483, 484 and 548; North Gaulish White Ware flagons in Contexts 494, 483, 484, 541, 543, 544 and 548; and Chapel Street products in Contexts 494, 483, 484 and 548. Also relevant at this point is a Claudian mortarium from Context 541 (no. 174).

The date is supported by two facts: the material from these deposits was fresh and unabraded and no material datable beyond the 1st century was present. The upper fills of feature 438, however, contain the same range of pottery as the lower deposits (e.g. Gallo-Belgic forms and Chapel Street products from Contexts 439 and TT2/3), but mixed with the occasional sherds of late-1st to 4th-century material. For example, Central Gaulish Samian, a New Forest colour-coated beaker and New Forest Parchment Ware bowl from Context 439.

The number of sherds that can be conjoined between the lower fills, e.g. between 483, 484 and 494, may indicate that they were deposited in one episode. This may have been soon after the ditch was constructed or last cleaned out, due to the absence of any sterile primary silts.

Group 10

These cobble spreads produced very little material that could be positively dated, as most of it was worn and abraded.

A single sherd of Central Gaulish roughcast beaker, associated with Central Gaulish Samian (Context 232), overlying a cobble spread with 'Nene Valley Type' Gaulish colour-coated beaker and Central Gaulish Samian, may indicate a date range of mid-2nd to 4th century, although a 2nd- to 3rd-century date is probably more likely.

Group 11

This group essentially comprised a spread of 'domestic debris' (Context 282) overlying a series of post-holes containing no dating evidence, and a spread of fine silt (Context 249) which spread over and into Pit 383, the rest of which was unexcavated.

The pottery from both of these contexts was fragmentary and abraded in most cases, for three reasons:

- the contexts were surface features and hence prone to trampling;
- they lay just beneath the plough zone and so may have been contaminated with abraded pottery;
- if both were rubbish deposits, then the pottery may have been lying exposed on the surface for a considerable period prior to incorporation into these contexts.

On the basis of the datable pottery, Context 292 may have a relatively early date, as most of it dates to the 1st century.

Taking into account the relatively large number of possibly Iron Age sherds, and the possibility of a small amount of contamination, there is no reason why this context (282) should not be pre-conquest or immediately post-conquest.

Context 249, however, contains a complete range of pottery from Gallo-Belgic types (1st century), through Central Gaulish colour-coated wares (mid-2nd-3rd century) to New Forest colour-coated wares (3rd-4th century), all of them being

in approximately the same state of abrasion. Hence, this deposit could have accumulated in one of a number of different ways, and at different times:

- One depositional episode in the late 3rd-4th century incorporating residual material from all phases of the site's use.
- It gradually accumulated during the use of the site and incorporated pottery types in use in all periods of the occupation of the site.
- It accumulated at any time between the 1st-4th century with varying degrees of residuality and contamination from the plough-soil.

DISCUSSION OF THE AMPHORAE

By David Williams

Dressel 1 and Dressel 2-4

Dressel 1 are wine-carrying amphorae that were made primarily in the Campania, Latium and Etruria districts of Italy (Peacock 1971; 1977a). The 1A form was produced from about 130 BC until around the middle of the 1st century BC, while the 1B form was made from the first quarter of the 1st century BC until the last decade of the century (Tchernia 1983). Fairly large numbers of Dressel 1A have been recovered from Hengistbury Head in Dorset, while the majority of Dressel 1B vessels are found north of the Thames (Peacock 1984). However, it is clear that the 1B form is also found in small numbers along the central south coast. A few rims of the 1B variety occur at Hengistbury Head (Peacock 1971) while examples are also known at Fishbourne (Cunliffe 1975, fig. 100, no. 159) and Chichester (Peacock 1978, fig. 10.15, no. 3). The comparatively large size of the Dressel 1 handles from Boxgrove suggests that they probably belong to the 1B rather than the 1A form.

Apart from the Dressel 1 handles, there are a number of featureless body sherds from the site which may also belong to this form. However, it is difficult to be precise because similar fabrics were used for the later Dressel 2-4 form, which is the direct successor on Italian kiln sites to Dressel 1 amphorae (Peacock 1977a). It is possible, therefore, that these body sherds belong instead to the Dressel 2-4 form, which ranges in date from the later 1st century BC to the mid-2nd century AD (Zevi 1966). In addition to Italy, this important form, widely distributed in late Iron Age and Roman Britain, was also made in a range of different fabrics in France, Spain and the Aegean, as well as in England, at Brockley Hill (Catle 1978).

One body sherd from Boxgrove (Context 152) is in a distinctive 'black sand' fabric, caused by dark-coloured inclusions of augite, which occurs in both the Dressel 1A and 1B forms, as well as Dressel 2-4. The recent find of a Dressel 1A rim from the Lake Farm, Dorset, in the 'black sand' fabric demonstrates that this fabric also reached Britain in the 1A form as well as the 1B mentioned by Peacock (1971). The presence of yellow (melanitic) garnet in this fabric led Courtois and Velde (1978) to suggest an origin in the Latium region. However, yellow-brown garnet is also a feature of the sands further south, and a Campanian origin, in particular the area around Pompeii and Herculaneum, has been advocated by Peacock (1977b). Further analysis by Courtois and Velde (1983), using an electron microprobe, has distinguished two separate compositional groups of yellow garnet, for which they propose one source near to Rome and another in the Vesuvius region. The latter proposal agrees with Peacock's (1977b) suggestion, but as yet there is no archaeological evidence for an origin near Rome for the 'black sand' fabric.

Dressel 20

This is the most common amphora type imported into Roman Britain, though recent research has shown that it was already present in some numbers during the late Iron Age (Williams & Peacock 1983). Dressel 20 amphorae were made in the southern Spanish province of Baetica, along the banks of the River Guadalquivir and its tributaries between Seville and Cordoba, and carried olive oil (Ponsich 1974; 1979). This type of amphora has wide date-range, from the Augustan prototype (Oberaden 83) with a fairly upright rim, a short spike and less of a squat bulbous body than the late form, to the developed well-known globular form which, with some typological variation, was in use at least up to the late 3rd century AD (Zevi 1967). Rims of the Oberaden 83 type are known from pre-Roman levels at Prae Wood and Gatesbury Track, so that importation of Baetican olive oil into Britain may have begun as late as the last decade of the 1st century BC (Williams & Peacock 1983).

Camulodunum 185A

This form has its origin in Baetica (Tchernia 1980), the similarity in Fabric with the more common Dressel 20 suggesting a source in the region of the River Guadalquivir (Peacock 1971). Amphorae of Camulodunum 185A form (Haltern 70) recovered from the Port VenDres II shipwreck carry inscriptions describing the contexts as *defrutum*, a sweet liquid obtained from boiling down a fruit must (Colls *et al.* 1977; Parker & Price 1981). The date range for this form is from about the mid-1st century BC to the mid-1st century AD (Colls *et al.* 1977; Tchernia 1980).

Camulodunum 186A and 186 sp and southern Spanish

This material probably derives from the coastal regions of southern Spain, between Cadiz and Malaga, and seems to have been mainly used to carry fish-based products from the late 1st century BC to the 2nd century AD (Peacock 1971; 1974).

Pelichet 47

A flat-bottomed wine amphora form predominantly made in southern France, more particularly around the mouth of the Rhone in Languedoc, where a number of kilns are known (Peacock 1978b; Widemann *et al.* 1979). It was also one of the amphorae types made at the recently excavated kilns at Crouzilles, Indre et Loire (information from Alain Ferdière), indicating that the form was also made in Central Gaul. The type had a long life, from about the middle of the 1st century AD to at least the early 4th century AD (Panella 1973). In Britain, Pelichet 47 is not found in pre-Boudiccan levels (Peacock 1978b).

THE ROMAN TILE By David Rudling

A total of 445 pieces of Roman tile/brick and 370 pieces of burnt clay/daub were recovered from the excavations. There were also 24 pieces of post-Roman brick and tile. All were sorted by a visual assessment of fabrics and, where possible, by tile types, and catalogued on recording forms which form part of the site archive. The pieces of Roman tile which could be identified by form included the following types: *tegula* (61 pieces); imbrex (6); box-flue (7); 'flat' tile/brick (81) and *tegula mammata* (2). Most of the pieces of tile were fairly small and, with the exceptions of thicknesses of *tegulae* and flange heights, no dimensions could be measured.

Most of the tiles were of sandy orange fabrics, sometimes with grog inclusions (Fabrics 1 & 2). Other fabrics included hard red wares with only a little sand temper (Fabric 1a); highly fired blue/grey wares, often with a red core (Fabric 3); orange sandy wares with organic (seed) voids (Fabric 4); flint-tempered orange ware (Fabric 5); grey/buff sandy wares (Fabric 6); and cream/off-white fine ware (Fabric 7).

The *tegulae* fragments (Fabrics 1, 1a, 2, 3, 6 & 7) include examples of flanges which range in height from 44 to 55 mm. One *tegula* fragment has parts of three concentric finger-impressed semi-circular 'signature' marks. The few imbrex fragments are all of Fabric 1. The most common tile type is that of flat tile/brick (Fabrics 1, 1a, 2 & 3) and this group includes examples which range in thickness from 30-35 to 40-45 mm. One example has the imprint of a cat's paw. There are two examples of 'flat' tile with applied bosses: i.e. *tegulae mammata*. Both examples are of Fabric 1 and approximately 35 mm thick.

The box-flue tile fragments (Fabrics 1 & 2) vary in thickness from 13 to 23 mm. There are three examples with combed decoration/keying and one example from Context 1 with relief-patterned keying and part of a circular or semi-circular cut-away. The relief-pattern is of Die 19, which is one of the 'London-Sussex Group' and dates to c. AD 75-110 (Black 1985, 358; 1987, 86). The Boxgrove example is the same as that recorded for Chichester, which is possibly a smaller pattern than that used for other examples of this type (Ernest Black pers. comm.). Other find-spots of Die 19 include Fishbourne, Angmering, Storrington, Wiggonholt, Newhaven, Bullock Down and Eastbourne (all in Sussex), Cobham (Surrey) and Lullingstone (Kent).

In addition to the examples of flue-tiles described above there are two other possible pieces. Both fragments (Contexts 1 & 199) are probably from the same tile and are the only examples of the distinctive Fabric 4. The fragments are both corner pieces, with one face measuring 30 mm thick and the other face (or ?flange) 22 mm thick. The identification of the tile type is uncertain, but possibilities include a large type of box-flue tile or a West Hampnett type voussoir. The writer is aware of the use of similar organic- (especially chaff-) tempered fabrics for examples of relief-patterned flue-tiles of the London-Sussex Group, an example being a tile of Die 19 found at Bullock Down (Rudling 1987, 239). If the use of similar fabrics from some of the London-Sussex Group of relief-patterned tiles and the Boxgrove tiles of Fabric 2 is no coincidence, it is probable that the Boxgrove specimens also date to the period AD 75-110.

THE COINS By David Rudling

1. 1st/2nd century. Illegible Ae As.
Obverse: bust facing right. Reverse: uncertain. Context 7.
2. Barbarous radiate, c. AD 270-290. Ae 15 mm.
Obverse: radiate bust of Victorinus facing right, blundered legend, AM [.]. Reverse: Pax standing left, holding vertical sceptre, star in field to right. Type based on RIC 116. Context 1.
3. Barbarous radiate, c. AD 270-290. Ae. Large fragment (13 mm).
Obverse: Radiate bust of Tetricus II facing right. Reverse: Salus standing left, holding vertical sceptre and feeding serpent to left. Context 1.

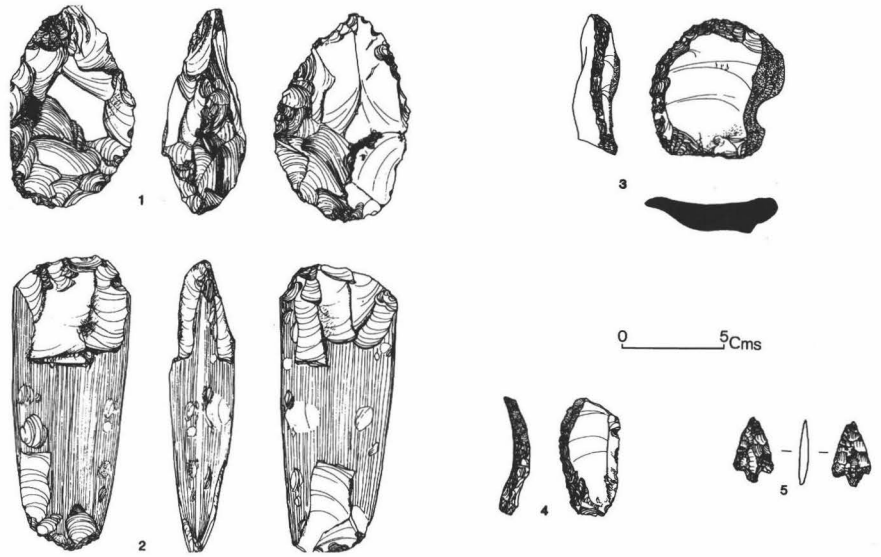


Fig. 25. Ounces Barn, Boxgrove 1982-83: flint tools.

THE FLINT: A SUMMARY REPORT By Robin Holgate
 182 flints were recovered from the excavations and these are summarized in Table 4. Local gravel flint was exploited and two main groups can be discerned on technological grounds. The first group includes a biface (Fig. 25:1) and biface-manufacturing flakes, which are probably Palaeolithic in date. The remaining flintwork, excluding the ground axe and the barbed-and-tanged arrowhead, is worked using hard hammers and probably post-dates the mid-2nd millennium bc; it could even be associated with the Romano-British occupation of the site. The ground axe (Fig. 25:2) can be assigned to the Neolithic period (3rd millennium bc). This might have resulted from Neolithic activity on the site (e.g. woodland management or a votive offering) but its final deposition could relate to the re-use of this implement in the Romano-British period. The barbed-and-tanged arrowhead (Fig. 25:5) is early Bronze Age in date (early 2nd millennium bc), but there is no reason to associate this piece with the remaining flintwork from the site. (For a fuller discussion of the flintwork, see microfiche p. m13.)

Table 4. Summary of worked flint.

Flakes	128
Blades	18
Bi-face thinning flake	14
Cores	3
Rough waste	4
Fire-cracked flint	2
Miscellaneous retouched flakes	3
Scrapers	4
Knives	2
Hollow scraper on thermal flake	1
Bi-face	1
Ground flint axe	1
Barbed-and-tanged arrowhead	1
TOTAL	182

CATALOGUE OF METALLURGICAL REMAINS

By Rod Clough

1. Coin mould fragments. (Fig. 26:19-23, 25).
 Large modules with an internal diameter of 12.5 to 13 mm.
2. Coin mould fragments. (Fig. 26:24).
 Internal diameter of these small modules 6.5 to 7 mm.
3. This is an almost complete crucible 35 mm deep x 67 mm in diameter with a pouring lip. Context 31. Ditch 4. (Fig. 26:13).
4. An almost complete crucible without a pouring lip. Context 31. Ditch 4. (Fig. 26:14).
5. A small piece of slag weighing 15 g, of moderate density with a vesicular structure and surface vitrification. The sample could be generally identified as vitrified fuel ash, i.e. a product from the reaction of fuel ash with other furnace materials. It is definitely not from smelting but could derive from smithing activities.
6. This is a rim fragment from a crucible, with red vitrification on the outer surface. Context 5. Ditch 8. (Fig. 26:16).
7. A crucible fragment. Slight vitrification on the inner surface along with a yellow deposit which is litharge, probably resulting from cupellation or preparation of coinage metal. Context 130. Ditch 5, the 'Devil's Ditch'.
8. Crucible fragments with encrustations of copper alloys and yellow deposits and a possible mould fragment. Context 31. Ditch 4.
9. Two small fragments of crucible (c. 7.5 mm thick) were manufactured from a fine-grained paste with some grass/straw? temper. The inner and outer surfaces of the crucible were light yellow in contrast to the interior fabric which was dark grey, presumably reduced by the organic temper. No vitrification was evident, nor were there any surface deposits which might have

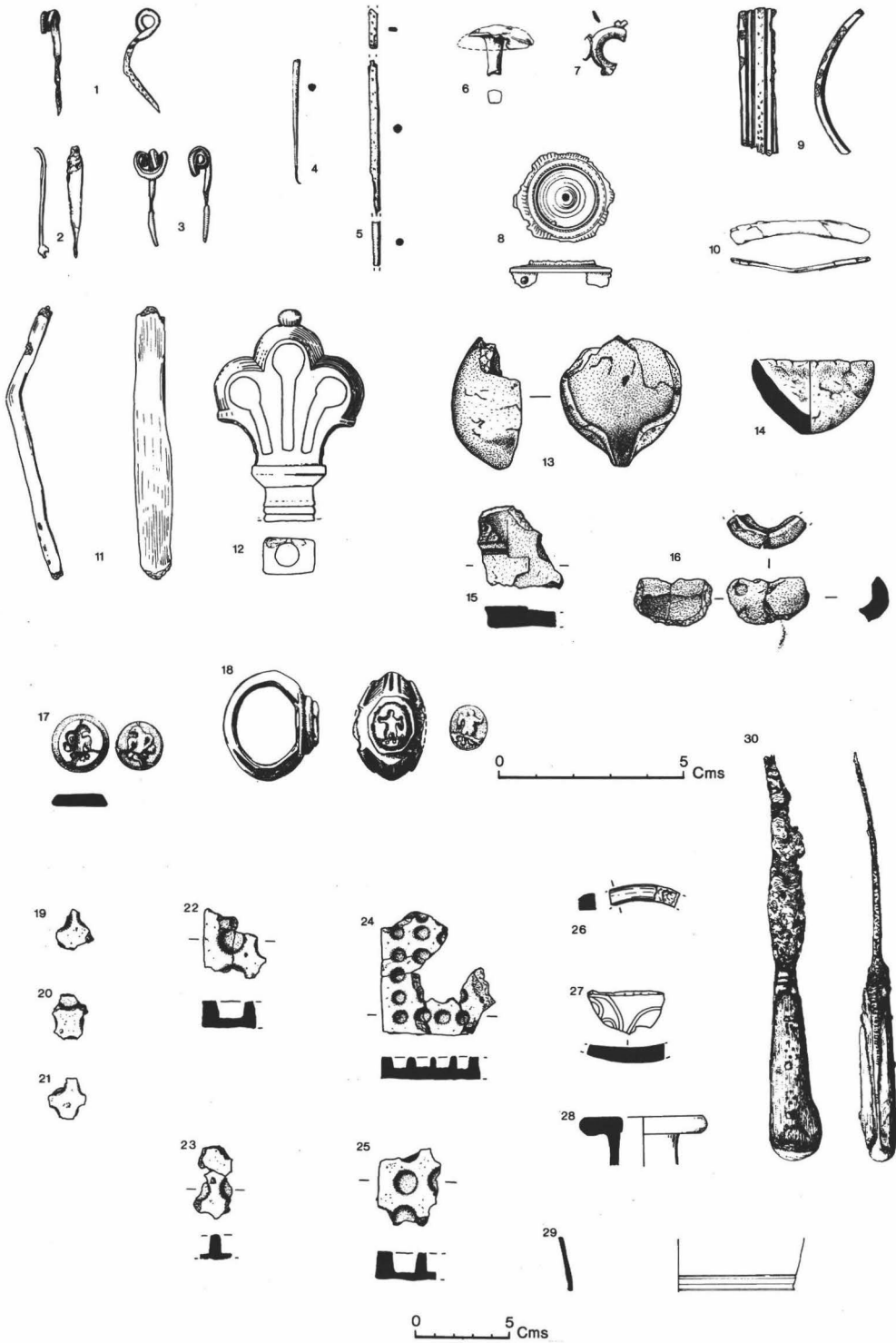


Fig. 26. Ounces Barn, Boxgrove 1982-83: small finds.

indicated the function of these crucibles. Context 71. Ditch 4.

10. Fragments of either furnace debris or crucibles with a porous and vitrified outer surface. Context 162. Ditch 10.

11. Vitrified and slightly slagged furnace or crucible debris. Context 93.

12. Remains of a lost-wax investment mould with pouring vent, though insufficient survives to determine the type of object manufactured. (Fig. 26:15).

13. The first impression is that this small, dense cake of slag is the product of a forging operation with some attached refractory material. Examination of a polished section confirmed this, as the structure was typical of a slag deriving from the bloomery process, i.e. fayalite with dense wustite dendrites in a glassy matrix along with a few quartz inclusions. Context 182. Ditch 3.

14. 'Daub', but could also be mould fragments. Context 28. Ditch 4.

15. This small, dense piece of iron slag (30 g) had a thin layer of furnace lining adhering to the outer surface, and is almost certainly forging slag. Context 69.

16. Burnt daub. This material had no form, vitrification or surface deposits to link it to any specific process, although it might well be hearth material. Context 31. Ditch 4.

THE ROMANO-BRITISH METALWORK

By David Rudling

a) Copper-alloy objects

1. Spring and part of the pin of a one-piece brooch. Nauheim derivative. Mid-1st century BC-3rd quarter of the 1st century AD (Hattatt 1982, 57). Context TT1/10. (Fig. 26:3).

2. Part of the spring and bow/pin of a one-piece brooch. Context 69. (Fig. 26:1).

3. Parts of the spring and bow of a one-piece brooch. Context 372. (Not illus.).

4. Part of the ?bow and catchplate of a one-piece brooch. Context 1. (Fig. 26:2).

5. Part of a glass centre-boss brooch (the glass boss itself is missing). The front surface of the brooch, which has stamped decoration, is gilded, and the back is tinned or silvered. c. AD 250-400+ (Hattatt 1982, 166). Context 1. (Fig. 26:8).

6. Part of a pin. Context 398. (Fig. 26:4).

7. Parts of a ?needle or handle. In cross-section the shaft of this object changes from round to more flattened. Context 69. (Fig. 26:5).

8. Stud. Cf. Crummy (1983, fig. 120). Context 1. (Fig. 26:6).

9. Part of a small strap-union. Type 1: a figure-of-eight form flanked on each side by a vertical bar attached at each end (Taylor & Brailsford 1985, 247). The date range for this type is

late Iron Age/1st two centuries AD. Context 439. (Fig. 26:7).

10. Part of a bracelet with grooved decoration. ?Early Roman. Cf. Crummy (1983) Object 1586. Context 1. (Fig. 26:9).

11. Part of a strip of metal of unknown function. Context 182. (Fig. 26:11).

12. Part of a thin strip of metal of unknown function. Context 28 (Fig. 26:10).

13. Piece of thin sheet metal of unknown function. Maximum surviving length: 4 cm. Maximum surviving width: 1.5 mm. Thickness: 0.3 mm. Context 232/15. (Not illus.).

14. Piece of metal of unknown function. Maximum surviving length: 2.3 cm. Maximum surviving width: 1.8 cm. The thickness increases from 2 mm at one end to 3 mm at the other. Context 38. (Not illus.).

15. Lump of metal/'cake'. Weight: 12.71 g. Possibly connected with on-site metalworking (see report on the metallurgical remains/moulds). Context 1. (Not illus.).

16. Two very small fragments of metal. Context 453. (Not illus.).

17. Copper-alloy fleur-de-lis handle for either a copper-alloy or iron key. Similar fleur-de-lis handles have been dated to post-AD 150 (Crummy 1983, 126 no. 4161 & fig. 142). Context 1. (Fig. 26:12).

b) Lead

Fragments of folded sheet lead. Thickness approximately 1 mm. Contexts 249/K21 and 249/M21. (Not illus.).

c) Iron objects

The general preservation of iron at this site was not good, and most finds were extremely corroded. Identifiable objects (none are illustrated) include:

1. Small ring. Context 68.

2. A strip of iron with curve at one end. Approximately 1-1.4 cm wide; 0.5 cm thick and a surviving length of 10.5 cm. Context 68.

3. Nail fragments. Contexts 38, 68, 199, 232.

4. ?Hobnail fragments (20). Context 142.

5. Miscellaneous lumps of rusty iron. Contexts 1, 3, 5, 7, 11, 12, 19, 22, 24, 28, 30, 31, 33, 42, 50, 64, 66, 68, 69, 70, 91, 95, 119, 127, 130, 131, 152, 160, 168, 179, 197, 218, 232, 240, 247, 249, 315, 328, 345.

THE INTAGLIOS By Martin Henig

1. Bronze ring with raised bezel, ridge around the externally angular hoop and everted shoulders. External diameter 28 mm; internal 22 mm. Width across bezel 18 mm; at narrowest point 7 mm. It is set with an intaglio moulded in pale blue glass, 13 mm in length by 10 mm in breadth and depicting a standing figure perhaps holding a shield. Context 1. (Fig. 26:18). The ring is of a 3rd-century type and may be compared with two of the rings in the cache from Pont-y-Saison, Chepstow, Gwent

(Marshall 1907, 215 & pl. XXXII, nos. 1402 & 1403). These now lack any setting in their bezels, but it may be noted that quite a number of rings of this form which I have listed as hybrids of my Types VII and X (Henig 1978, 35, figs. 1 & 38) contain similar moulded intaglios (viz. Henig 1978, nos. 545, 550, 551, 554 & 555). These are Romano-British imitation gems, apparently entirely confined to Britain and most from the south of the Province (Henig 1978, 132-3). The Boxgrove example, like the others cited above, is mapped as Type 2. Note that Henig 1978, no. 555, is from Highdown, Sussex.

2. Moulded intaglio in blue glass, circular with sides bevelled outwards, upper face diameter 11 mm, lower diameter 14 mm, thickness 3 mm. Context 1. (Fig. 26:17). The device is an eagle standing to the front and looking left (impression described). Its wings are partially displayed. Comparison may be made with a red glass intaglio from the Cow Roast site, Berkhamsted (Henig 1978, no. app. 190) where the eagle faces in the opposite direction. I am not entirely certain that either intaglio was set

in a ring. It is possible that they occupied the centres of disc brooches like two later green glass intaglios showing eagles in profile to the left, respectively from Richborough and from Barrington (Cambs.) (Henig 1978, nos. 823 & 824). For a discussion of such brooches see Hattatt 1987, 255-61.

THE GLASS By John Shepherd

Twenty-one fragments of glass were submitted for identification: nine are Roman in date, the remainder are post-medieval. The Roman glass is catalogued below and the post-medieval glass is listed on microfiche.

a) Monochrome glass

1. Context 439. (Fig. 26:29).

Fragment from the side of a beaker or bowl. Free-blown wheel-ground and polished on the interior and exterior surfaces. Exterior decorated with horizontal wheel-cut grooves, c. 2 mm wide, of which just two, c. 5 mm apart, are extant. Good deep blue glass. Mid- to late 1st century AD.

Table 5. Animal bone.

Context	Cattle	Sheep/Goat	Horse	Pig	Red Deer
1					1
38	3				
125	3				
162	4				
170	1				
182 L2				1	
188	1				
199	2				
215	1				
221	4				
223	3				
225	8	1			
282 K11		1			
282 K14	4	2			
282 M13	2	1			
282 N14	4				
288		1			
291		1			
292	6		8		
304 L17				1	
304 L18	1	1			
330	1				
345	1				
347	1				
361 K14	2				
361 L13				3	
361 L14	1	3			
361 L15	1	2			
483	19	1		1	
504	2				
506	4				
517	1				
518	2				
520	4				
541	3	1		1	
544	5	3			
548	18	5		4	
TT 2/3	2	4	1		
Total Fragments	114	27	9	11	1

b) Naturally coloured glass (bluish-greens, etc.)

2. Context 1. (Fig. 26:28).

Fragment from the rim and neck of a bottle; probably with a mould-blown square-sectioned body (Isings 1957, 63F, form 50). Rim folded inwards and flattened out to form a thick, flattened rim. Handle lacking but small glass scrap, remnant of handle, is visible on the underside of the rim. Thick greenish-blue glass. Late 1st or early 2nd century AD.

3. Context 1. (Fig. 26:27).

Fragment from the base of a prismatic bottle (e.g. Isings 1957, 63ff., form 50). Mould-blown. Base decorated in low relief with a design which consists, at least, of four peltae, probably in a circle, with their convex arcs pointing outwards from the centre of the base. Only two are extant on this fragment. Puntil scar visible in the centre of the base. Thick greenish-blue glass. Late 1st or early 2nd century AD.

4-7. Context 1 (2 fragments): 5655/(230); 5655/(439).

Four fragments from the bodies of an indeterminate number of mould-blown square-sectioned bowls (Isings 1957, 63ff., form 50). All thick bluish-green glass.

8. Context 1.

Fragment of thick bluish-green glass from a free-blown vessel of indeterminate form.

9. Context 557.

Fragment of thick bluish-green glass from a free-blown vessel of indeterminate form. Badly distorted through contact with fire.

OBJECTS OF SHALE By David Rudling
Part of a bracelet. Context 288. (Fig. 26:26).

POST-MEDIEVAL METALWORK By Ian Goodall
Scale tang knife with bone handle, iron rivets and incomplete scimitar-shaped iron blade. 18th century. Cf. Hayward (1957 II, pls. XIII, XIV, XVI-XXII). Context 1. (Fig. 26:30).

THE ANIMAL BONE By Owen Bedwin

Much of the animal bone was so poorly preserved that the fragments had to be identified *in situ*. (All details were recorded on forms which are curated with the archive.) In total, 114 fragments of cattle bone were recorded, with 27 fragments of sheep/goat, 11 of pig, 9 of horse and 1 of red deer. The latter's top-soil context may suggest a modern intrusive element.

The bone fragments are listed by context in Table 5.

THE SEEDS By Pat Hinton

Flotation and preliminary sorting of samples was carried out by the Sussex Archaeological Field Unit and the extracted charred cereals, chaff and seeds subsequently referred to the writer. Sample sizes and context details are unknown. In Table 6 all taxa are represented by seeds, (which term includes fruits, nutlets etc.), unless otherwise stated.

Many of the seeds are poorly preserved, particularly the cereal grains which are badly burned. The wheat grains are rather more puffed than the barley and oats, but among the less distorted grains it is possible to select some with characteristics of spelt (*Triticum spelta*), and the presence of

this species is confirmed by the glume bases, of which all sufficiently complete ones can be identified as spelt. Others might equally well be emmer (*Triticum dicoccum*) or spelt, and one or two shorter, more rounded and possibly originally plumper, grains in (13) are suggestive of free-threshing bread wheat; but in view of the very poor condition of these grains and the absence of identifiable glume or rachis fragments of any other wheat species it is probable that most are spelt.

Although the barley (*Hordeum vulgare*) appears slightly less heavily charred than the wheat there is considerable distortion. Angularity of outline however denotes hulled barley and two of the ten grains from (13) may possibly have been asymmetric originally, which would indicate the presence of the six-row form. The one rachis internode, also from (13), is damaged and the floret scars are lost.

In the absence of any part of the oat florets it is not possible to say whether these were wild or cultivated species.

The chaff and the weed seeds are likely to represent waste from a late stage in crop processing and the scatter of charred remains in ditches and pits suggests the gradual dispersal of ashes from domestic hearths and other fires.

Sloe (*Prunus spinosa*) and blackberries (*Rubus fruticosus*) are edible and although it is possible they were gathered as food the two prickles, probably of *Rubus* sp., with the seeds in (225) suggest that more than just the fruit is involved, and it could be that they, and the heathers, represent fuel or discarded rubbish.

The majority of the other seeds are of arable weed and/or grassland plants. These groups cannot conveniently be distinguished since ancient fields will probably have carried a wider range of plants than those now known as crop weeds. Rye brome (*Bromus secalinus*) is frequently found with spelt but its status as unwelcome weed or accepted part of crops is unclear.

Most of these plants are typical of light neutral to acid loamy soils, but corn spurrey (*Spergula arvensis*) is an indicator of an acid sandy soil. The heathers (*Erica* and *Calluna* species) are evidence of the nearby heathland and sheep's sorrel (*Rumex acetosella*) and tormentil (*Potentilla erecta*) commonly grow in such conditions, and also in damper pasture. Shallow pools or ditches are suggested by the grey club-rush, a plant of fresh or brackish waters.

THE CHARCOAL By Caroline Cartwright

A total of 343 g of charcoal was recovered from 58 contexts (plus 3 g from one context at the Devil's Ditch). Calculated on a percentage by weight basis, *Quercus* sp. (oak) heads the list with 38.5% (132 g) of the total, followed by *Corylus* sp. (hazel) at 26.2% (90 g). It seems likely that oak and hazel were prime timber for building and fencing as well as an all-purpose source for artefact manufacture and fuel. *Crataegus* sp. (hawthorn) at 13.4% (46 g), *Ulex* sp. (gorse) 4.7% (16 g), *Calluna* sp. (ling) 3.2% (11 g), *Salix/Populus* (willow/poplar) 2.6% (9 g), Leguminosae 2.3% (8 g) and *Prunus spinosa* (blackthorn) 1.2% (4 g) may represent hedging material and kindling for hearths. *Fraxinus* sp. (ash) at 6.4% (22 g) seems a slightly unusually low figure for such a useful multi-purpose timber. *Betula* sp. (birch) makes up the total with 1.5% (5 g). Secondary use of discarded or waste timber seems probable. Most of the charcoal fragments consist of small twig and round wood pieces; only the occasional fragment of larger timber heartwood is present.

Recovered charcoal is listed, by context in Table 7.

Table 6. Carbonized seed remains.

Species	Context Number																				
	3	5	13	16	31	100	140	160	225	232 K14	232 L6	232 M6	245	251	269	345	417	483	TT3 3	TT1 10	
<i>Triticum cf. spelta</i> - grains (spelt)			17	2	1	2		7	7			2						12	6		
<i>T. spelta</i> - glume bases (spelt)								41	6	6				6	3		2				
<i>T. dicoccum/spelta</i> - grains (emmer/spelt)			44		2			3	1			2	1		3	4	2	2			
<i>T. dicoccum/spelta</i> - glume base fragments			1					4	10					3		1	2				
<i>Triticum</i> sp. grains (indeterminate wheat)			5					3													1
<i>Hordeum vulgare</i> - grains (hulled barley)	1		10		2	1	1		3	1		1	1		1		1	1			
<i>Hordeum vulgare</i> - rachis fragments					1																
<i>Avena</i> sp. - grains (oats)								1	1	1		1	1		1		3				
Unidentified cereal fragments			6					8	2	4	1	3	1		1	2	6	4			
<i>Polygonum aviculare</i> agg. (knotgrass)					1	1															
<i>Rumex acetosella</i> (sheep's sorrel)								1					1				2				
<i>Rumex</i> sp. (dock)								2	1					1			3				
<i>Chenopodium album</i> (fat hen)														1							
<i>Spergula arvensis</i> (corn spurrey)			1																		
<i>Silene alba</i> (white campion)					1																
<i>Ranunculus/repens/acris/bulbosus</i> (buttercup)								1							1						
<i>Papaver</i> sp. (poppy)																	10				
<i>Rubus fruticosus</i> agg. (blackberry)								1	22					2						1	
<i>cf. R. fruticosus</i> - prickles									2												
<i>Potentilla cf. erecta</i> (common tormentill)																	2	1			
<i>Prunus spinosa</i> (sloe)								1													
<i>Vicia cf. hirsuta</i> (hairy tare)								3						1	1						

Table 6. (cont.)

Species	Context Number																				
	3	5	13	16	31	100	140	160	225	232 K14	232 L6	232 M6	245	251	269	345	417	483	TT3 3	TT1 10	
<i>Medicago lupulina</i> (black medick)						2		3													1
<i>Lotus</i> sp. (birdsfoot trefoil)										2											
<i>Hypericum</i> cf. <i>humifusum</i> (trailing St John's wort)					1																
<i>Erica</i> cf. <i>cinerea</i> - flowers (bell heather)									16						1						
<i>Calluna vulgaris</i> - flowers (ling)									4												
<i>Ericaceae</i> indet. - buds								2	2											2	
<i>Ericaceae</i> indet. - capsules																				3	
<i>Ericaceae</i> indet - seeds									1											3	
<i>Galium aparine</i> (cleavers)	1		1						1												1
cf. <i>Mentha</i> sp. (mint)									1												
<i>Solanum nigrum</i> (black nightshade)													1								
<i>Matricaria perforata</i> (scentless mayweed)									1											1	
cf. <i>Lolium</i> sp. (rye grass)															1						
<i>Poa</i> sp. (meadow grass)							1	1								1					
<i>Bromus</i> cf. <i>secalinus</i> (rye brome)									1				1								
<i>Agrostis</i> sp.									1	1			1		1	1	2				
Graminae indet.	1	1						3	1					2	2						
<i>Scirpus lacustris</i> cf. ssp. <i>tabernaemontani</i> (grey bulrush)									1												

Table 7. Charcoal.

Context	<i>Betula sp.</i> (Birch)	<i>Calluna sp.</i> (Heather)	<i>Corylus sp.</i> (Hazel)	<i>Crataegus sp.</i> (Hawthorn)	<i>Fraxinus sp.</i> (Ash)	<i>Leguminosae</i> family	<i>Prunus spinosa</i> (Blackthorn)	<i>Quercus sp.</i> Oak	<i>Salix/Populus</i> Willow/Poplar
1	2		4						
3							1		
5				1	1	1	4	1	
7			27		15		1		
12			3				1		
13				4					
16							2		
28			1						
31	3		2			4			
38			1						
42		1					3		
50			2				3		
64							1		
89							1		
100				2			2		
106							1		
111			2						
119				1					
125									
140							3		
142			7	4			4		
151			4		6				
160				15			2	3	
190			2	5			2	6	
221								5	
225		2		1			10		
232							1		
245									
251				2					
269				2					
282				2					
286						2			
292	5								
332							4		
339			5						
340			1						
345				1			2		
398							16	3	
403			3						
412			3						
413			1			1			
428			4						
439			2				3		
446								4	
454								1	
474		2					3		
475			2						
482			1				2		
483			3				3		
484							7		
492			6						
495							6		
541			2						
547		2	1						
TT1/10							3		
TT2				3					
TT2/3							3		
TT3/3				3			29		
TOTAL	5 g	11 g	90 g	46 g	22 g	8 g	4 g	132 g	9 g
	1.5 %	3.2%	26.2%	13.4%	6.4%	2.3%	1.2%	38.5%	2.6%

Weight in grams

THE STONE By Caroline Cartwright & David Buckley
Three hundred fragments of lithic material (excluding flint) were recovered from 81 contexts at Boxgrove site 5655 (see microfiche pp. m15-16). These included 99 fragments of glauconitic sandstone querns, excavated from 44 contexts. In addition, 97 fragments of glauconitic sandstone which may have originally formed part of quernstones (subsequently fragmented) occurred in 32 contexts. These form the bulk of the lithic material available (33% and 32.33% respectively).

The querns appear to be of fairly standard 'Sussex' form i.e. flat-topped with concave grinding surfaces and fairly thin, although with varying diameters. Most pieces are undistinguished with only a trace of grinding surface or outer edge present. Many do not even have this and can only be assumed to have originally come from querns. (Details of available diameters and maximum thickness for both upper and lower stones can be found in the archive.) Commonly, lower stone diameters vary between 380 and 390 mm with the maximum thickness at the rim varying between 45 and 62 mm (peaking around 50 mm), and maximum thickness at the centre varying between 35 and 95 mm (peaking around 70 mm). Upper stone diameters commonly vary between 300 and 460 mm (though one measures 660 mm) with a peak around 360 mm. Maximum thickness at the rim varies between 40 and 70 mm, peaking around 60 mm. The level of fragmentation renders estimation of a minimum number fairly meaningless.

At least two of the glauconitic sandstone fragments (e.g.

Contexts 1 & 5) derive from saddle querns. One notable import is the single small fragment (32 g; 0.33%) of Mayen lava quernstone from Context 1 which has a quarry source in the Eifel district of Germany.

Fifty-six fragments of ferruginous sandstone (18.67%) were recovered from 14 contexts. These may derive from building material or artefacts (subsequently fragmented). Six fragments of ferruginous sandstone whetstones (2%) exhibit clear utilization surfaces. Further possible building or artefactual or raw material debris is represented by 16 fragments of calcareous sandstone (5.33%), 6 fragments of fine-grained quartz-sandstone (2%), 3 fragments of shelly limestone (1%) and 2 fragments of clay ironstone (0.67%). Eight fragments of quartzite beach pebbles may include hammerstone material.

A variety of sandstones in the Upper and Lower Greensand have been exploited as a commodity since the Neolithic. Most of the calcareous sandstones utilized, comprise quartz (glauconite), calcite and some biotite, mostly with a calcitic cement, but sometimes with a large ferruginous content also. The shelly limestones can be traced to outcrops in the Petworth area. Quartzite Beach pebbles (of non-local origin) can be picked up on the sea shore, presumably transported to these locations as erratics.

Details of palaeogeography of the Boxgrove area have been published elsewhere (Roberts 1986a,b) and the reader is referred to these texts for a full account.

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Excavations at Bignor Roman villa, West Sussex 1985-90

by F. Aldsworth &
D. Rudling

Excavations at Bignor Roman villa between 1985 and 1990, in association with a programme of conservation and repair, investigated various parts of the site including the main baths, the north-east corner of the villa, and the boundaries of both the domestic and farmyard areas.

Investigations undertaken on the site of the main baths in 1985, 1987 and 1988 (Part 1 of this report) revealed evidence for occupation prior to the construction of the baths, including the masonry footings for half-timbered and masonry structures, and a sequence of constructional phases not only for the heated rooms and cold plunge bath, but also for the development of the courtyard villa itself. As a consequence of the excavations the remains of the cold plunge were restored for display (Appendix 1).

Plough-damage assessment excavations in 1985, 1986, 1987 and 1990 (Part 2 of this report) re-established the line of the surrounding wall of the villa, and confirmed that the villa had developed in the 4th century AD from a winged-corridor structure, through a phase where two long lines of rooms flanked the approach to the earlier west wing, to a courtyard building with adjoining outer farmyard.

Studies of finds from the 1985-1990 excavations provide additional information about both the economy and material culture of the site. This section of the report also includes a brief study of brick and tile found at Bignor before 1985 (Part 3 of this report).

INTRODUCTION

This article reports on the results of excavations undertaken at Bignor Roman villa between 1985 and 1990. The excavations are part of the programme of major improvements and research on the villa which began in 1984-85 with the rediscovery of the Site Museum.

During 1985 West Sussex County Council and the Field Archaeology Unit of University College London undertook plough-damage assessment excavations, on behalf of the owners and English Heritage, to the east of the courtyard villa in order to determine the quality and extent of any surviving remains of the Roman farmyard area (Fig. 2). These were extended to the north, west and south sides of the courtyard villa by the County Council in 1986 and during 1990 the Field Archaeology Unit was commissioned by the trustees of the villa to examine five locations in or around the site. The results of these excavations are contained in Part 2 of this report.

Excavations were also begun in 1985 by the County Council on the site of the main baths complex at the south-east corner of the courtyard villa, and these continued in 1987 and 1988. The results of these excavations are contained in Part 1 of this report.

Since the primary objective of the excavations was to assess the quality of any surviving remains, with the aim of long-term presentation if warranted, no attempt was made to excavate revealed features and deposits fully. Generally, only the surface of the last phase of archaeological features/deposits was revealed, cleaned and recorded. Very limited sampling was undertaken in order to obtain dating, economic and environmental evidence.

As a result of these investigations the entire area covered by the courtyard villa and the farmyard has been removed from arable cultivation, the former car park has been removed from its former position in the centre of the courtyard to a new site to the south, and repairs made to the remains of the cold

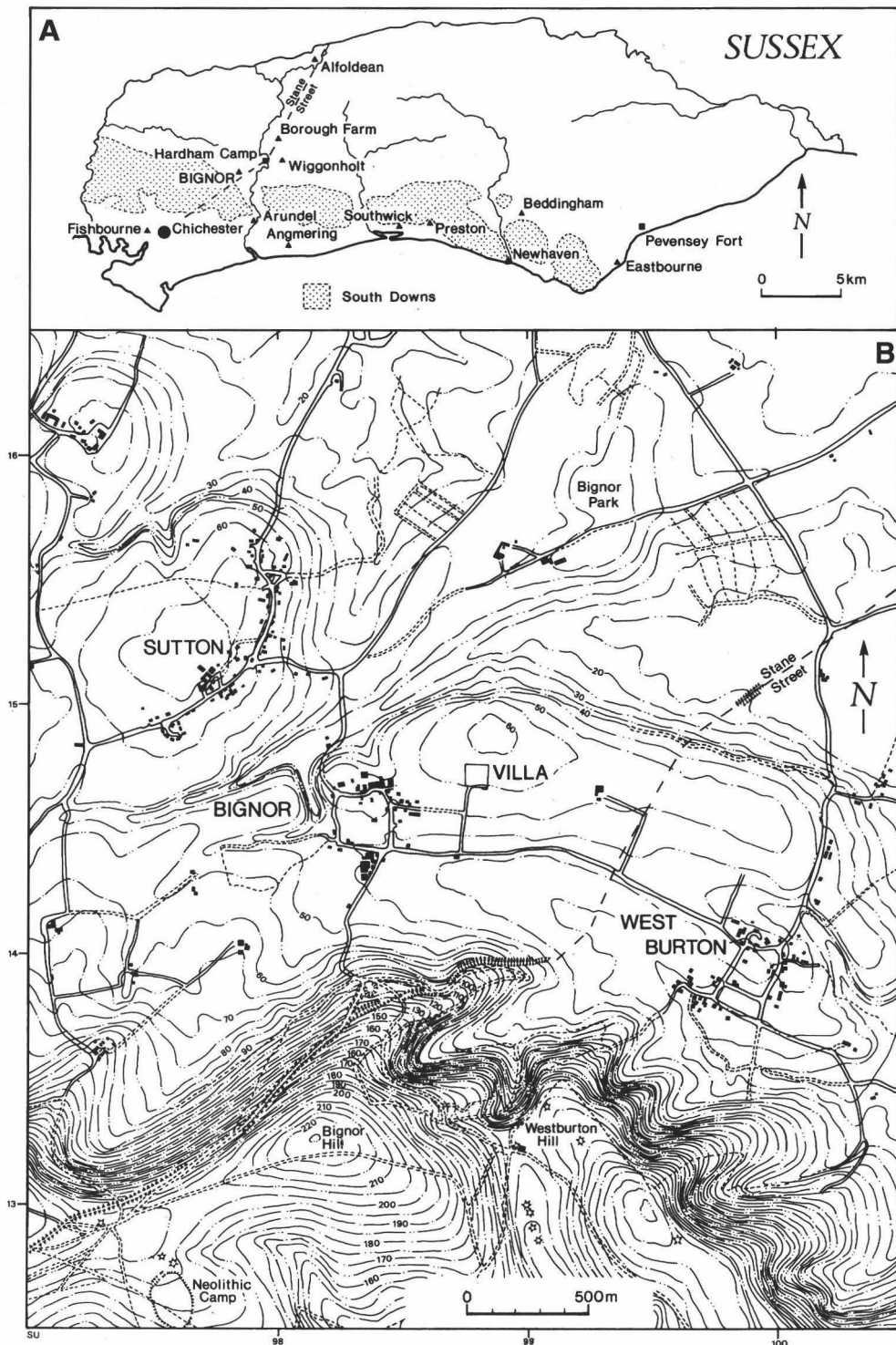


Fig. 1. Bignor Roman Villa site location maps. (Map B is based upon Ordnance Survey 1:10,000 mapping with the permission of the Controller of Her Majesty's Stationery Office, © Crown copyright.)

plunge bath in 1925 were removed and the remains were repaired again for display (Appendix 1).

The archives for all the 1985-1990 excavations, including all the published drawings and a new plan of the villa complex at 1:250, will be placed in the West Sussex Record Office, in Chichester.

ARCHAEOLOGICAL BACKGROUND

The Roman villa at Bignor is one of the largest in Britain. It is situated at NGR SU 987146 on the southern slope of the Upper Greensand shelf, just north of the South Downs, in West Sussex (Fig. 1). In addition to being located on very fertile arable land, the villa was well placed to exploit grazing lands on the nearby Downs, and perhaps also the woodlands of the Wealden clays to the north. It is very close to Stane Street, which passes within a few hundred metres, and was thus advantageously placed for good communications with the markets at Chichester and the minor urban settlement in the Hardham-Pulborough area (Cunliffe 1973, 69-71).

The site was discovered in 1811 by the farmer George Tupper, an ancestor of the present owner, whilst ploughing. Soon after its discovery a local resident, John Hawkins of Bignor Park, took responsibility for the excavation of the villa and he invited Samuel Lysons, a leading antiquary of the day, to supervise the work. Lysons lived in London and could therefore spend only a limited amount of time in Sussex, but he and Hawkins corresponded regularly and many of their letters survive in the West Sussex Record Office at Chichester. These letters, which have been published (Steer 1966), throw considerable light on the way in which the site was explored and on the problems faced by the excavators. In 1818 Samuel Lysons read the last of three papers to the Society of Antiquaries and produced an overall plan of the villa (Lysons 1817; 1821), but before this he had drawn and begun to publish, with the help of Richard Smirke and Charles Stothard, a series of superb engravings of the villa, which were initially sold separately, but later combined as the third volume of his *Reliquiae Britannico-Romanae* (Lysons 1819). After the death of Samuel Lysons in 1819, excavations continued for a short while under the direction of his brother, Daniel Lysons, and John Hawkins, but these seem to have been confined to the south-west corner of the courtyard villa which is shown incomplete on

Samuel Lysons' plan. Excavations seem to have ceased later in 1819, and thereafter much of the site, including all of the farmyard, was returned to arable cultivation. From as early as June 1812 cover buildings were erected over the principal mosaics and the site became a popular tourist attraction.

In the following account the room numbers given are those allocated by Lysons and shown on the revised plan of the villa published in this report (Fig. 62) except those at the south end of the west wing which have been allocated the numbers 78-80 by the present writers.

No further work was undertaken until 1925 when S. E. Winbolt re-excavated and repaired the cold plunge (Room 55) (Winbolt 1926) which had been left open, and he and G. Herbert produced a new guide to the villa; it was revised again in 1930. In 1929 the Venus mosaic (Room 3) was re-laid.

Between 1956 and 1962 Professor S. S. Frere undertook limited excavations in parts of the west, north, and south wings (Frere 1982) establishing for the first time a chronology for the constructional phases of the west wing (Fig. 3). Soon after this a site museum was built in the area of Rooms 7 and 8 and the plan of the west wing was marked on the surface using modern materials. In 1973 the Winter and Medusa mosaics (Rooms 26 & 58) were re-laid, and in 1975-76 excavations were undertaken in the north corridor (Room 10) prior to the re-laying of the mosaic and the erection of a covering building (Aldsworth 1983).

During the winter of 1984-85 a West Sussex County Council Manpower Services Commission Scheme, under the supervision of Fred Aldsworth and James Kenny, refurbished the site museum and commenced the programme of assessment excavations described below.

The history of the development of the villa has been examined in detail by Professor Frere (1982) and Ernest Black (1983), and reviewed by one of the writers (Rudling, in Drewett *et al.* 1988, 220-27). A new guide to the villa was prepared by Fred Aldsworth in 1988 and was published by the trustees.

PART 1: THE BATHS

By Fred Aldsworth

PREVIOUS EXCAVATIONS

The baths were first excavated under the direction of Samuel Lysons between 1813 and 1815. The

BIGNOR ROMAN VILLA 1985-90

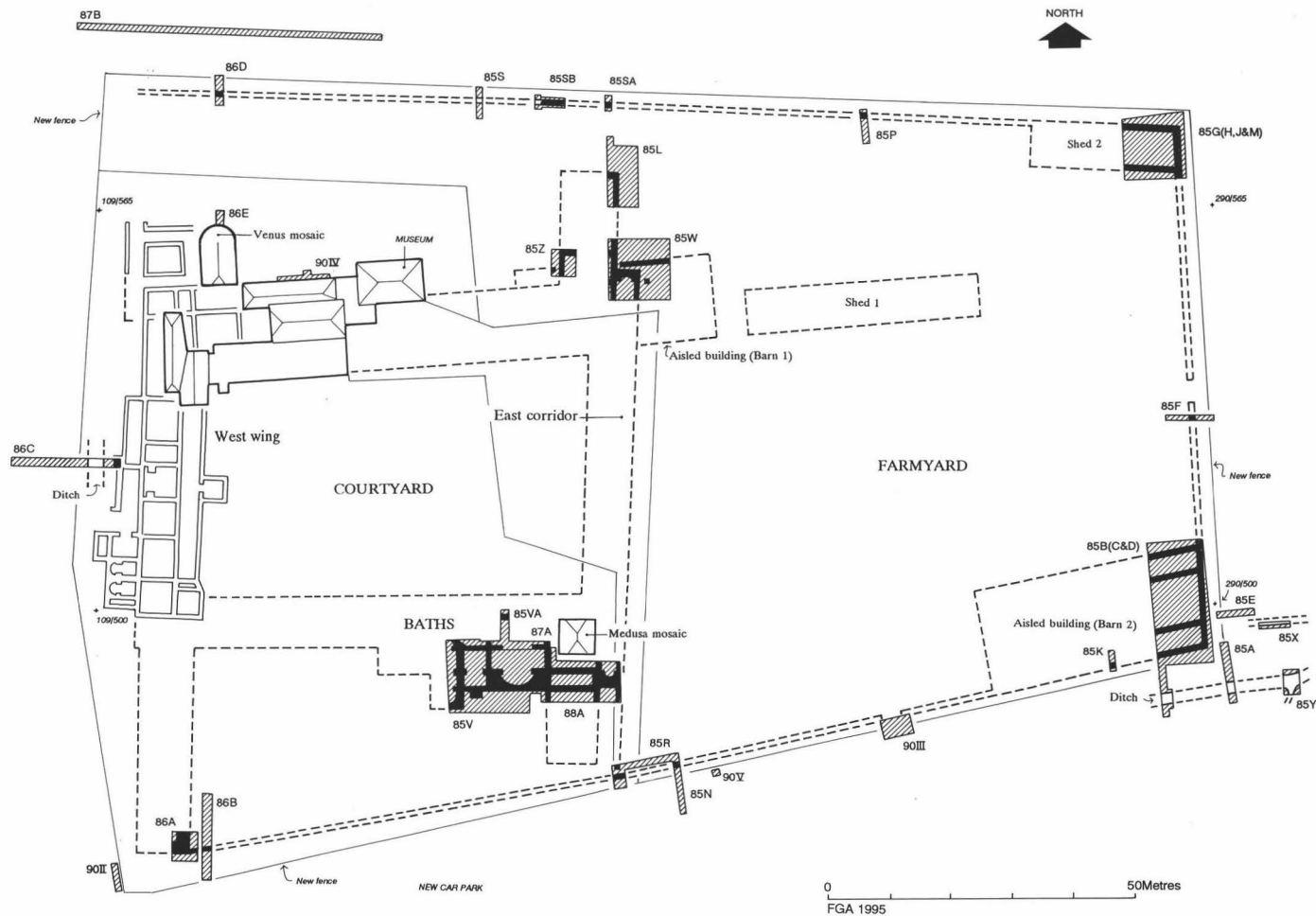


Fig. 2. Location of trenches excavated in 1985-1990, based on a revised plan of the villa by one of the authors (FGA).

BIGNOR ROMAN VILLA 1956-90

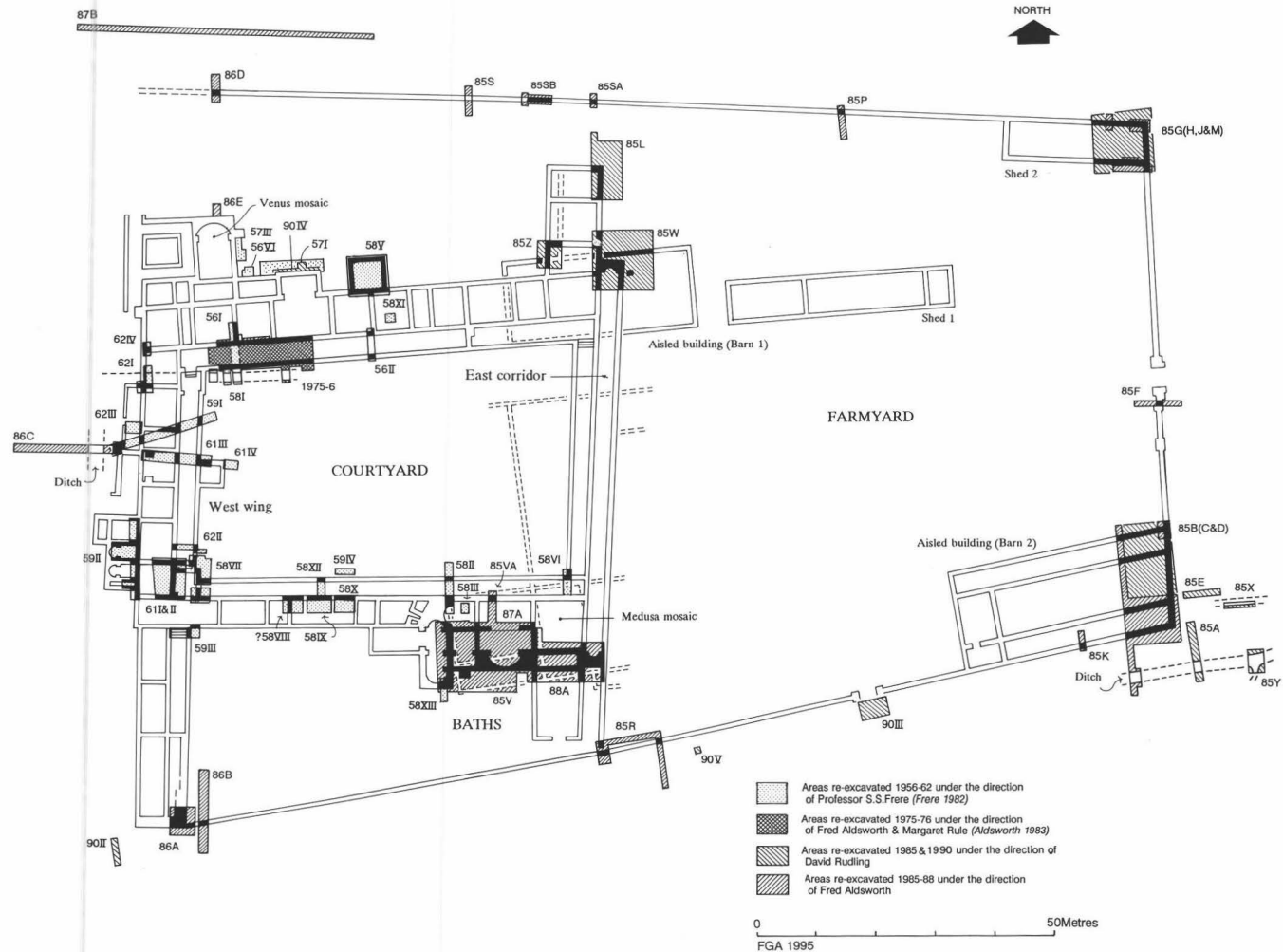


Fig. 3. Location of trenches excavated 1956-1990.

results are described in his report (Lysons 1817, 215-19) and referred to in his correspondence with John Hawkins (Steer 1966). His discoveries are illustrated in a superb series of hand-coloured engravings, mostly by Lysons himself, published together either in or soon after 1819 (Lysons 1819, pls. II & XXV-XXXII). A number of other 19th-century descriptions of the villa survive, but they appear to add very little to what Lysons had already said, although several illustrations require special comment. In an account of the villa, James Rouse includes an engraving showing the baths from the north (Rouse 1823, pl. 102). This is signed by Rouse though not dated, but there is reason to believe that it was drawn at approximately the same time as the other engravings in the book i.e. c. 1823. In the West Sussex Record Office there are photographs of two unfinished pencil drawings (WSRO PD 212 and 214). One of them is signed and dated [A. W.] Franks 8th June 18[62 or 82], the originals are in the library of the Society of Antiquaries of London. The views and details are identical to those produced by Lysons (1819, pls. II & XXV) and the most likely explanation seems to be that these were both produced by Franks, not on site, but from Lysons' original engravings published in May 1819. A third photograph of a pencil drawing (WSRO PD 213) is a different view of the baths from the north, probably by another artist, but it is unsigned and undated.

There is archaeological evidence to indicate that after their discovery the baths were left open and robbed before they were backfilled (*see below*), and Rouse's drawing would appear to imply that a period of at least ten years elapsed before the remains were reburied. The Bignor Tithe Map of 1845 does not show the baths and by 1876, when the survey was undertaken for the 1st edition of the Ordnance Survey 25-inch map, a carriage drive had been built over the site of the heated rooms (*see below* - Trench 85V Context 2).

All but the cold bath and the Medusa mosaic were reburied in the 19th century and a brick-built covering building was erected over the Medusa mosaic. According to correspondence the bricklayer started work on the 29th of May 1818 (Steer 1966, no. 51). In 1925 S. E. Winbolt re-excavated and repaired the cold bath (Room 55) (Winbolt 1926), and in 1958 Professor S. S. Frere opened five trenches in the area of the bath complex (Fig. 3; Frere 1982, 170-74, Trenches 58II, III, IV, VI & XIII). In 1973 the Medusa mosaic was relaid (Frere 1982, 135).

EXCAVATIONS 1985-1988

The excavations in 1985, 1987 and 1988 were supervised by the writer and James Kenny, for West Sussex County Council, English Heritage, and the trustees of the villa, and undertaken by Misses H. Watson and K. Young and Messrs B. Barnett, F. Greenaway, J. Keyes, D. Martin, J. Penford, and K. Wales.

In Trenches 85V, 85VA, and 87A part of three heated rooms of the baths (Rooms 52, 53 & 54) together with the south portico and a corridor (Rooms 45 & 55c) were partially investigated to determine the condition in which they had been left after Lysons' excavations and the extent to which they had been subsequently damaged by ploughing. The remains had been robbed and allowed to decay prior to backfilling and, since there were no surviving floors in Rooms 45, 53, 54 and 55, the opportunity was taken to investigate the area more fully than had been proposed. As a result, two important stratigraphic sequences were recorded which provided evidence both for occupation prior to the building of the baths, Frere's Periods I and II, and several phases of construction and reconstruction of the baths themselves, Frere's Period IIIA. The opportunity has been taken to re-appraise the results of the excavations conducted by Lysons (1817 & 1819) and Frere (1982).

A trial trench (Trench 85V: Figs. 2 & 4), some 12.4 m long by 3.2 m wide, was excavated immediately south of the cold bath and Rooms 52 and 55 in order to locate the southern edge of Lysons' excavations and to remove the roots of a large dead tree which had formerly stood at the south-west corner of the cold bath. The tree appears in the 19th-century illustrations and its roots had caused considerable damage to the baths especially the stoke-hole to Room 54. At the south-west corner of the trench and immediately below about 150 mm of ploughsoil was a layer of crushed greensand lumps about 100 mm thick. This extended into the south and west sections (Fig. 11, Section D-E, Context 2) and sealed the backfilled material in the baths. It is probably best seen as the surface of the carriage drive laid over the baths some time after they were backfilled. Immediately beneath this on the south side of the trench was a layer of collapsed Roman masonry through which both the south side of Lysons' trench, visible on his drawings (Lysons 1819, pls. II & XXV), and Frere's trench (Frere 1982, Trench 58 XIII) had been cut. Neither the collapsed masonry

BIGNOR 1985-88

OCCUPATION PRIOR TO THE CONSTRUCTION OF THE BATHS: PERIODS I & II

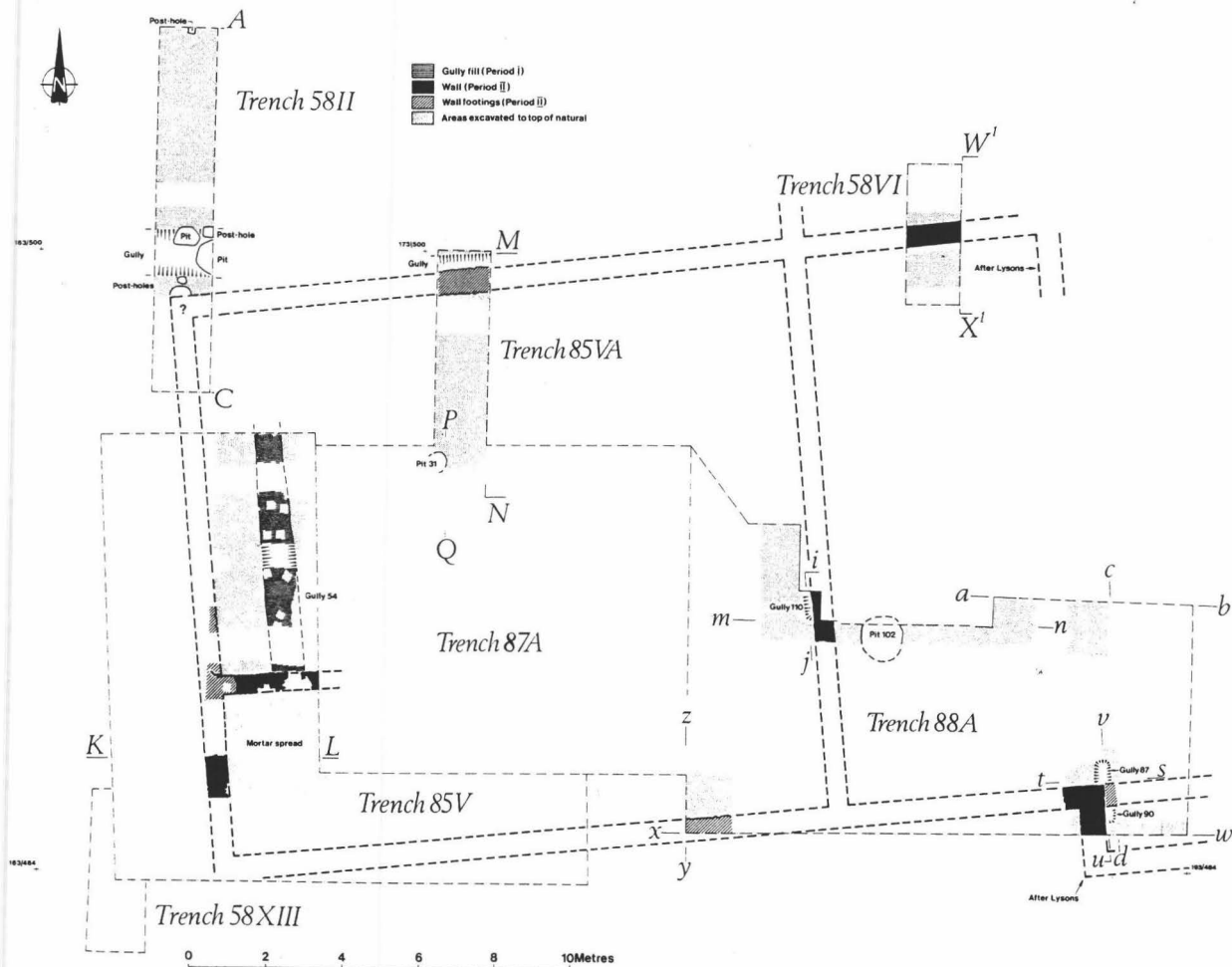


Fig. 4. Plan of occupation prior to the construction of the Baths: Periods I and II.

nor Frere's trench were excavated and on the south side of the baths Lysons' trench was re-excavated only in the area of the stoke-hole on the south side of Room 54.

The east end of the trial trench was backfilled and the west end was extended northwards in order to re-examine parts of Rooms 52, 53, and 54. The trench was now 11.4 m long by 5.6 m wide. Beneath the 19th-century carriage drive were the layers of backfill of Lysons' excavations comprising soil (Fig. 5, Section D–E, Contexts 3 & 4) and greensand lumps (Context 5). It soon became clear that a considerable amount of robbing and decay had taken place before the site was backfilled. Many of the features recorded by Lysons had either collapsed or were missing and an extensive spread of greensand flakes (Context 8) appears to derive from weathering of the stonework following exposure of the structure to the weather for possibly ten years.

A further trench (Trench 85VA) was excavated immediately north of the cold bath in order to examine the black and white chequerboard floor recorded by Lysons in the corridor and the south wall of the south portico (Rooms 45). The trench was 6.8 m long and 1.4 m wide. It appears that the floor was removed in the 19th century and the portico wall robbed in the Romano-British period. The trench was excavated down to natural greensand in an attempt to determine the date and extent of the robbing.

The repairs undertaken by S. E. Winbolt in 1925 involved the partial re-excavation of the cold plunge (Room 55) and the consolidation of the remains (Winbolt 1926). By 1975 the exposed walls had deteriorated quite badly, the plunge was partially filled with soil and by 1987 the remains were in such poor condition that it was decided to tackle the problem again. The whole structure was re-excavated and the repairs made by Winbolt, using a very distinctive cement-based mortar with pink sand, were removed (Trench 87A). The remains were consolidated and then rebuilt to Roman floor level (see Appendix 1).

The final phase of excavation was undertaken in 1988 in order to determine the condition of the original walls of the *apodyterium* (Room 56) and the adjoining rooms to the east and south (Rooms 57, 58 & 64). Further evidence was found for occupation prior to the construction of the baths, including masonry structures (Trench 88A).

It is proposed to discuss the results of the

excavations in chronological order of deposition under the period headings devised by Frere (1982). Period I for the earliest features which may be either contemporary with the first timber villa on the site or earlier than it; Period II for the masonry structures which predate the baths and are possibly contemporary with the first stone villa incorporated into the west wing of the courtyard villa; and Period III for the initial construction and later alterations to the bath complex. In the absence of any structural evidence both Frere (1982) and Black (1983) assign the construction of the baths to the first phase of the conversion of the winged-corridor villa (Period IIE) into a courtyard villa. Frere refers to this as Period IIIA whilst Black refers to it as Period III(i). Until the stratigraphic relationship between the west and south wings of the courtyard villa have been fully examined the precise phasing of the baths within the development of the courtyard villa will not be known. In this report it is assumed that the bath complex formed part of the initial extension of the Period II villa by the addition of north and south ranges, as suggested by Black and supported by the excavations elsewhere on the site in 1985. This phase of development is assigned to Period IIIA and the successive alterations and extensions are also assigned to this phase, though some of them may have taken place when or after this had been converted to a courtyard villa in Frere's Period IIIB or Black's Periods III(ii) or (iii).

PERIOD I

The undisturbed top of the natural greensand was encountered in several areas (see Fig. 4) and prior to disturbance appears to have dipped downwards to the south-west at a slope of about 1 in 5. It was capped in places by original topsoil (Sections AC, Contexts 10 & 11; MN, Context 26; WX, Contexts 10 & 11; ab, Context 93; cd, Context 68; ij, Context 101; st, Context 68; wx, Context 68 and yz, Context 124).

The earliest phase of occupation was represented by several gullies, two pits, and layers containing occupation debris, which may be contemporary with the two gullies, two pits, and four post-holes found by Frere in 1958 (Frere 1982, 170–71; Trench 58 II, Figs. 21, 22 & 25, Section AA–CC — redrawn here in Figs. 4 & 5, Section AC; and Trench 58 VI Figs. 24 & 25, Section W1–X1 — redrawn here in Fig. 6, Section WX).

In Trench 85V a gully was discovered running north–south over a distance of 6.0 m (Fig. 4, Gully

54). It was found to vary from 620 mm wide at its north end to 960 mm wide further south and was cut into natural greensand. At the northern end of the trench both the top of the natural greensand and the upper fill of the gully had been removed when the baths were terraced in to the slope of the hill. The fill of the gully was excavated for a distance of 600 mm and it was found to be 320 mm deep and flat bottomed. The fill (Context 54) was uniform throughout, comprising fairly clean loam with lumps of greensand, a few fragments of Romano-British tile, burnt flint, animal bone, a single sherd of Claudio-Neronian Samian (Form Dr. 18/31), and two sherds of late-1st- to early-2nd-century Romano-British wares: a buff ware base and part of a 1st-century necked bowl. The gully had the appearance of having been deliberately filled.

A second gully was found in Trench 85VA (Figs. 4 & 6, Section MN, Context 27) running east-west and partially destroyed by the foundation trench of the Period II wall (Context 29). It contained two sherds of a late-1st-century rusticated vessel and fragments of Romano-British tile and may be a continuation of the gully observed further west by Frere in 1958 (Frere 1982, 170-71; Trench 58II, Figs. 21, 22 & 25, Section AA-CC — reproduced here in Figs. 4 & 5, Section AC).

Two gullies were found in Trench 88A (Figs. 4, 7 & 8, Sections ij, mn, st & uv). Near the south-east corner was a shallow north-south slot (Contexts 87 & 90) cut through an original turf layer (Context 68) and measuring 1.7 m long, 460 mm wide and 220 mm deep. It contained fairly clean loam with some charcoal but no finds. It was sealed by occupation layers (Contexts 67, 89 & 91) and partly destroyed by Period II walls (Contexts 51 & 88). To the north-west, and partly underlying a buttress of the 19th-century covering building over the Medusa mosaic, were the remains of a second gully, 26 mm deep, cut through original topsoil (Context 101). The gully contained clean loam (Context 110) with no finds. It was sealed by a layer of clean greensand lumps (Context 100) which appears to have been laid to level the site prior to the construction of the Period II walls.

At the south end of Trench 85VA were the remains of a pit (Figs. 4 & 6, Section PQ, Context 31) truncated by a modern pit (Context 14) and a wall of the cold bath (Context 32). It contained three grey ware body sherds of 1st- or 2nd-century date and was sealed by Period III occupation layers.

At the north end of Trench 85VA were several layers of loam containing occupation debris (Fig. 6, Section MN, Contexts 20, 24, 25 & 26) which were sealed by the upcast from the Period II foundation trench for a wall. On the north side of Trench 88A and partially cut through original topsoil (Context 101) was a pit (Context 102: Figs. 4 & 7, Section mn) measuring 700 mm wide and 520 mm deep. It contained clean loam with several large lumps of greensand but no finds.

The dating for the Period I occupation is provided by an as yet undated copper-alloy object, possibly a hinge from a box or a strap fitting, and a small group of pottery sherds from the deliberate fill of the gully in Trench 85V (Contexts 11, 12 & 13); the fill of the gully in Trench 85VA (Context 27); and layers containing occupation debris predating the construction of the Period II wall in Trench 85VA (Contexts 20, 24, 25 & 26) and Trench 88A (Contexts 101 & 119). The gully in Trench 85V contained the single sherd of Claudio-Neronian Samian, a buff ware base, a very coarse gritted sherd which may be prehistoric, and other 1st- to 2nd-century coarse ware sherds. The gully in Trench 85VA (Context 27) contained the two coarse ware sherds which may be late 1st century in date. The layers containing occupation debris found in 1985 (Contexts 20, 24, 25 & 26) included the copper-alloy object and a 1st- to 2nd-century sherd, whilst those found in 1988 (Contexts 68, 101 & 119) produced fine and coarse 1st- to 2nd-century wares and one piece of *tegula mammata* tile which must indicate some sort of masonry structure.

Much of this material appears to fall within the date range *c.* 43-100, but it includes several pieces which may belong to the 2nd century AD (see Part 3).

PERIOD II

The earliest phase of masonry structure was represented by the remains of walls and a mortar spread which may all be contemporary with Frere's 'oblique' wall (Frere 1982, Trench 58VI, Section W1-X1 — reproduced here in Fig. 6, Section WX), the Period II villa located by Frere under the west wing of the Period III courtyard villa (Frere 1982, 137-9), and the early walls recorded by Lysons (Lysons 1819, pl. III).

In Trench 85V a wall was found running east-west for a distance of 2.5 m (Fig. 4). At its west end walls were found extending south for a distance of 2.8 m and north for a distance 1.8 m. All three walls

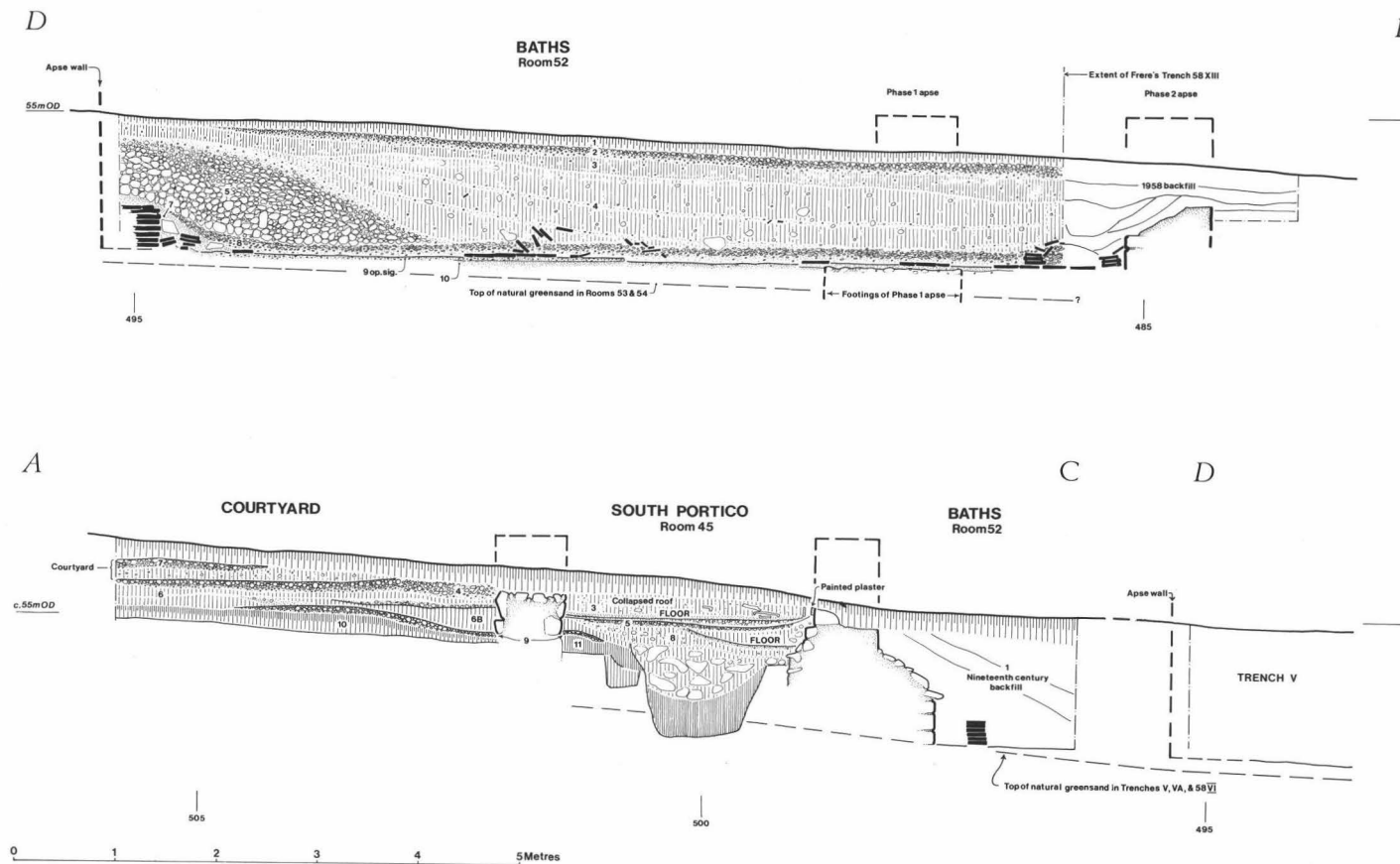


Fig. 5. Trench 58II, Sections AC (after Frere 1982, Section AA-CC) and Trench 85V, Section DE.

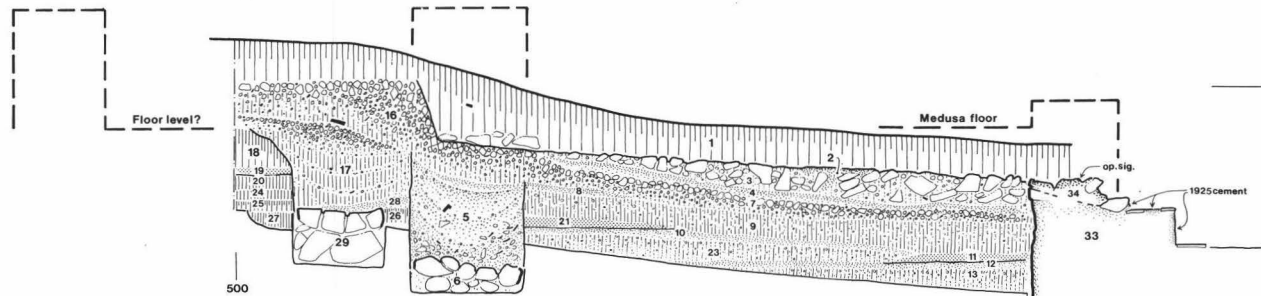
M

N

SOUTH PORTICO
Room 45

COLD BATH
Room 55

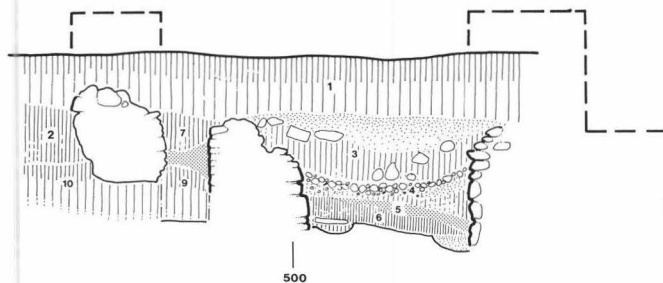
55m OD



W¹

X¹

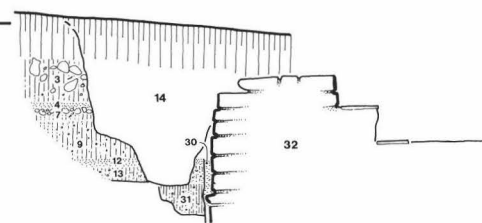
55m OD



P

Q

Floor level?



0 1 2 3 4 5 Metres

Fig. 6. Trench 85V, Sections MN, PQ, WX (after Frere 1982, W1-X1).

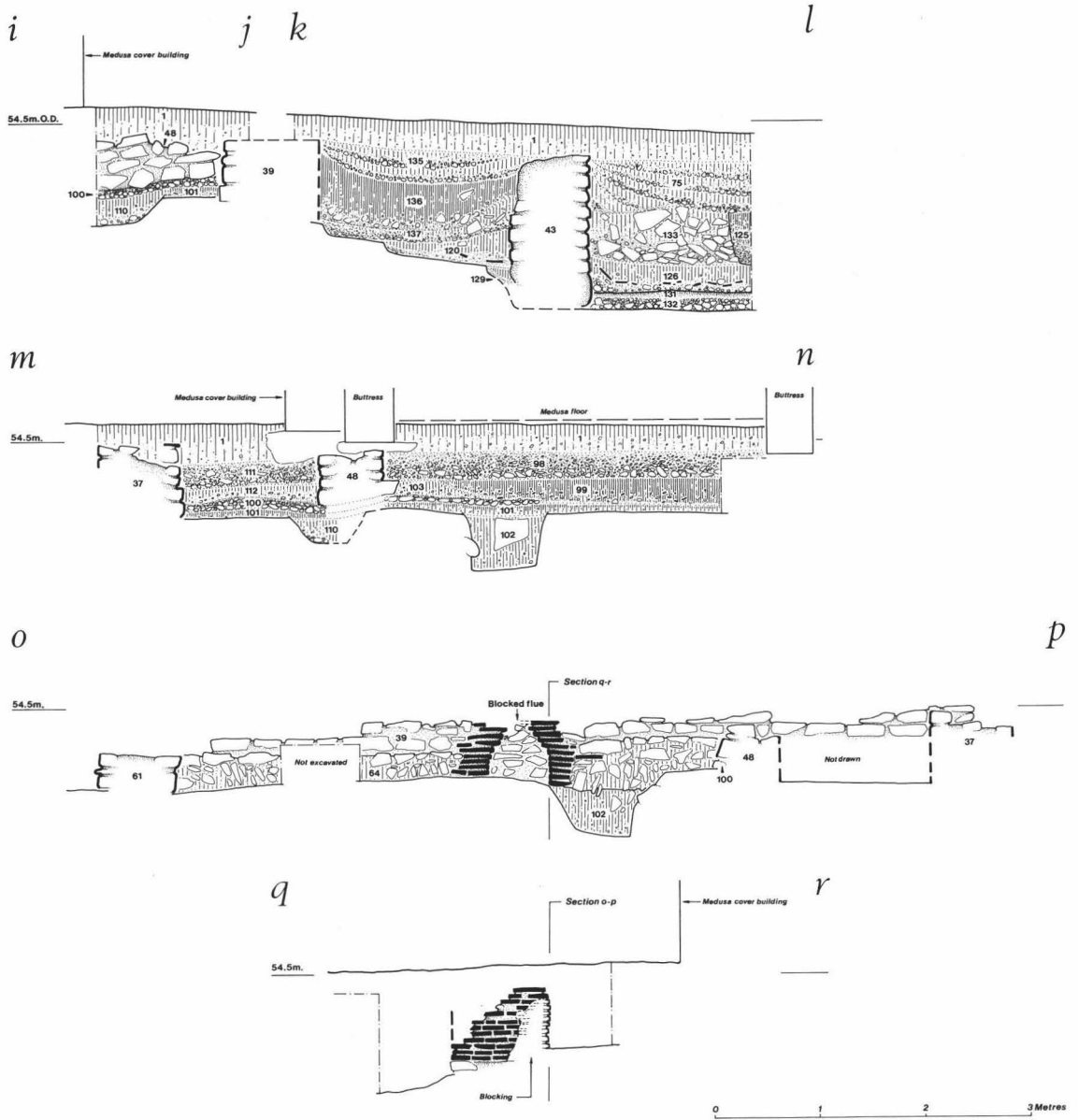


Fig. 7. Trench 88A, Sections *ij*, *kl*, and *mn*, and Elevations *op* and *qr*.

were identical in construction being of greensand lumps in a buff mortar, 500 mm wide, and appeared to have been built at the same time. All that survived was a single course of mortared stonework built on footings at 53.4 m O.D. which were probably built to carry a timber-framed building. The northern end of the north-south wall had been destroyed when

the Period III baths were terraced into the slope of the hill and there was no evidence to indicate that the east-west wall continued westwards, though if it did exist it would have been destroyed when the baths were constructed. To the south of the east-west wall was a spread of buff mortar containing greensand lumps which is probably best seen as

collapsed masonry; this was not removed. No trace of any floor associated with these walls was seen.

In Trench 85VA the footings of a robbed east-west wall were encountered to the north of the south wall of the Period III portico (Figs. 4 & 6, Section MN, Context 29 — for a full description of the stratigraphy in this trench *see* Period III discussion below). It was cut from about 54.0 m O.D. into the bedrock and comprised large lumps of greensand with no mortar. The foundation trench had been cut through the Period I gully (Context 27) and occupation layers (Contexts 20, 24, 25 & 26) and the upcast from its construction redeposited as a layer of fairly clean greensand (Context 19). The wall was probably robbed out soon after the south wall of the Period III portico was constructed (Context 6), the robber trench being backfilled with a mixture of white mortar or plaster (Context 28) and loamy soil containing greensand lumps (Context 17). This robbed wall is almost certainly another part of the 'oblique' wall noted by Frere in his Trench 58VI, though it was not robbed to footing level in that area. As will be seen later, the south wall of the Period III portico also survived in Frere's trench, but had been robbed in Trench 85VA.

In Trench 88A three further sections of wall were observed. On the north side, and partly underlying the south-west buttress of the 19th-century covering building of the Medusa mosaic, a north-south wall (Context 48) was found (Figs. 4 & 7, Section mn). It was 530 mm wide and survived over a distance of 120 mm. It comprised three courses of greensand blocks laid in a pale buff-coloured mortar. This was set on a single foundation course of greensand blocks laid without mortar with its upper surface at 54.1 m O.D.

Near the south-east corner of Trench 88A was a T-shaped foundation of greensand blocks (Context 88) laid in a shallow trench cut through the earlier gully (Contexts 87 & 90) and supporting a wall which appeared to represent the north-east corner of a room (Context 51 — Figs. 4 & 8, Sections st & uv). The wall was 620 mm wide and survived as three courses of greensand blocks set in a pale buff mortar built from 53.8 m O.D. There was no evidence to suggest why the wall did not continue on the foundation to the east, but this may have been a threshold into an adjoining room. Lysons (1819, pls. III & XXVI) shows the north-south wall returning east again after a short distance (*see* Fig. 4), but this area was not examined in 1988 and it is difficult to

see how this fits in with the features found so far in this area.

At the south-west corner of Trench 88A there were the remains of a robbed footing belonging to an east-west wall (Figs. 4 & 8, Sections wx & yz, Contexts 118 & 122) which aligns with the section found in the south-east corner. The foundation trench was cut through an original turf layer (Context 124) from about 53.4 m O.D. and its upcast of clean greensand lumps (Context 123) deposited on its north side. The remains of the footing comprised a few lumps of greensand lying in soil, the remainder of the footing having been robbed out at a later date, probably when the baths were built or extended.

Since the 'oblique' wall in Frere's Trench 58VI and the remains of walls found in Trenches 85A and 88A all belong stratigraphically to the same phase of development on the site, it is assumed that they belong to the same period of construction — Period II — and that they probably formed part of a building or buildings destroyed when the Period III villa was extended and the baths constructed. The thickness of the walls suggest that they may have supported timber-framed buildings and the varying levels from which their respective foundation trenches were cut indicate that at the time of their construction the land was sloping downwards to the south-west at an angle of about 1 in 10.

These recent observations provide further evidence for a very extensive complex of masonry buildings predating the baths. They were constructed on the same alignment and to some extent with walls in almost the same positions as the Period II gullies, though the pattern of exposures so far provides insufficient evidence to suggest the form of the whole complex. It seems likely, however, that at least four rooms and/or yards occupied the site later covered by the baths. The largest at the north-west corner measured 15.5 m east-west by 9.4 m internally, whilst that immediately south of it was the same length, but only 4.2 m across. To the east was a further room measuring 14.0 m north-south and probably 6.0 m wide, whilst only a small part of a room at the south-east corner has so far been examined.

The dating evidence for the Period II structures is provided by the pottery sherds sealed in the Period I features (*see* above), which include the redeposited greensand (Trench 85,VA Context 19) forming the upcast from the construction of the Period II wall,

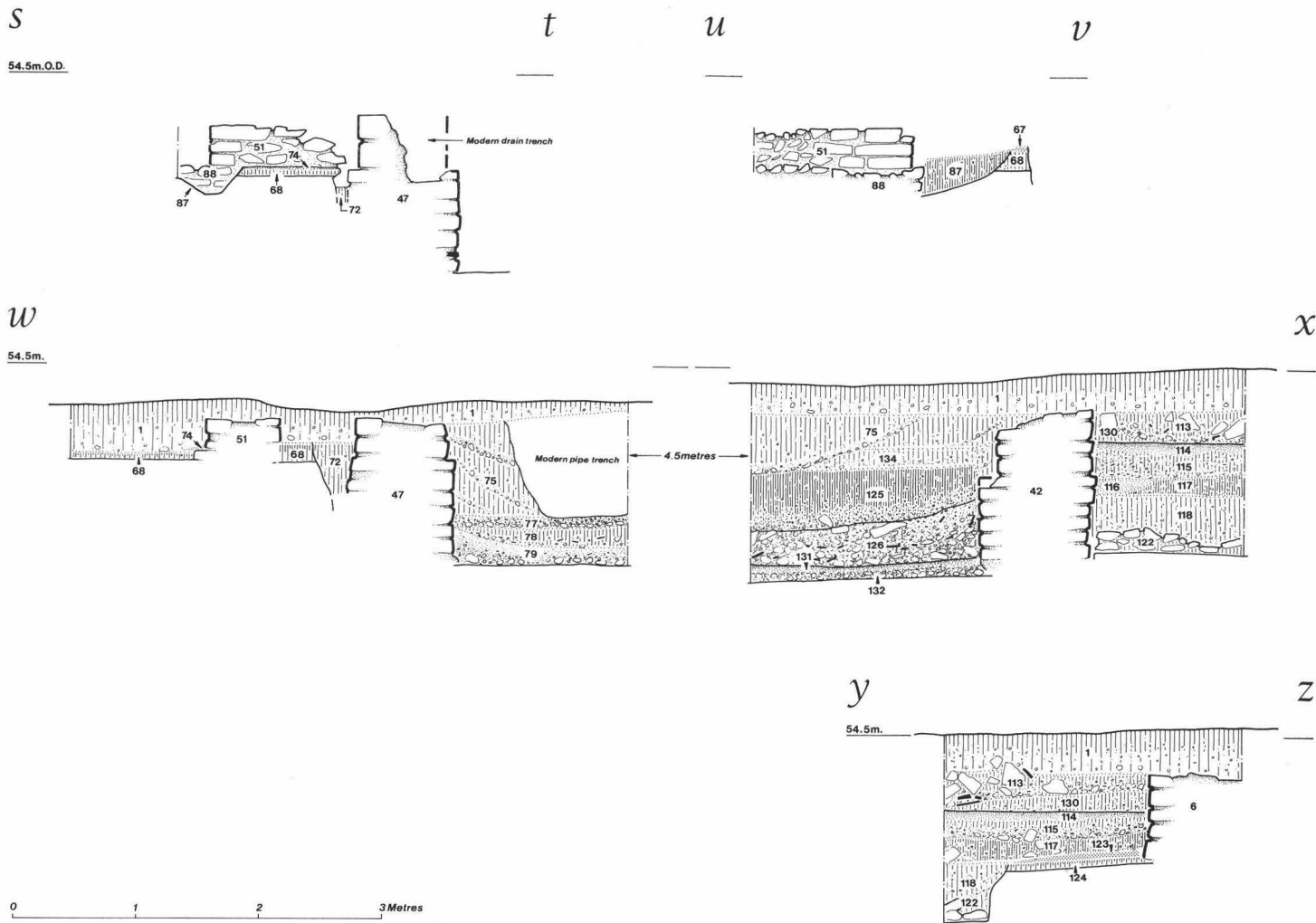


Fig. 8. Trench 88A, Elevations st and uv, and Sections wx and yz.

the footing of that wall (Trench 85VA, Context 29), and the occupation layers cut by the Period III walls (Trench 88A, Contexts 70 & 86). A 2nd- to 3rd-century AD date can be attributed to the diagnostic material from those contexts (see Part 3, Pottery Catalogue, nos. 38-43).

PERIOD III

Three heated rooms of the baths (Rooms 52, 53 & 54), the cold plunge bath (Room 55), three further rooms to the east (Rooms 56, 57 & 58), and parts of the south portico (Room 45) and the east corridor (Room 64) were partially re-excavated (Fig. 9). The results are considered with a re-interpretation of the investigations by Lysons in 1813-15 (Lysons 1819) and Frere in 1958 (Frere 1982).

It has not always been possible to correlate phases of construction between trenches or rooms. For this reason the term Phase 1 has been reserved to describe components of a partially hypothetical plan, discussed later, which is perhaps represented in the recent excavations only by the wall footings in Room 54. The term Phase 2 is used to describe the earliest masonry structures which form a complete bath plan (i.e. Rooms 45 & 52-8). Later additions and alterations are initially phased within the trench or room in which they were found but are later discussed in the context of the complete bath complex.

The stratigraphic and dating evidence for the initial construction of the baths was revealed in Trench 85VA where an important sequence of constructional phases, alteration and robbing was observed (Figs. 9 & 6, Sections MN & PQ). The interpretation of this sequence is dependent upon the assumption that the layers of fairly clean redeposited greensand (Contexts 11, 19 & 21) are the upcast from the foundation trenches cut for nearby walls (Contexts 32, 29 & 6), that Wall 33 was trench-built from a ground level represented approximately by the top of Context 9, and that the wall represented by a footing in Trench 85VA (Context 6) belongs to the same phase of construction as the earliest Period III walls recorded in Trench 85V and by Frere in 1958 (Trench 58II).

It is proposed to discuss the stratigraphy in Trench 85VA in relationship to the date of the initial construction of the baths before turning attention to the later alterations and robbing revealed in Trenches 85V and 85VA.

After the Period II wall, represented by a footing

in Trench 85VA (Context 29), had been constructed, soil built up against its northern side (Context 18) and it seems likely that this occurred before the Period III baths were commenced. Three distinct phases were observed in the initial construction of the baths but there seems no reason to believe that these represent anything other than a very short period of time. Stratigraphically, the earliest feature is the block of masonry at the north-west corner of the cold plunge bath (Figs. 9 & 6, Section PQ, Context 32) which in 1987 was found to continue westwards (see below). It is of greensand blocks in buff mortar and was built in a foundation trench (Context 30) cut through the Period I pit (Context 31) and Period II occupation (Contexts 12 & 13). The upcast from the cutting of its foundation trench is probably the layer of redeposited greensand on its north side (Context 11) though their precise relationship was destroyed by a comparatively modern pit which was probably dug in the late 19th century or later (Context 14). After a short period of time during which layers were deposited containing occupation debris, including mortar, charcoal and pieces of tile (Contexts 10 & 23), the south wall of the south portico was constructed (Context 6) in a foundation trench with its upcast deposited as a fairly clean layer of greensand on its south side (Context 21).

Soon after this more occupation debris was deposited on the south side of this wall (Contexts 8 & 9), presumably to bring the level of the ground up to the level of the floor of the south portico. The Period II wall, represented by its footing (Context 29), was robbed and the robber trench filled with mortar, soil and greensand lumps (Contexts 17 & 28).

The north wall of the cold bath (Context 33) appears to have been trench-built through Contexts 8 and 9 at a later date and butted up against the block of masonry at the north-west corner of the cold plunge (Context 32). This was capped either at the same time or a little later by re-used roofing tiles and greensand lumps set in *opus signinum* (Context 34).

After the north wall of the bath and the wall of the south portico had been constructed a floor was laid in the corridor between the two, but no trace of this survives; indeed, the evidence provided by the excavation and Lysons' drawings is difficult to interpret. There can be little doubt but that the south wall of the portico was robbed to foundation level during the period of the life of the villa, like the Period II wall to the north (Context 29), but this robbing only appears to occur where the wall forms

BIGNOR 1985-88

THE BATHS: PERIOD III

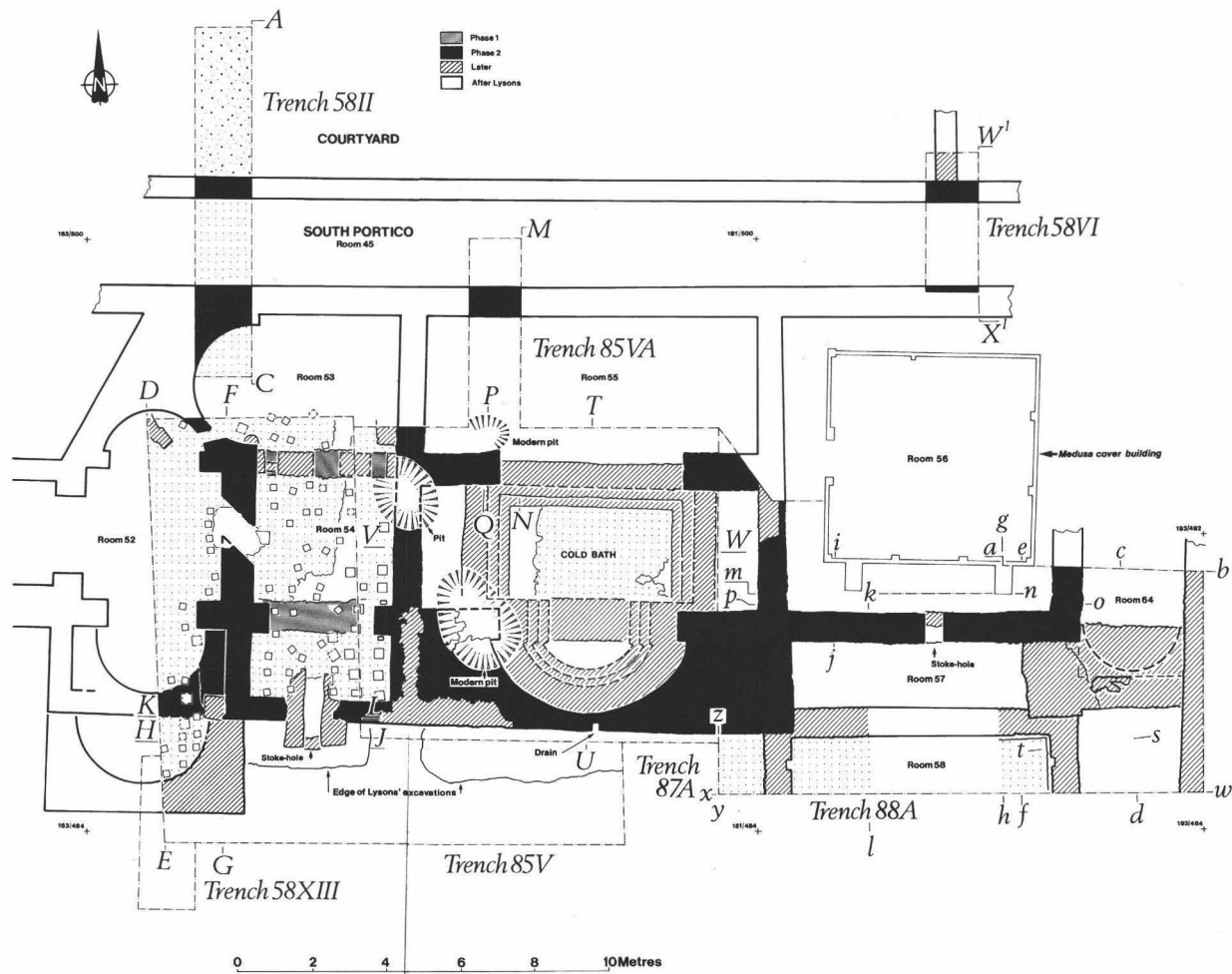


Fig. 9. Plan of the Baths: Period III.

BIGNOR 1985

THE BATHS: TRENCH V

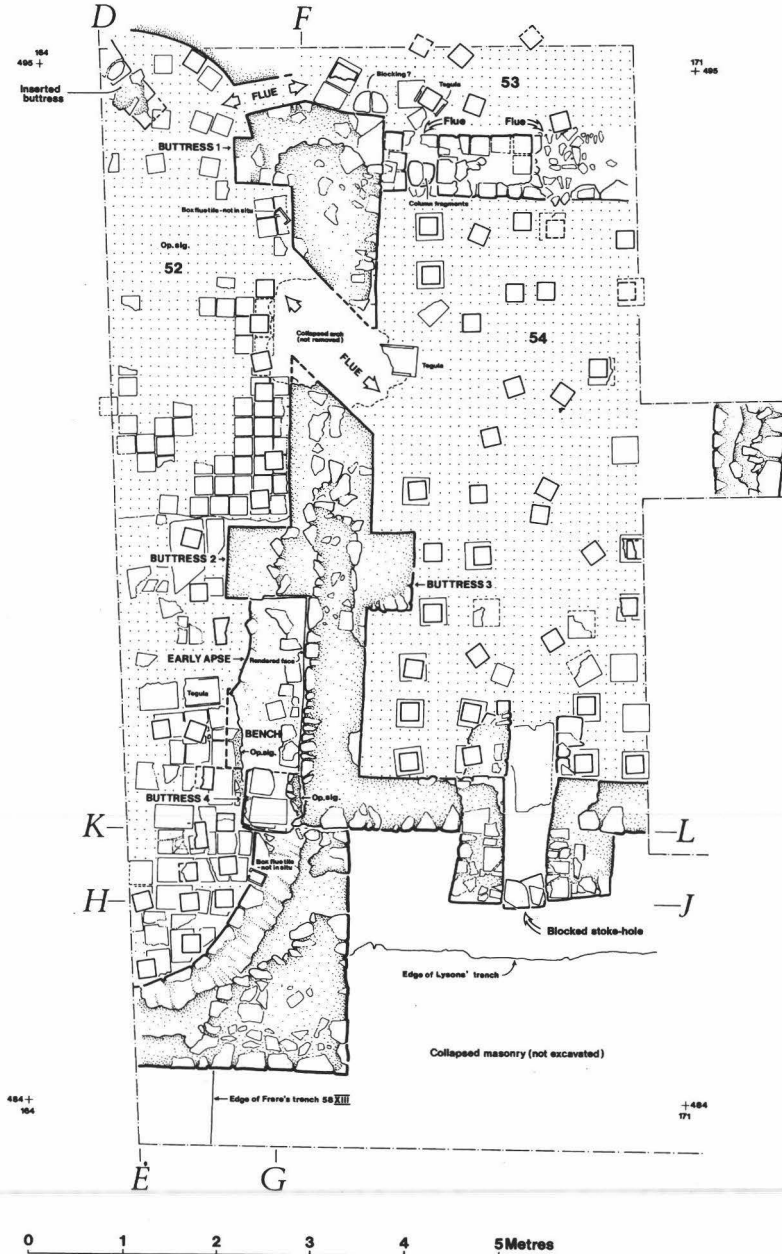
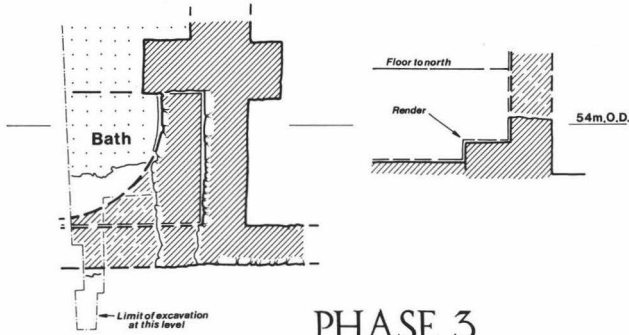


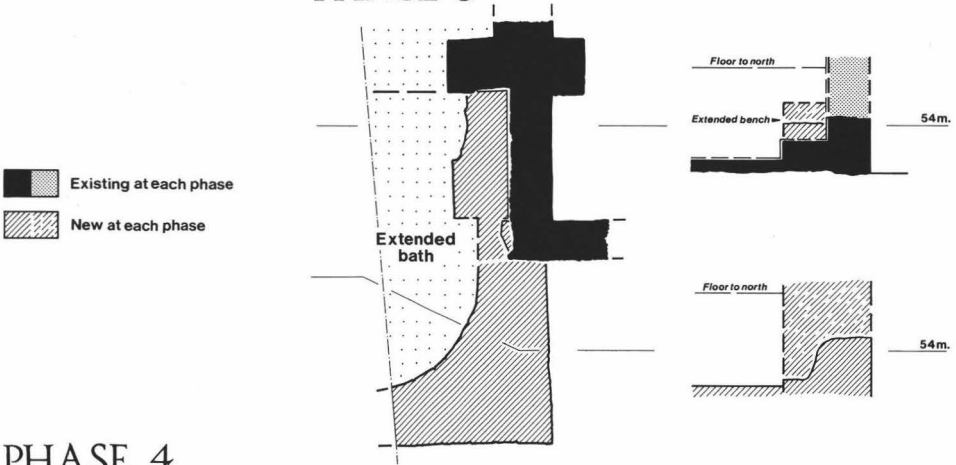
Fig. 10. Detailed plan of Trench 85V.

ROOM 52

PHASE 2



PHASE 3



PHASE 4

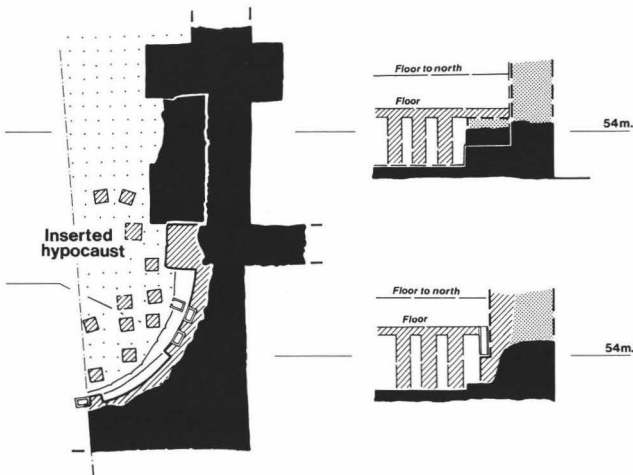


Fig. 11. Phased interpretation plans of Room 52.

the north side of Room 55. The robber trench was filled with a distinctive mixture of greensand lumps, mortar, and large quantities of painted wall plaster (Context 5). The robbing is sealed by layers of mortar and stone (Contexts 2, 3, 4, 7 & 16) which would appear to be make-up for a floor, but no trace of this floor, recorded as black and white chequerboard tiles by Lysons, nor of the wall shown by Lysons as forming the north boundary of Room 55 survive (Lysons 1819, pls. II, XXV, XXVI & XXIX). Further investigations where the wall abutted the corners of the adjoining rooms might clarify the matter further. It seems likely, however, that the north wall of Room 55 was removed but later replaced and the chequerboard floor added on its south side. Both the wall and the floor were recorded by Lysons, but have subsequently been removed and their former site backfilled with soil (Context 1).

Turning now to the evidence from Trench 85V, parts of three heated rooms (52, 53 & 54) were examined and at least four phases of construction and reconstruction were recorded (Fig. 10). It would appear that although later modifications had taken place, the walls of all three rooms were constructed at the same time of greensand blocks in a buff sandy mortar, with no trace of butt joints, and it is assumed that these works were contemporary with the construction of the south portico in Period III. A comparison of the levels observed in 1985 and those recorded by Frere indicates that on their northern side the baths were terraced into the natural slope of the top of the greensand which in this vicinity is dipping southwards.

The severe damage caused by collapse and robbing after Lysons had excavated the baths in 1813-15 has destroyed many features which had survived into the 19th century, but because of the standard of Lysons' records it has been possible to re-interpret several features recorded by him.

ROOM 52

In its original (Phase 2) form Room 52 was 3.6 m square, internally, with apsidal chambers at the north and south ends (Figs. 9, 10 & 11). On the east side of the main chamber was a flue built diagonally through the wall to link this with the adjoining Room 54. The flue had formerly carried a round-headed arch, built of tile and stone, but this has collapsed since 1815. The remains were not removed during the re-excavation, but the flue appears to be contemporary with the wall in which

it is built. Another flue led from the apse at the north end of the room into Room 53 and again this appeared to be contemporary with the main structure. The floor of the room and that of the apse at the north end was of regularly laid *bessales* tiles, varying from 195 mm to 210 mm square, on a bed of *opus signinum* over a make-up of greensand lumps and pieces of tile in a mortar matrix (Fig. 5, Section DE, Contexts 9 & 10). The floor supported a number of *pilae* columns built of tiles of the same size as those used in the floor. On the north side of the apse was an inserted buttress feature, built mainly of re-used tiles, which had evidently been added to support the hypocaust floor (Fig. 11, Phase 4). No trace of the floor which was formerly supported on the *pilae* columns and buttress survived, but fragments of it, including thresholds into adjoining rooms, were recorded by Lysons (1819, pls. II, XXV, XXVI, XXX & XXXI; see Fig. 12, Elevation FG).

The structural sequence at the south end of this room is more complex and three main phases of construction and alteration were recorded (Figs. 10 & 11). In its earliest (Phase 2) form the south end of Room 52 had terminated in an apse, provisionally interpreted as a bath with adjoining bench, but without a hypocaust underneath (Figs. 10 & 12, Elevation FG). This had been partially cut away and rebuilt at a later date, but sufficient evidence survived to reconstruct it in detail. The bench, which had probably existed on either side of the bath, was lined, like the bath itself, with a mortared render and was raised only about 300 mm above the floor of the bath. The rendered face continued up the back and along the side of the bench. The floor of the bath would have been about 1.3 m below the level of the floor recorded by Lysons in the northern part of this room, but no evidence was preserved to show how the water was introduced into the bath nor how it was retained on its north side and prevented from flowing into the hypocaust system.

At a later date (Phase 3) the bath at the south end of Room 52 was extended by the addition of an apsidal-ended chamber on the south side of the room. It was constructed of greensand blocks in a distinctive bright yellow mortar, but on the inner face only the lowest course of stonework survived to indicate its former line. The drains noted by Frere in 1958 may have served to remove water from it and its predecessor (Frere 1982, 172, Trench 58 XIII).

Later still the apse was modified to carry a hypocaust system (Phase 4). The physical evidence

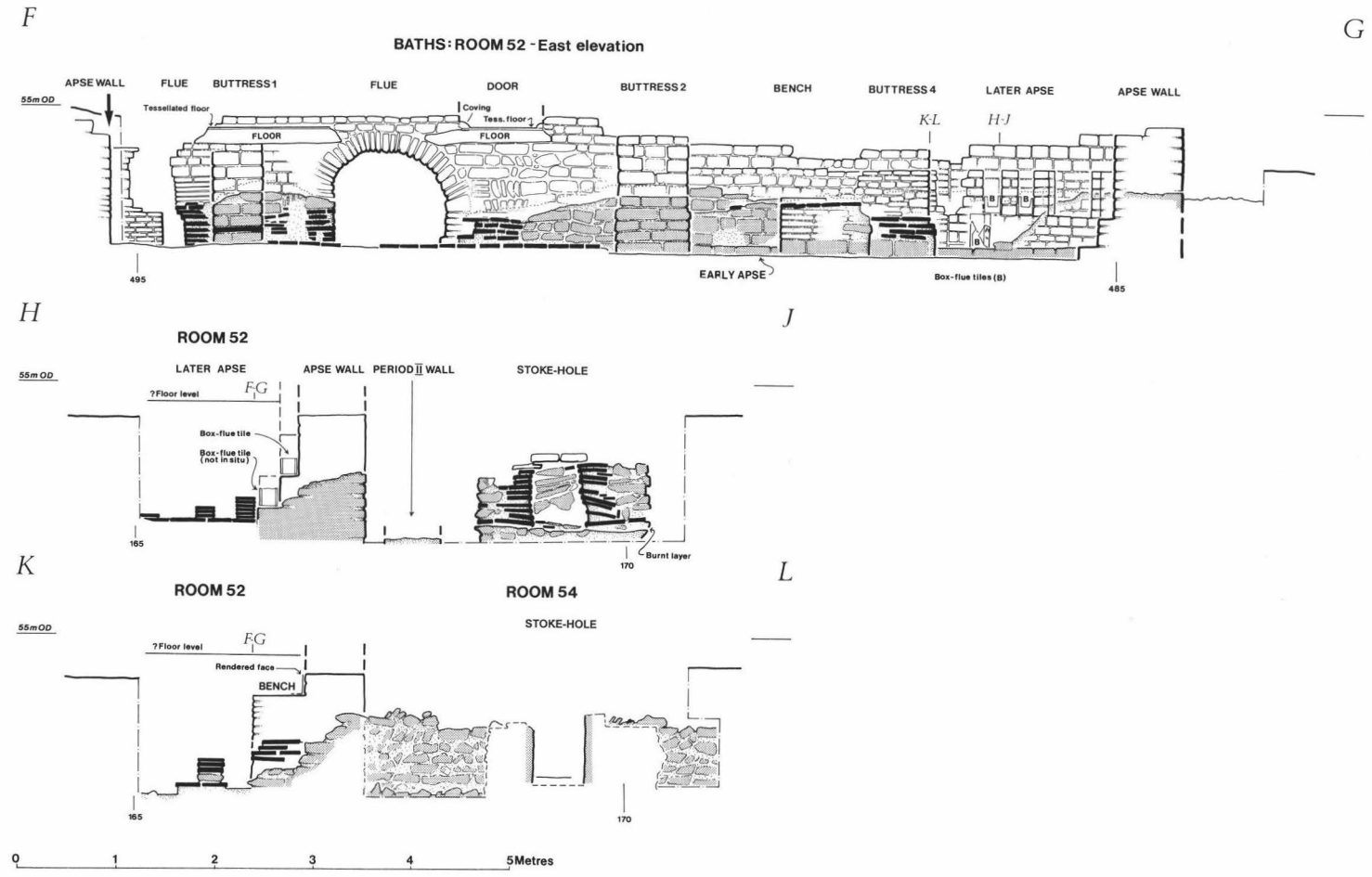


Fig. 12. Trench 85V, Elevations FG (partly after Lysons 1819), HJ and KL.

for this has mostly been destroyed and the interpretation is almost entirely based on a reconsideration of the information recorded by Lysons in his plan and elevation drawing which are partially reproduced here (Lysons 1819, pl. XXXI; Figs. 10 & 12, Elevation FG). The inner face of the apse was rebuilt to incorporate box-flue tiles. A buttress of re-used stone slabs and tiles was constructed at the south end of the former bench, and a floor was inserted above the hypocaust supported on the bench, which had been heightened using a mixture of re-used tiles, including parts of two voussoir box-flue tiles, and greensand blocks. *Pilae* columns were built of re-used tiles, including box-flue tiles, and stone.

ROOM 53

The floor in Room 53 had probably been relaid at least once and the flues into the adjoining Room 54 were probably inserted (*see* below). At a late date (Phase 5) these flues and that into Room 52 were blocked — in the former case by two fragments of stone column — in the latter by greensand blocks (Figs. 9, 10 & 13). A spread of greensand lumps at the south-east corner appears to be make-up for a floor.

ROOM 54

Room 54 measured 6 m by 3.6 m internally and had been modified on several occasions (Figs. 9, 10 & 13). Immediately over and cutting through the Period I and II features were two east–west footings of greensand lumps in a foundation trench — one forming the north side of the room, the other dividing the room south of the flue into Room 52. Stratigraphically they appear to be contemporary with the footings of the west wall of the room and it is assumed that they were either constructed at the same time as the remainder of the Period III baths and never carried walls (Phase 2), or that they survived from an earlier phase of construction (Phase 1 — *see* discussion below). A spread of greensand lumps on the east side of the room appears to be make-up for a floor and both this and the southernmost wall footing were overlaid by what remains of the floor (Fig. 10).

At the north end there was evidence to indicate the former existence of three flues into Room 53. These were constructed of floor tiles and greensand blocks over the top of the east–west footing which forms the north side of the room. The jambs of the end flues were not bonded into the adjoining walls

of the room which suggests that they were additions.

Little attempt appears to have been made to provide a floor to the hypocaust system — the pre-existing structures appear to have been levelled, the room terraced into the hill, and a thin patchy layer of mortar laid down. The *pilae* columns of the hypocaust system were laid directly on the patchy mortar floor, each column comprising a base tile or *pedalis*, measuring from 275 mm to 290 mm square, supporting a pillar of tiles or *bessales*, measuring 195 mm to 210 mm square.

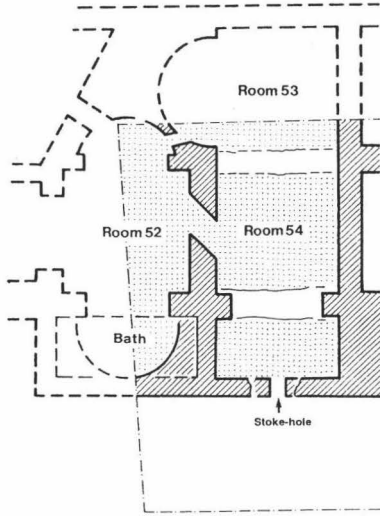
At the south end of the room was a stoke-hole which appears to have been modified several times (Figs. 9, 10 & 13). In its original (Phase 2) form it was probably little more than an opening through the south wall (Fig. 12, Elevation KL) served directly from a furnace on its south side, the remains of which survived as a burnt layer beneath the later wing walls (Fig. 12, Elevation HJ). Wing walls were added to the external elevation, perhaps to support a hot water tank (Phase 4a). These were constructed of stone and re-used tiles, including *tegulae*, set in a buff mortar, and were partially inserted into the original wall of the room which had been cut back to accommodate them. Later still wing walls were added to the internal elevations, incorporating re-used tiles and pre-existing *pilae* columns, and a large slab of stone was inserted as a new floor to the stoke-hole (Phase 4b).

In its latest phase the stoke-hole was blocked completely with lumps and slabs of stone in a buff mortar (Phase 5). It seems likely that the blocking was undertaken at the same time as the flues were sealed off in the north-west corner of this room; at the south-west corner of Room 53; and between Rooms 50 and 52 (Lysons 1819, pl. XXVI).

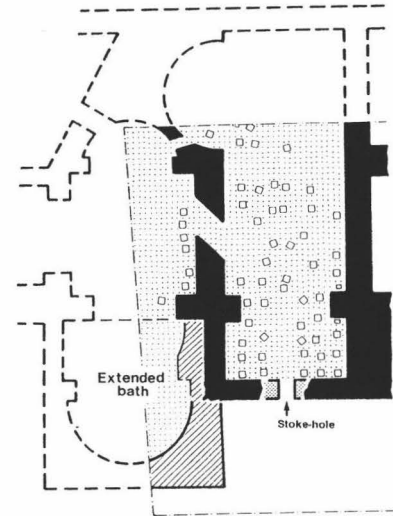
THE COLD PLUNGE — ROOM 55 (Trenches 87A & 88A) A trench (87A) measuring 9.5 m east–west by 8.5 m was laid out over the area of the cold plunge so as to link with the trenches dug in 1985 (85V & 85VA; Fig. 14). The former repairs, made in a very distinct cement-based pink mortar by Winbolt, were carefully removed. The exposed features, which included several not noted either by Lysons or Winbolt, were cleaned and recorded, but excavation was not total and natural bedrock was revealed only in two exposures (Fig. 15, Section TU). Two large undated, but probably fairly modern, pits near the south-west and north-west corners of the trench had destroyed crucial stratigraphic evidence, but sufficient

THE BATHS: ROOMS 52-54

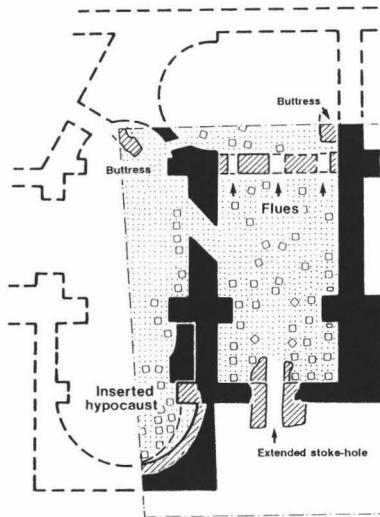
PHASE 2



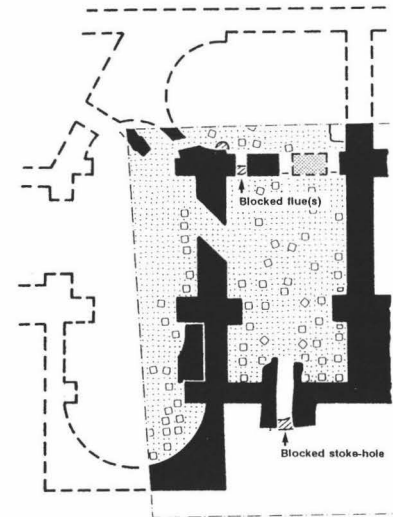
PHASE 3



PHASE 4



PHASE 5




 New at each phase

Fig. 13. Phased interpretation plans of Rooms 52-54.

BIGNOR 1987

THE BATHS: TRENCH 87A

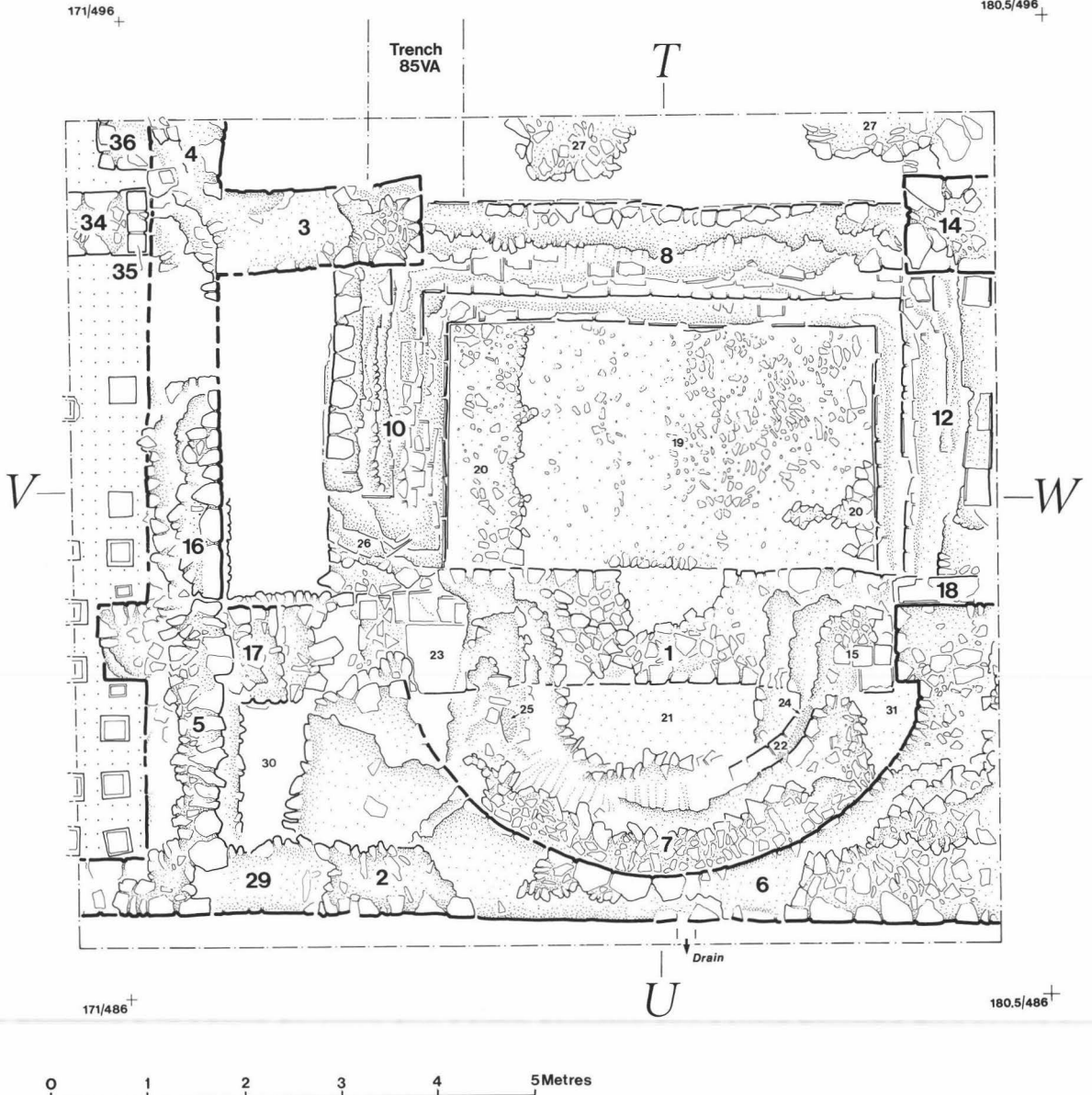
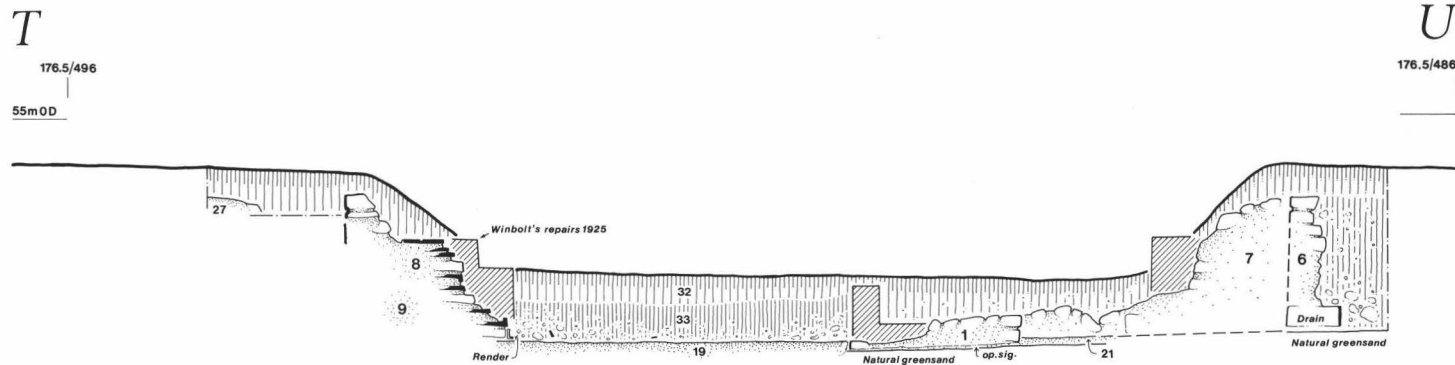


Fig. 14. Detailed plan of Trench 87A.



INTERPRETATION:

55m OD

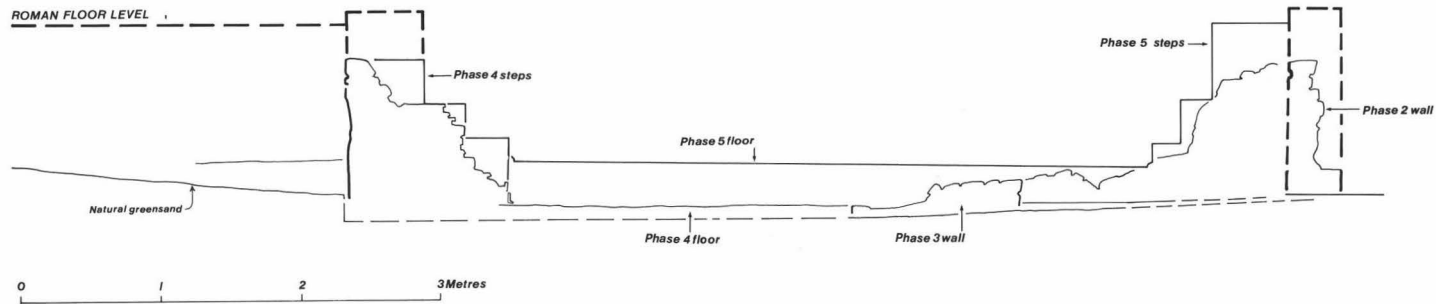


Fig. 15. Trench 85V, Section TU (with interpretation).

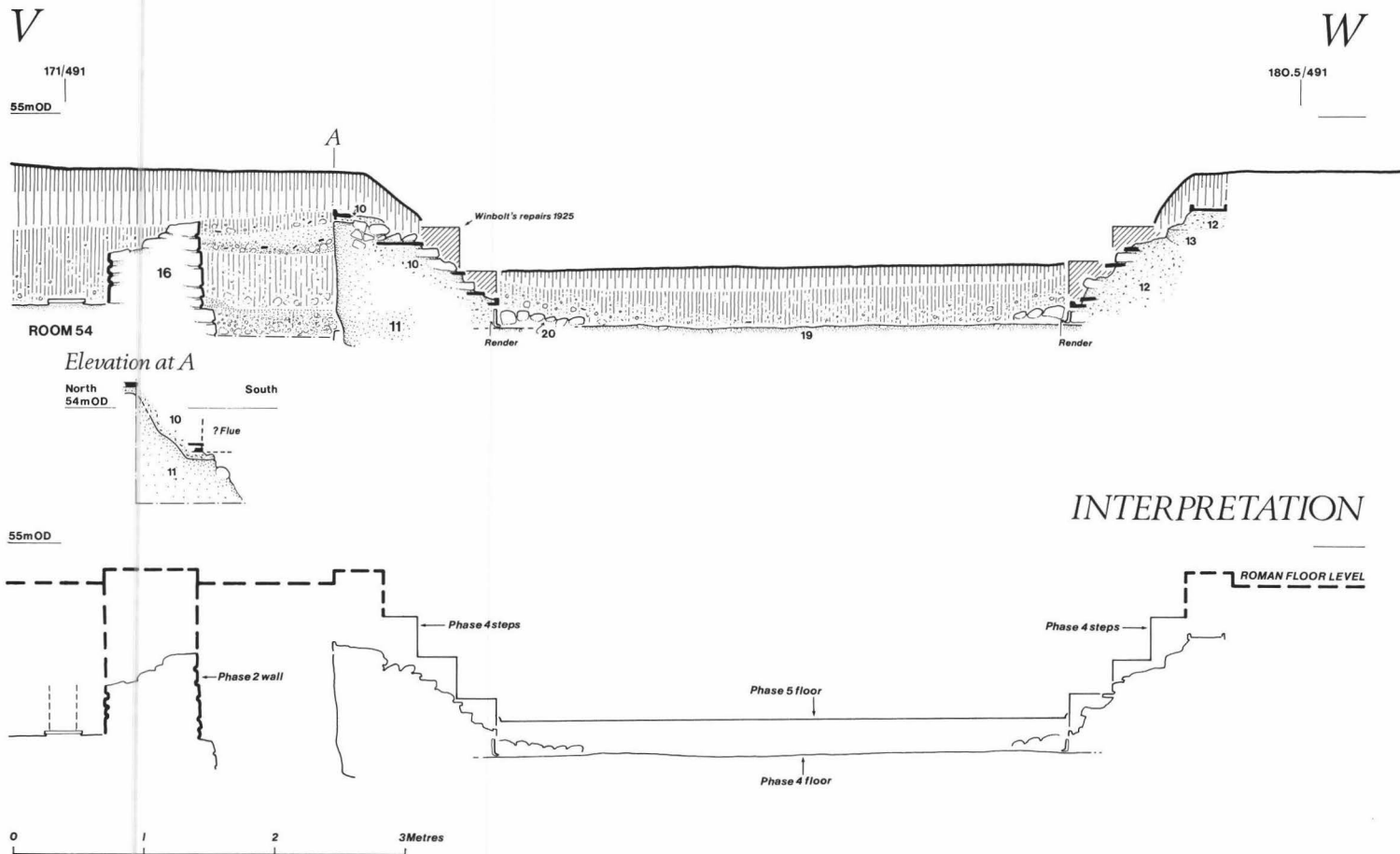


Fig. 16. Trench 85V, Section VW (with interpretation).

survived to provide a probable chronology for the construction and alterations to this room (Fig. 17).

It is clear from the excavation that Winbolt's reconstruction of the steps of the bath had been inconsistent with the structural remains and Lysons' drawings. The remains were consolidated and then reconstructed to Roman floor levels in 1988 (see Appendix 1).

Four principal phases of construction and alteration can be determined during this period (Fig. 17). The earliest (Phase 2) appears to have been contemporary with the building of Rooms 52, 53 and 54 to the west and comprised the remains of a large rectangular room containing four buttress-like features which divided it into three chambers — two rectangular ones to the north and a semi-circular one in the form of an apse to the south (Fig. 14, Walls numbered 3-6, 14, 16 & 17). These were all constructed of regular courses of greensand blocks laid in a creamy-buff mortar on slightly offset footings at about 53.4 m O.D. In the centre of the apse, at the level of the internal mortar floor (Context 21) and the natural bedrock outside, was a small aperture which may have served as a drain, but apart from this there was no evidence to indicate the function of this room at this time.

The westernmost of the two buttress-like offsets to the apse was demolished in Phase 3 to make way for a substantial east-west wall, 1.2 m wide, built of greensand blocks and re-used tiles, including *pilae* and *tegulae*, set in a buff mortar (Contexts 1 & 18) and incorporating a large square block of sandstone (Context 23). The effect of the insertion was to divide off the southern part of the room as a separate unit, perhaps a semi-circular bath. The stratigraphic relationships are best seen at the east end where the inserted wall (Context 1) is butted up against the eastern buttress-like offset of the apse. Immediately below the wall was a thin context of *opus signinum* (Fig. 15, Section TU). At a subsequent date a floor of greensand lumps set in a yellow mortar was laid to the north of the inserted wall (Figs. 15 & 16, Sections TU & VW, Context 19). Since this did not extend to the north or west of the inserted steps (see below), it is provisionally assigned to Phase 4.

The next phase of construction, also assigned to Phase 4, comprised the insertion of walls in the centre of the room perhaps to provide a small cold plunge bath with access steps (Figs. 9, 14, 15 & 16, Sections TU & VW, and 17). This work seems to have been undertaken in two stages and it is not clear

whether these were contemporary or represent two distinct functional stages of use. The first stage appears to have been the insertion of north, east and west walls between the pre-existing buttress-like projections using lumps of greensand in a bright yellow mortar (Contexts 9, 11 & 13). These walls were then concealed by steps, leading down into the central area, which were built mostly of re-used *tegulae* set and rendered in a very distinctive *opus signinum* (Contexts 8, 10 & 12). At the south end of the west wall (Contexts 10 & 11) several tiles were found set at an angle to the line of the wall in *opus signinum* and they had the appearance of being the remains of the north side of a drain or flue (Fig. 14, Context 26). There was no other evidence to support this interpretation and it must for the present be concluded that their positioning was fortuitous.

The final phase of alteration within the room (Phase 5) comprised the partial demolition of the cross wall (Context 1) to bring the rectangular bath in the centre of the room and the semi-circular chamber at the south end into use as a single unit, and the insertion of steps into the semi-circular apse. The insertion involved the placing of a quantity of greensand lumps set in a buff mortar (Contexts 7 & 15) within the apse and the setting of steps in a buff mortar on this (Context 22). Two patches of *opus signinum* immediately above the line of the steps (Contexts 24 & 25) appear to indicate that this part of the bath was rendered like that to the north. At the same time a layer of hard chalk lumps (Context 20) was laid over the floor surface (Context 19) and this appears to have been part of an intention to raise the floor level in the bottom of the extended plunge bath. Judging by Lysons' drawings the floor level was raised by about 300 mm (Figs. 15 & 16). The new floor would have sealed the remains of earlier floors and wall footings.

Possibly at the same time or later the main apse wall (Context 6) appears to have been demolished to ground level and walls rebuilt to form at least the west and south walls of the southern part of the room (Contexts 2 & 5).

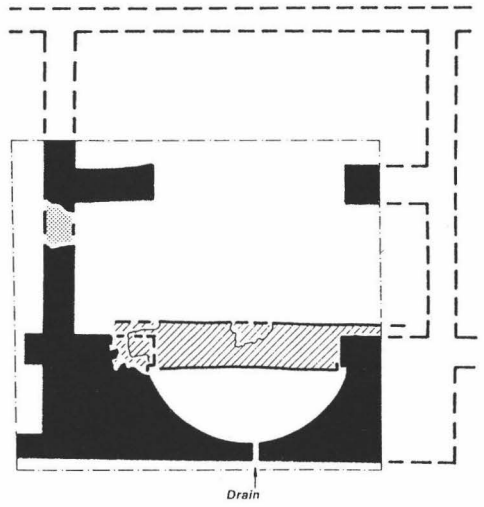
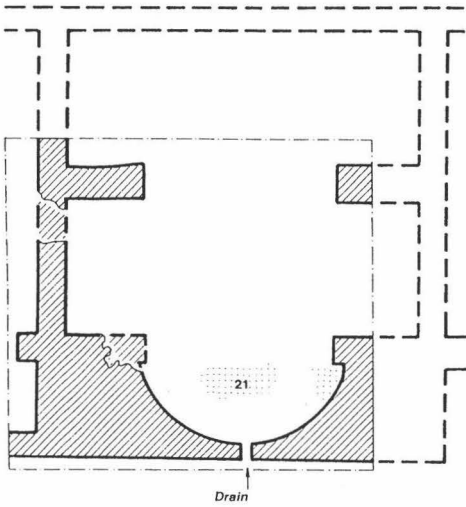
ROOM 56

The whole of the south wall and parts of the east and west walls of the room containing the Medusa mosaic were revealed (Figs. 9 & 18, Contexts 37, 39, 61 & 64) and these were seen to be contemporary with the initial construction of the cold plunge (Fig. 19, Phase 2). The south wall (Context 39) survived

ROOM 55: COLD PLUNGE

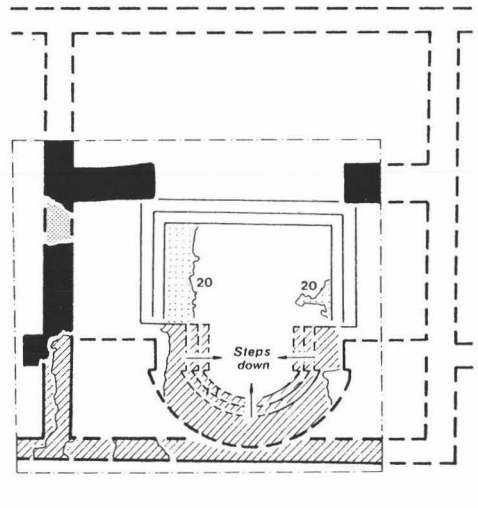
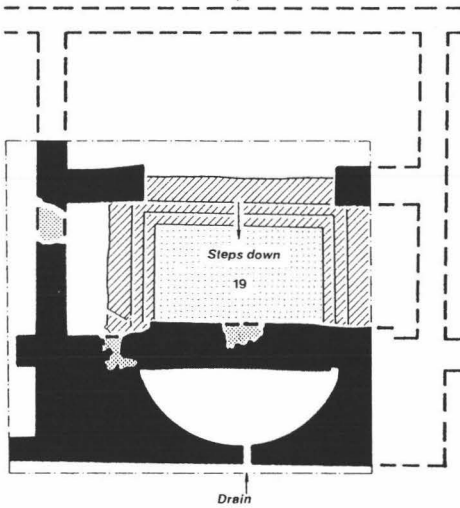
PHASE 2

PHASE 3



PHASE 4

PHASE 5





-  Existing at each phase
-  New at each phase

Fig. 17. Phased interpretation plans of Room 55: Cold Plunge.

up to two courses of greensand blocks, 750 mm wide, set on a slightly wider foundation comprising a single course of greensand slabs set on edge (Context 64). They had been laid in a shallow foundation trench which contained a certain amount of brown, clayey, soil (Context 80, Fig. 20, Section gh). In the centre were the remains of an opening or flue constructed of tiles which showed no signs of having been used as a stoke-hole (Fig. 7, Sections op & qr). Any trace of a furnace to the south had been destroyed by later additions and the opening had been blocked, probably when Room 58 was added in Phase 4.

This room is thought to have been the changing room or *apodyterium* of the baths but there appears to be some doubt as to whether it was heated. In his plan of the baths Lysons shows what appears to be a recess for a box-flue tile in the east wall (Lysons 1819, pl. XXVI) and this, taken with the evidence for a possible stoke-hole in the south wall, which Lysons describes as 'a fire-place which appeared never to have been used' (Lysons 1819, pl. XXVI), seems to suggest the former existence of a hypocaust system. A layer of greensand lumps and chippings (Figs. 7 & 20, Sections gh & mn, Contexts 98 & 111) appears to represent the make-up for a floor but no trace of an original floor was found in the area excavated. The distance from the bottom of the opening in the south wall to the present level of the top of the Medusa mosaic was found to be 1 m and, since there is no evidence to suggest that the latter was altered when the floor was re-laid in 1973, there seems to have been adequate space here for either a complete system of *pilae* columns or a pair of walls leading to a partial system under the centre of the room. However, no trace was seen of any evidence within the room to indicate the former existence of a heating system and the survival of an earlier wall and occupation debris suggests that none ever existed. The function of the opening in the south wall must, therefore, remain in doubt.

ROOM 57

The function of this particular space remains obscure. It measured only 6.5 m east-west by 1.7 m internally and was created when Room 58 was added in Phase 4. Room 58 was terraced into the slope of the hill so the construction of its north wall (Contexts 43 & 46) meant that the natural bedrock within the space which became Room 57 had to be removed up to a depth of 800 mm (Figs. 7 & 20, Sections ef, gh, and kl).

It is possible that the room was intended to contain a furnace for a hypocaust in Room 58, but the central portion of the south wall appears not to have been fully investigated by Lysons and no attempt was made in 1988 to determine whether it contained a stoke-hole.

ROOM 58

The function of this room has never been established though its extent was determined by Lysons. In his original plan (Lysons 1817) he shows it as two rooms, but in both his second and final plans it is shown as one (Lysons 1819, pls. III & XXVI; 1821, 176). If the latter were the case then it would have been one of the largest rooms in the villa. In his final plan Lysons also includes a break in the centre of the south wall, which might indicate the former existence of a stoke-hole, and recesses for box-flue tiles in the east and west walls (Lysons 1819, pl. XXVI).

Only a small part of the room was re-examined in 1988 and the results seem to indicate that it had not been fully explored by Lysons whose backfill was quite distinctive (Contexts 75 & 135). The room had been terraced into the slope of the hill by the removal of at least 800 mm of the natural bedrock — the north wall being set into a shallow foundation trench (Fig. 7, Section kl, Context 129). The walls were well constructed of greensand blocks in yellow mortar, the east and west walls having an internal offset 850 mm above their base at 53.8 m O.D., probably to carry an original floor on *pilae* columns. Immediately above this near the north-east and north-west corners were the remains of recesses for box-flue tiles.

The original hypocaust floor was represented by greensand lumps (Context 132) covered by a surface of yellow mortar (Figs. 7, 8 & 20, Sections gh, kl & wx, Contexts 79 & 131). Immediately above this was a layer containing large quantities of building material, including fragments of box-flue tile and *pilae* tiles bonded together, and this appears to represent the remains of a disturbed hypocaust system (Context 126). Above this was a layer of redeposited building material, probably representing the collapse of the walls (Context 133), into which a large pit had subsequently been dug (Figs. 7 & 8, Sections kl & wx, Context 125). The pit contained black soil, tile, bone, and pottery and this had the appearance of being a midden or refuse tip. The abandoned hypocaust system and the pit together suggest that Room 58 had fallen into disuse during

BIGNOR 1988

THE BATHS: TRENCH 88A

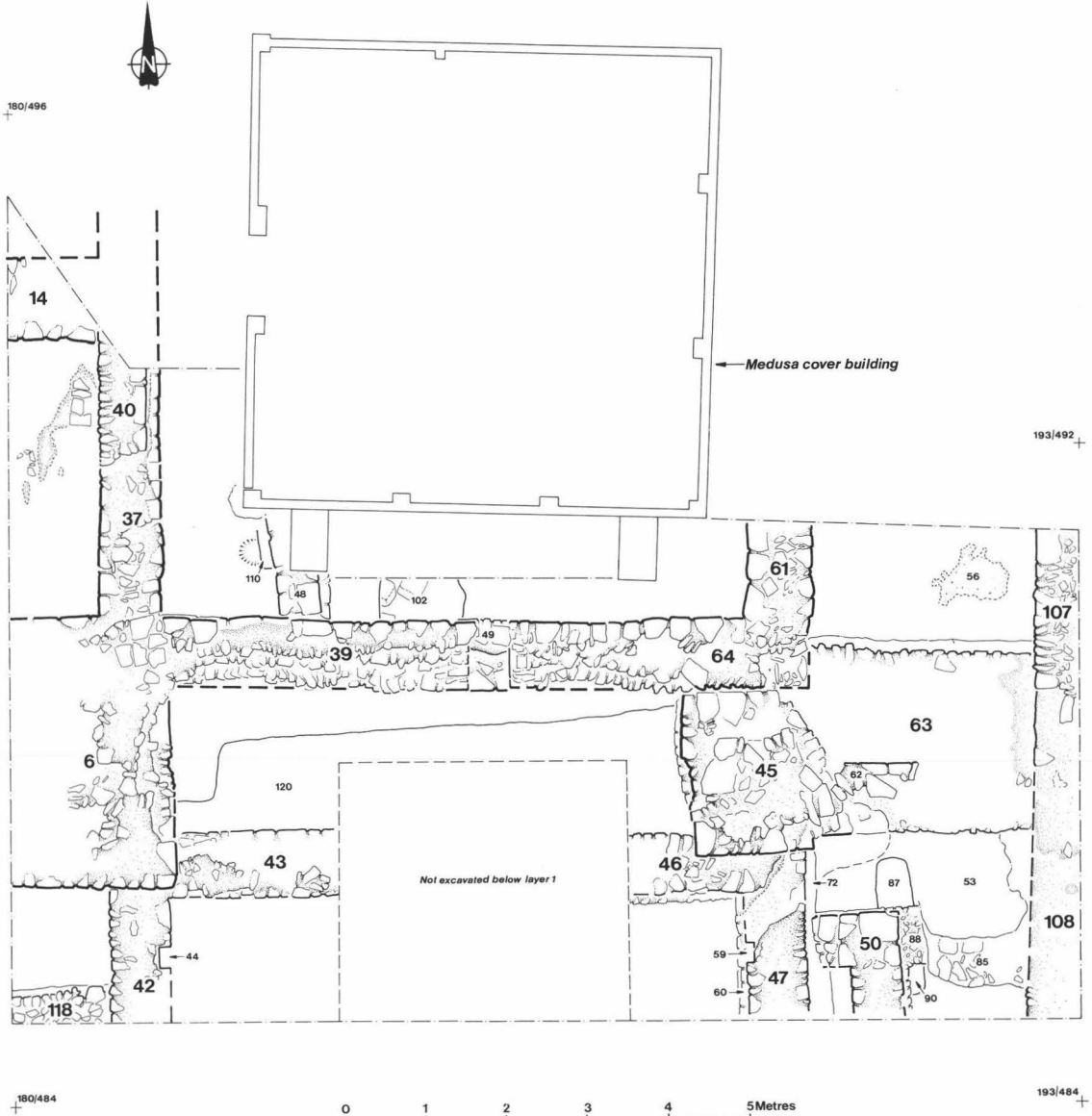
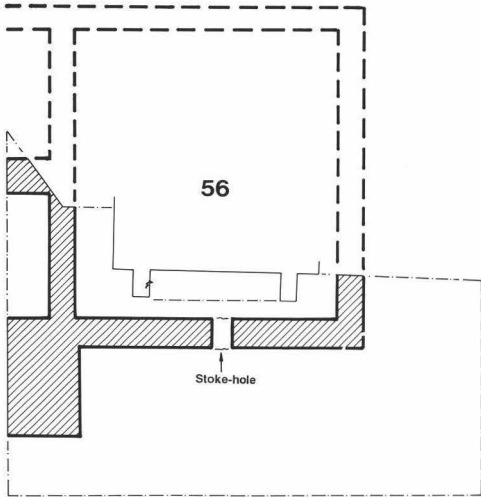


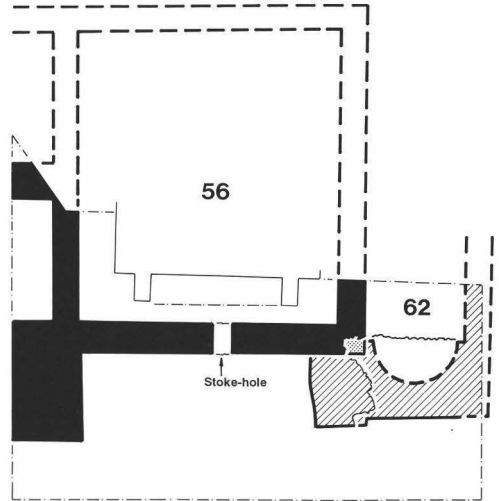
Fig. 18. Detailed plan of Trench 88A.

ROOMS 56-58 & 62

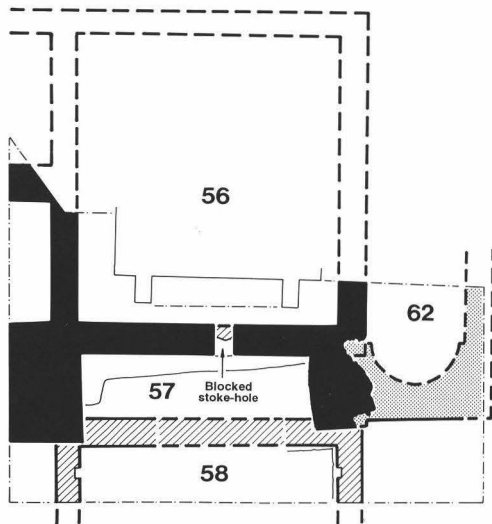
PHASE 2



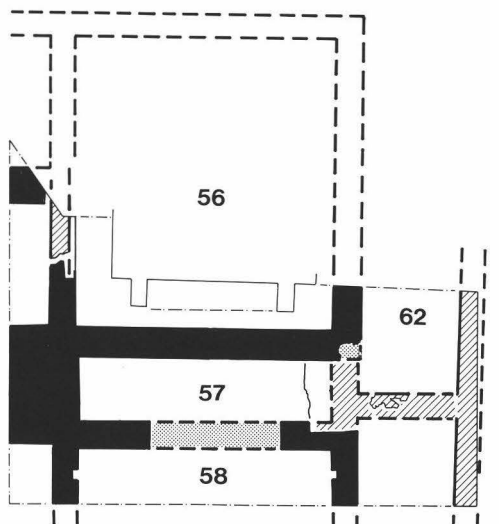
PHASE 3



PHASE 4



PHASE 5



Existing at each phase
New at each phase

Fig. 19. Phased interpretation plans of Rooms 56-8 and 62.

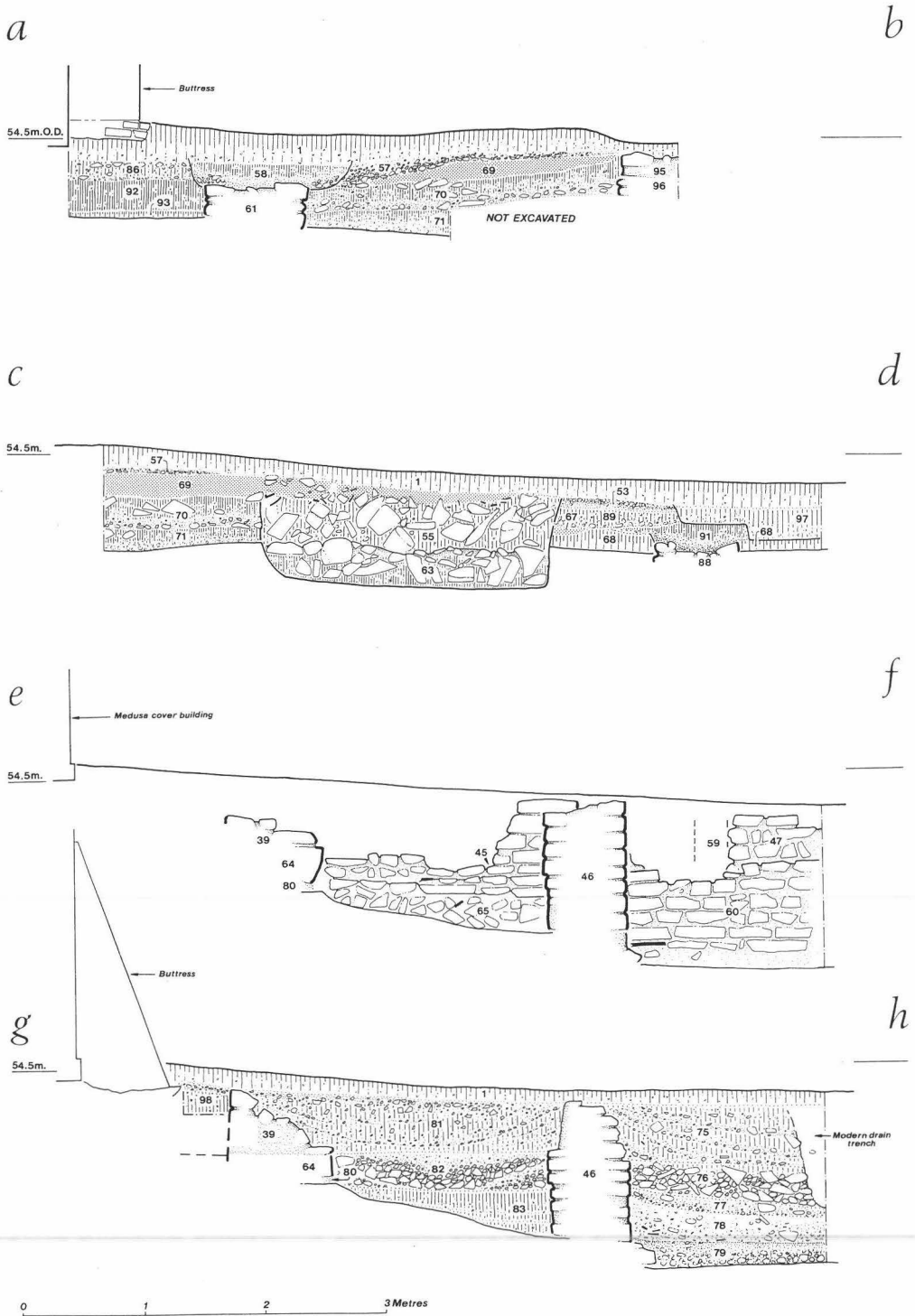


Fig. 20. Trench 88A, Sections ab, cd, and gh, and elevation ef.

the Roman period and probably during the life of the villa.

To the west of Room 58 and the south of Room 55 a floor surface was observed at 53.9 m O.D. It comprised a deposit of yellow mortar, up to 80 mm thick, with a very flat upper surface (Context 114) which extended right up to, and therefore post-dates, the adjoining walls on the north and east sides (Fig. 8, Sections wx & yz). It did not survive further west in Trench 87A and must have been destroyed in that area by the 19th-century excavations. It lies outside the known extent of the rooms of the baths and is assumed, in the absence of any other information, to be the floor of a yard.

ROOM 62

The addition of a substantial masonry structure immediately outside the south-east corner of Room 56 in Phase 3, which probably represents the southern end of an east corridor, indicates that either before or at this stage the building was converted into a courtyard villa (Frere's Period IIIB or Black's Periods III (ii) or (iii)). A foundation trench 2.3 m wide was cut through occupation layers and into the natural bedrock up to a depth of 700 mm to carry a foundation of greensand slabs set on edge with a small amount of buff-coloured mortar on top (Figs. 9, 18, 19 & 20, Section cd, Context 63). The foundation originally carried a well-built wall mostly of greensand blocks set in buff-coloured mortar (Context 45) and this wall incorporated a fragment of a re-used stone column at the south-west corner. A small step, about 100 mm deep, in the line of its south face must originally have had the appearance of a shallow, pilaster-type buttress.

The wall was partially robbed at a later stage and the ground levelled, but several pieces of greensand on its surviving north-east side were laid in such a way as to suggest that they may originally have formed part of a semi-circular apse. If this were the case then it would suggest that the south end of the east corridor terminated in a form which mirrored the apse found at the north end of the same corridor by Lysons (1819, pl. III). This was re-excavated in 1985 (see Part 2, Trench 85W) and found to have an internal diameter of 2.6 m. Its footings, however, were not examined, so it was not possible to determine whether it was built on a wide foundation like the one at the south end. The construction of such a massive foundation at the south end might have been necessary to support the structure over

previously disturbed soil. Further examination of the area to the east of that excavated in 1988 would clarify this interpretation, but for the present it is assumed that the wall turned northwards just beyond the edge of the trench excavated in 1988 to form the east wall of the corridor.

The footings of the south wall of Room 62 (Context 65) were exposed when Rooms 57 and 58 had been added to the south of Room 56 in Phase 4 (Fig. 20, Section ef) and then a substantial part of the wall and its footings (Contexts 45 & 65) were removed when Room 62 was extended south in Phase 5. A new north–south wall (Contexts 107 & 108) was constructed to the east of Rooms 57 and 58 and the robber trench of the apse wall was backfilled with large pieces of greensand with a little mortar and soil. This was sealed by a layer of redeposited clean, clayey, greensand (Context 69). Over this were several blocks of greensand set in a buff-coloured mortar which seem to represent the remains of the north side of an east–west wall or step linking walls 107 and 108 with the remains of the apse (Context 45). Patches of chalk (Contexts 53, 56 & 57) appear to represent the remains of floor surfaces.

PERIOD III — INTERPRETATION

Excavations in 1985, 1987 and 1988 together with a reappraisal of earlier excavations by Lysons (1819; 1821) and Frere (1982, 170–74, Trenches 58II & 58IV) allow a very tentative reconstruction of the phasing of the baths complex (Rooms 50–57, Fig. 21).

It is clear that from the earliest phase of construction the baths were terraced into the slope of the hill by at least 800 mm on the north side. This probably means that the destruction of earlier phases of construction by later development was inevitable and that the later structures were built up from levels considerably below the original ground level.

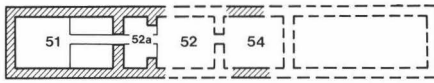
PHASE 1





A major anomaly in the plan recovered by Lysons is the existence of two substantial *praeefurnia* (Rooms 50 & 51) and it is unlikely that both functioned at the same time.

Excavations in 1985 revealed that the flue between Rooms 52 and 54 was aligned not on the stoke-hole in Room 51 but on that in Room 50, and two previously unrecorded wall-footings were found in Room 54 on the same east–west alignment as the north and south walls of Rooms 51 and 55a. This

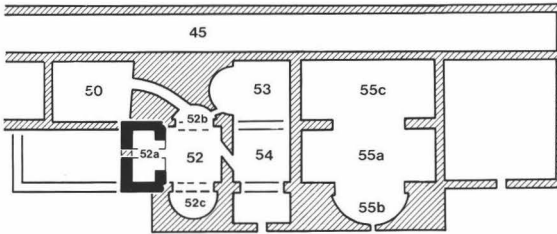
BIGNOR: THE BATHS

PHASE 1

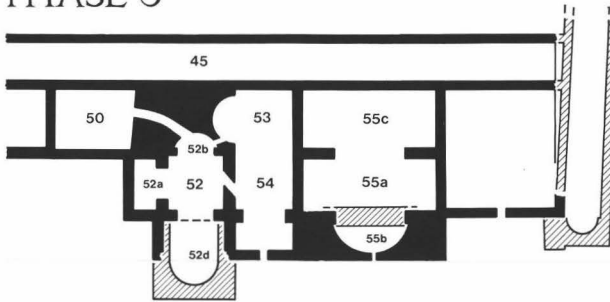


-  Surviving from previous phase
-  New at this phase
-  Abandoned as part of the baths complex in this phase
-  Late blocking of flues (Phase 5)

PHASE 2



PHASE 3



PHASES 4-5

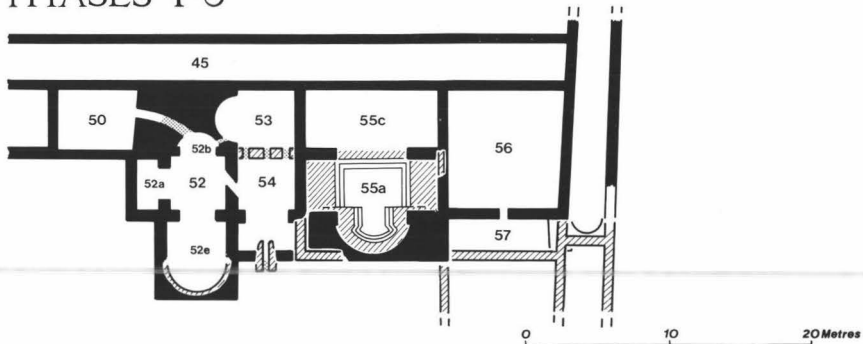


Fig. 21. Phased reconstruction plans of the Baths.

may indicate that the first bath-house on this part of the site had rooms in a linear arrangement and that Room 51 was its *praefurnium*. The *alveus* or hot bath will have been within the rectangular alcove, adjacent to Room 51 (52a on Fig. 18), and Lysons' plans (1819, pls. 26 & 31) show the flue continuing through this alcove between what must have been solid supports for the bath.

In 1985 it was noted that the two footings within Room 54 and those of the west wall seemed to be contemporary and it can be assumed that the latter divided the *caldarium* from the *tepidarium*. A flue aligned on the stoke-hole of Room 51 would have been completely destroyed by the creation of the diagonal flue in Phase 2. Further confirmation of the existence of this phase of construction could possibly be obtained by the removal, at some future date, of the floor in Room 52, to determine whether the wall footings found to the east in Room 54 continued beneath it.

At present, it is uncertain whether this phase of the bath-house was freestanding or joined to the south range of the villa and the absence of any obvious features belonging to this phase under Room 55 makes interpretation of the east end difficult. It is possible, however, that it was partially built of timber, though a cold plunge, if present, would have required a stone surround.

PHASE 2

The second major phase of the baths sees their true integration with the south wing of the villa. Frere (1982, 172, Trench 59IV) found that the flue from Room 51 into Room 52a had been blocked and it seems likely that at this phase Room 50 replaced Room 51 as the main *praefurnium*. The apsidal recess adjacent to this new *praefurnium* (Room 52b) probably contained a hot-bath; 52a may still have done so since hot water could have been piped from a tank above the furnace in the adjacent room. The recess to the south (52c), with its apsidal bench, has analogies in many bath buildings where a pair of apses face one another on opposite sides of a *caldarium*, but its function is not entirely clear since it did not have a hypocaust at this time and there was no solid division on its north side. If it had no hypocaust then it can only have been a cold bath, but if this were so then there should have been a solid division between it and the hypocaust system to the north. Hence the only possibility seems to be that it was some form of *labrum* or cold water basin

retained on its north side by a solid tile partition that was later removed.

The function of Room 55 is also problematical at this phase since, apart from the drain on the south side, no evidence has been revealed, for example in the form of a waterproof lining, to demonstrate that it contained a cold bath as it did at a later date. It was a large room with walls built up from the same level as those of the hypocaust system in the room to the west, but 900 mm below the level of the floor in the adjoining room to the east. If it was not a sunken feature, such as a hypocaust system or a bath, then the quality of construction in the lower levels of the walls, which would have functioned merely as below-ground-level footings at this stage, may be due to the fact that the floor level had to be built up from levels previously terraced into the slope of the hill to accommodate the east end of the Phase 1 complex. No evidence for a floor was seen beyond the limits of the steps inserted in Phase 4, but this could have been destroyed at a later date.

Although doubts about the precise functions of Rooms 52c, 55 and 56 in this phase hinder a complete interpretation of the baths, the sequence of *praefurnium* (50), *caldarium* (52), and *tepidaria* (53 & 54) cannot be doubted. For completion this sequence demands a *frigidarium*, probably with a cold bath, in the position occupied by Rooms 55a-c. There is no doubt that from Phase 3 onwards this was the function of these rooms, and the drain from 55b suggests that it was so in Phase 2 also. The apsidal recess opening off Room 53, the rectangular recess on the south side of Room 54, and the three recesses connecting with Room 52 will probably have contained baths or *labra* or facilities for oiling or massage. In the Younger Pliny (*Epistulae* II.17.11) *unctorium*, and in Sidonius Apollinaris (*Epistulae* II.2) *ungentarium*, are used in place of *tepidarium* in descriptions of bath-suites and presumably arose from the use of oils and ointments by bathers in this room. The uncertainty concerning whether or not Room 56 had a hypocaust prevents its firm identification as a *laconium*, though it can be said that its position is comparable with one. If it had no hypocaust, it may have functioned in Phase 2 as an *apodyterium*, as it did later.

PHASES 3 & 4

A number of subsequent alterations and additions have been observed, but as mentioned above, it has not always been possible to correlate them between

rooms or trenches. One possible means of identifying phases of construction might be to use the sources of sand used in the mortars. For example, the extended apse in Room 52, the first phase of the insertion of steps into Room 55, and the walls of Room 58 are all constructed using a bright yellow mortar mix and this might be taken to indicate one stage of building works. However, this particular method has not been employed here since it cannot be assumed to provide conclusive evidence, though there seems no reason in this particular case why the three features noted could not have been constructed at about the same time. For the present, however, partly for reasons of simplicity, modifications made after Phase 2 and before the blocking of the stoke-holes in Phase 5 are assigned to Phases 3 and 4 within the room or trench in which they were found.

By the end of Phase 4 the arrangement of rooms was probably as follows. The baths were entered at the north side of the Medusa Room (56) which served as a changing room or *apodyterium*. Immediately to the west was a large room containing a cold plunge or *frigidarium* (55a). This was off-centre to allow a way through on its north side along a passage paved with black and white tiles (55c), giving access to the first warm room or *tepidarium* (53). From here access could be gained to the hot room or *caldarium* (52), which contained at least one hot bath or *alveus* (52a), and a second warm room (54) before entering an elaborate cold bath (55a) prior to re-robing.

PHASE 5

The stoke-holes at the south end of Room 54 and between Rooms 52 and 52b together with at least one of the flues between Rooms 53 and 54 were blocked, indicating the cessation of elaborate bathing activities at the villa. At some stage the hypocaust system in Room 58, and possibly the room itself, was abandoned and the space was used for refuse disposal.

PERIOD III — DATING

The dating evidence for the building of the north wall of the cold bath is supplied in Trench 85VA by finds in the redeposited greensand from its construction trench (Context 11) and the soil containing occupation debris cut by it (Contexts 12 & 13). The dating of the building of the south wall of the south portico (Room 45) is supplied in Trench

85VA by finds from greensand redeposited during construction (Context 21) and soil containing occupation debris sealed by it (Contexts 10 & 23). A date for the robbing of the Period II wall in Trench 85VA would have been supplied by finds contained within the soil layer cut by the robber trench (Context 18) and from the fill of the robber trench itself, but no finds were recovered. Soil deposited against the south wall of the south portico in Trench 85VA before it was robbed help to date its period of use (Contexts 8 & 9). These layers, like those beneath them, were probably intended to make up the ground level for the construction of a floor and therefore give an indication of the date of construction of that wall.

A 2nd-century date is suggested for much of this material (*see* Part 3) and it either derives from occupation layers cut by the foundations or is residual. A date for the construction of the baths towards the end of the 3rd century, or perhaps even later, is suggested by the material associated with the Period II masonry structures sealed beneath them, which have already been discussed above.

A date for the abandonment of Room 58 is provided by a collection of pottery found in what appears to be a refuse deposit (Trench 88A, Context 125) and this seems not to have been disturbed by the 19th-century excavations. The diagnostic sherds date from *c.* 220 to the late 4th century AD (*see* Part 3, Pottery Catalogue Nos. 54-9). This was sealed by material which appears to be Lysons' backfill (Trench 88A, Context 75) and this contained mostly 3rd- and 4th-century material (Part 3, Nos. 44-53). However, a general date range of mid- to late 4th century is suggested for the assemblage with a few residual pieces.

PART 2: THE COURTYARD VILLA AND FARMYARD

By Fred Aldsworth & David Rudling

INTRODUCTION

The excavations in 1985 and 1986 were directed by James Kenny and the authors, and were undertaken by students from the Institute of Archaeology, University of London, and members of a Manpower Services Commission Job Creation Scheme coordinated by West Sussex County Council.

In 1985 Scheduled Monument Consent was obtained to undertake trial excavations in four areas,

and work was commenced at the south-east corner of the outer enclosure or farmyard. It soon became clear, however, that Lysons' plan was inaccurate and the proposed programme was modified to ensure that the limits of the villa identified in the 19th century were re-established in two seasons of excavations — 1985 and 1986.

The results are described in eight areas (Fig. 2).

AREA 1: THE NORTH-EAST CORNER OF THE COURTYARD VILLA AND AISLED BUILDING 1 —

Trenches 85L, 85W & 85Z (Figs. 22-6)

This area was investigated to locate the north wall of the farmyard in the vicinity of Room 21, to examine the extent and condition of the archaeological remains of this area, and to test the hypothesis put forward by Ernest Black (1983, 96) that 'Rooms 18 and 65 formed parts of a large rectangular building'.

Trench 85L, which was a maximum of 11.6 m long and 5.1 m wide (Figs. 22 & 23, Section S-T-U), failed to locate the north wall of the farmyard, subsequently Trench SA (*see below*) did locate the wall approximately 10 m to the north of Trench 85L. This and other discoveries of parts of this wall in Trenches 85G, 85P, 85SB and 1986 D, demonstrate that the northern wall to the villa is on a different

alignment (i.e. north-west-south-east) to that shown by Lysons and Frere (1983, fig. 1). The south-western quarter of Trench 85L contained traces of two walls (Contexts 4 & 9) of Room 21. The north wall (Context 4) of Room 21, which was located at a depth of 220 mm, is 900 mm wide and made of greensand blocks. The east wall (Context 9) of Room 21, also made of greensand blocks, is only very poorly preserved. A large part of Context 9 had been destroyed by the excavation of an approximately east-west orientated ditch or trench (Context 8; fill: Context 7) which yielded some modern metalwork. Partly above and to the north of the north-east corner of Room 21 was a concentration (Context 2) of tightly packed greensand with occasional pieces of Roman tile. The interpretation of this concentration of material, which was not fully excavated, is uncertain, but possibilities include the fill of a pit (Context 6) of Roman or later date.

Trench 85W, 10 m long and 8 m wide (Figs. 23 & 24, Section Q-R), was designed to assess the condition of archaeological remains at the junction of the northern end of Room 63 with Rooms 23, 24 and 65. The topsoil (Context 1) varied in depth from approximately 100-200 mm and was deeper in the western half of the trench. Below the topsoil archaeological features were considerably better

BIGNOR ROMAN VILLA TRENCH L



Fig. 22. Plan of Trench 85L.

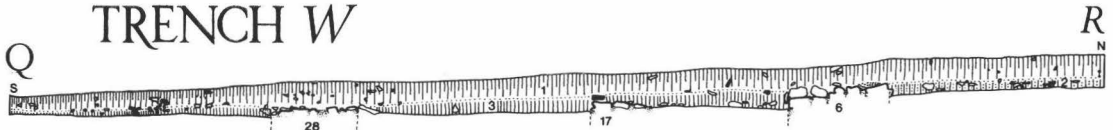
preserved on the western side of the trench. In the north-west corner of the trench was a layer (Context 2) of dark brown loam and mortar. This deposit was contained to the east and south respectively by walls 6 and 7. Below Context 2 were two thin deposits (Contexts 20 & 21) containing greensand rubble. No dateable material was recovered from Contexts 2, 20 or 21, which are fills of Room 22. The north-south orientated wall 7, which is 600 mm wide and made of mortared greensand, continues to the southern edge of the trench where the remains are much wider (c. 900 mm). This southern, wider section of the wall, which forms part of Room 24, is referred to as Context 9. In between Contexts 7 and 9 is a section of wall c. 700 mm wide which as exposed consists mainly of mortar. This stretch of masonry (Context 10) forms part of the eastern wall of Room 23. The variable widths of the north-south wall formed by Contexts 7, 9 and 10 can possibly be explained as either a narrower wall (i.e. Context 7) built upon a much wider foundations (e.g. Context 9), or as different building phases. Both explanations question whether Rooms 22, 23 and 24 necessarily all belong to the same construction

period as suggested by Black (1983, 98). The northern and southern walls of Room 23 are Contexts 6 and 28 respectively. Whilst both walls consist of mortared greensand, there is a difference in their surviving widths, Wall 6 being 900 mm wide and Wall 28 c. 600 mm wide.

The uppermost layer within Room 23 and Room 24, which is immediately to the south of Room 23, was Context 3, and beneath this were a number of thin patchy layers including Contexts 22, 23, 25, 26 and 30. Below Context 22 in the northern part of Room 23 were traces of an east-west orientated wall (Context 17). Wall 17, part of which appears to have been utilized in the construction of Wall 7, is the northern wall of Room 65. The continuation of this wall to the west of Wall 7 *beneath* Room 23, together with similar evidence from Trench 85Z, confirms Ernest Black's hypothesis that 'Rooms 18 and 65 formed parts of a large rectangular building'. Although the southern edge of Wall 17 was revealed across most of the trench (the exception being at the eastern side of the trench), the northern edge of the wall was only partially exposed. Much of the rest of this wall probably lies below Context 15

BIGNOR ROMAN VILLA

TRENCH W



TRENCH L

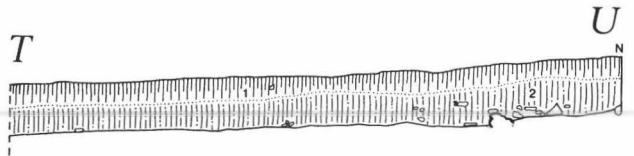


Fig. 23. Trenches 85L and 85W: sections.

BIGNOR ROMAN VILLA TRENCH W

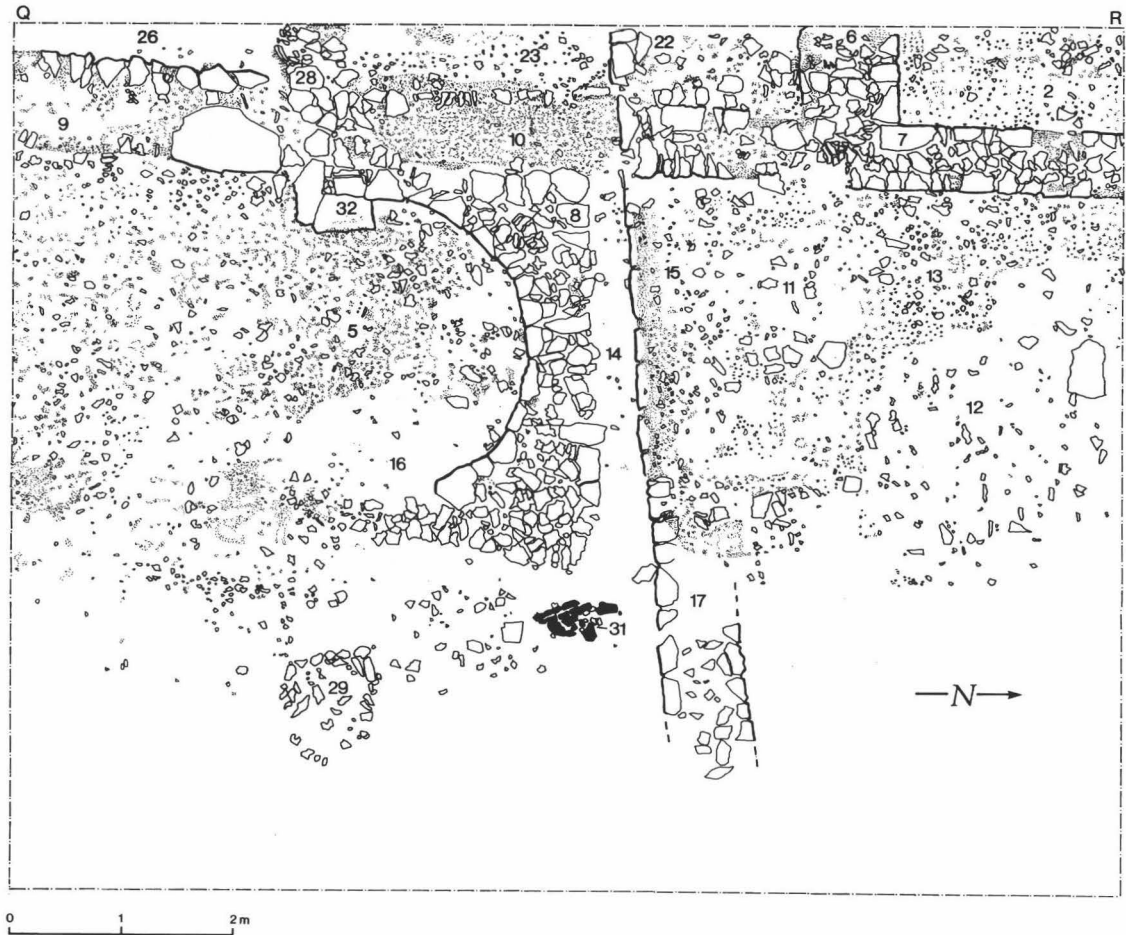


Fig. 24. Plan of Trench 85W.

which was not excavated. Beneath the topsoil to the north of Wall 17 and to the east of Wall 7 was a plough-disturbed layer (Context 4) above various irregularly shaped deposits (Contexts 11, 12 & 13). Context 12 was a dark deposit approximately 100–150 mm deep which appears to be the fill of a large

shallow scoop or pit. Its eastern edge had been much disturbed by ploughing. Finds recovered from Context 12 include important assemblages of pottery and faunal remains (see Part 3). The pottery finds suggest that this deposit dates to the mid-late 3rd century.



Fig. 25. Trench 85W. Photograph looking north at the junction of the northern end of Room 63 with Rooms 23, 24, and 65. Scales: 2 m. (Photo: David Rudling.)

Beneath Context 4 and immediately to the south of Wall 17, and bordered on its western edge by Wall 10, was a soil horizon, Context 14. The southern edge of this deposit was the apsidal northern end (Context 8) of the ambulatory (Rooms 62-4). Context 8 consists of mortared greensand.

The uppermost deposit within the ambulatory was a plough-disturbed Context 5 which contained much mortar and small pieces of chalk. Context 5 overlay another layer, Context 16, which was not fully exposed or excavated. At the south-western end of the masonry apse, limited excavation of Context 5 revealed a very large sandstone slab (Context 32). Whether similar masonry originally extended across the width of the ambulatory at this point is uncertain.

Unfortunately the eastern part of Trench 85W had suffered very badly from plough damage, and the eastern wall of the ambulatory had been

destroyed (Figs. 24 & 25). Discoveries in this area, however, included an aisle post-base (Context 29) and part of a burnt ferruginous sandstone ?hearth (Context 31). The aisle post-base, which is approximately 800 mm square and consists of lumps of greensand, is 2.6 m from the inside face of the north wall (Context 17) of Room 65. It indicates that the rectangular building — 'barn' — (i.e. Rooms 18/65) was aisled on at least one side and may have comprised six bays.

Trench 85Z, a 4 m square (Fig. 26) examined the north-west corner of Room 23. The full width of the northern greensand wall (Context 4) of this room was unfortunately not completely contained within the trench. The northern end (Context 13) of the western wall of Room 23 is somewhat ill-defined at the junction with Context 4, and appears to have been increasingly damaged/robbed towards its junction with the east-west wall (Contexts 2/3)

TRENCH Z

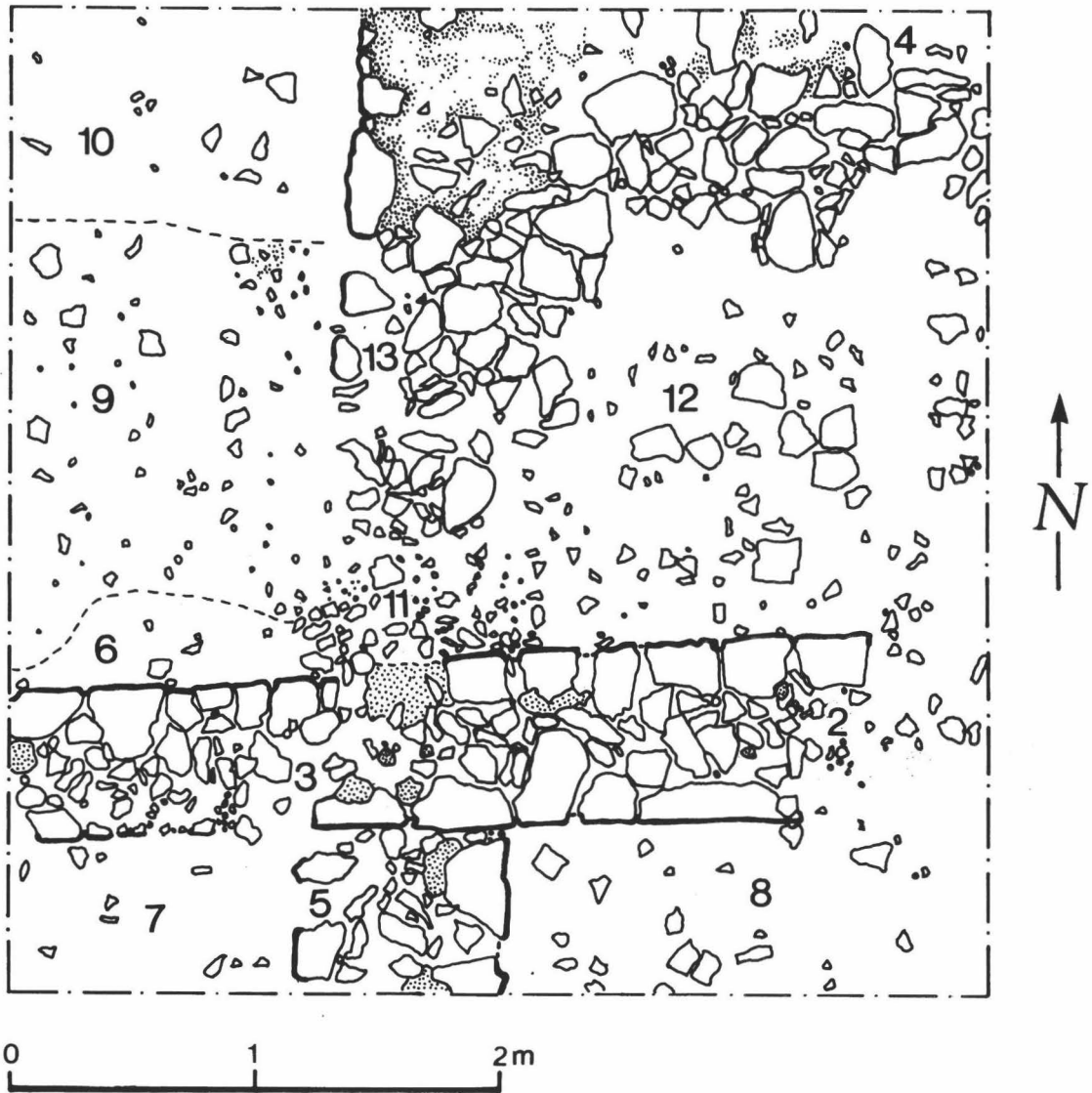


Fig. 26. Plan of Trench 85Z.

to the south. To the south of Contexts 2/3 this section (Context 5) of the western wall of Room 23 is 850 mm wide and in reasonably good condition. The east-west orientated wall (Contexts 2/3) is in reasonable condition except at the eastern edge of

the trench. The western part (Context 3) of this greensand wall is the northern wall of Room 18. After its junction with the western wall (Contexts 5/11) of Room 23 the northern wall of Room 18 continues eastwards, but with a greater width (c. 750

mm wide as opposed to c. 600 mm wide). This wider section of the wall (Context 2) is additional evidence to that obtained from Trench 85W (*see above*) to support the theory that Rooms 18 and 65 formed parts of a large rectangular building (Black 1983, 96). None of the various deposits (Contexts 6-10 & 12) adjacent to the masonry remains described above were excavated.

AREA 2: THE VENUS ROOM — Trench 86E (Fig. 27)

The trench, a little over 3 m long and 1.5 m wide, was excavated to locate and expose the footings of the original Roman wall in order to reduce the effect of moisture penetration through the wall of the 19th-century covering building and under the Venus mosaic. The north wall of Room 3 survived as three courses of masonry in a buff-coloured mortar on a single course of unmortared masonry footing. Outside this was a fairly regular, near vertical, cut through the natural bedrock which is probably best seen as an original foundation trench. It contained a clean fill of silty loam (Context 5) over which was a dark loam containing large lumps of greensand and some Roman roofing tile (Context 3). To the north of the cut was an occupation layer (Context 4) over the natural and this was all sealed by an old ploughsoil (Context 2) and topsoil (Context 1). There was no clear evidence to indicate the extent of Lysons' excavations at this point.

AREA 3: THE WEST SIDE OF THE COURTYARD

VILLA — Trench 86C (Fig. 28)

Trench 86C was 17.5 m long by 1.5 m wide and was excavated in an attempt to locate a possible west boundary wall of the villa. It was continued to the west wing in order to examine the footings of the west wall of Room 32 and to relate the section of that recorded by Frere in his Trench 1959 I (Frere 1982; Fig. 6, Section A-B).

The earliest features encountered were a boundary ditch and part of a rectangular pit or gully. Both were cut through an original turf and topsoil surface (Contexts 12 & 17). The rectangular cut at the east end of the trench was observed in plan only but seemed to contain dark loam with some lumps of greensand and Roman tile (Context 25). It was not traced in section through Contexts 13 and 16 and must, therefore, be an early feature predating the west wall of Room 32.

The boundary ditch was 2.8 m wide, 1.1 m deep, and V-shaped with a flat bottom. It contained a

primary fine grey-green silt on the west side (Context 19) sealed by occupation debris (Contexts 20 & 22) which included Roman pottery, including Samian ware and almost half a greyware vessel from the Rowlands Castle kilns; Roman tile, including a box-flue tile fragment with combed decoration; a stone roofing slab; part of a deer antler (left *in situ*); and several pieces of wall plaster decorated with dark green paint.

The diagnostic pottery from the lowest level of occupation debris in the fill (Context 20) comprises mid-2nd- to mid-3rd-century material (Part 3 Nos. 69-76).

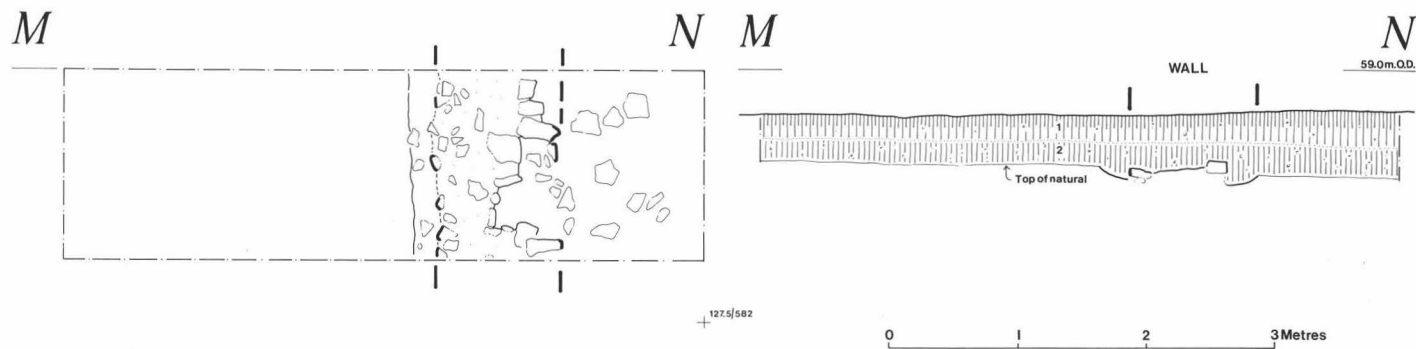
Above this was a fairly clean layer of redeposited natural clayey greensand (Context 21), which contained some Roman pottery and tile as well as oyster shell, and then another layer of occupation debris (Context 18) which appears to extend eastwards from the edge of the ditch to the west wing (Context 16). This comprised dark loam containing Roman pottery, including Samian ware, Roman tile, oyster shells, nails and several fragments of wall plaster with green and black paint. The redeposited natural greensand (Context 21) could be either a collapsed rampart or bank on the east side of the ditch or the material removed from foundation trenches of the west wing. The ditch itself is assumed for the present to be a continuation of the ditch found under the north wing by Frere (1982, 161-3; and Figs. 3 & 19) and Aldsworth (1983; Fig. 18, Section E-F).

The upper fill of the centre of the ditch on the east side comprised a mass of building material, including *tegulae*, *imbrices*, flat tiles as well as fragments of stone roofing slabs and quantities of buff-coloured mortar (Context 14). In plan this appeared to represent the remains of a crudely constructed wall footing built into the top of the ditch, but it is more likely to be the result of the deposition of materials from the demolition of a nearby structure. To the west of this was a layer (Context 15) of medium loam containing greensand lumps and pottery.

Sealing the ditch were occupation layers (Contexts 4 & 13) comprising dark loam containing greensand lumps, Roman brick and tile, animal bone, iron nails, and a single white stone tessera.

Cut through the latest occupation layer at the east end of the trench was a pit or trench dug alongside the west wall of Room 32. This is probably part of Frere's excavations in 1959 or a later

TRENCH D



TRENCH E

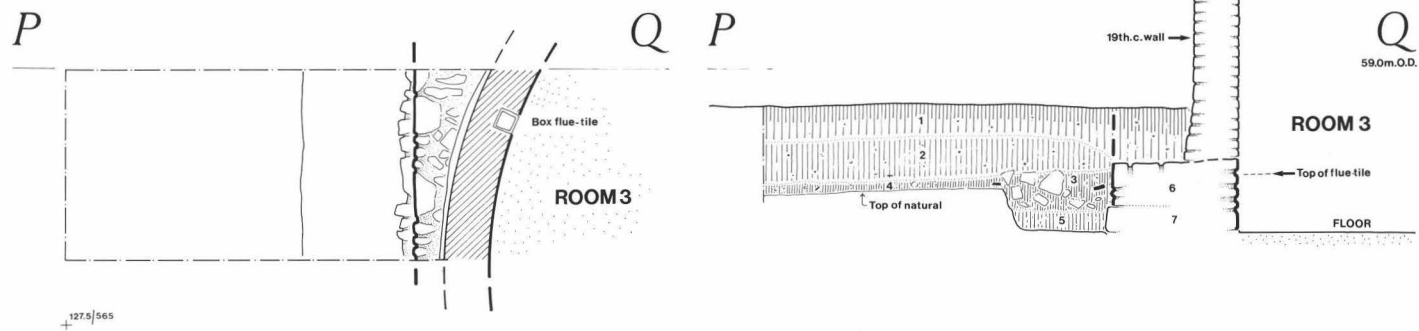


Fig. 27. Plan and sections of Trenches 86D and 86E.

BIGNOR 1986 TRENCH C

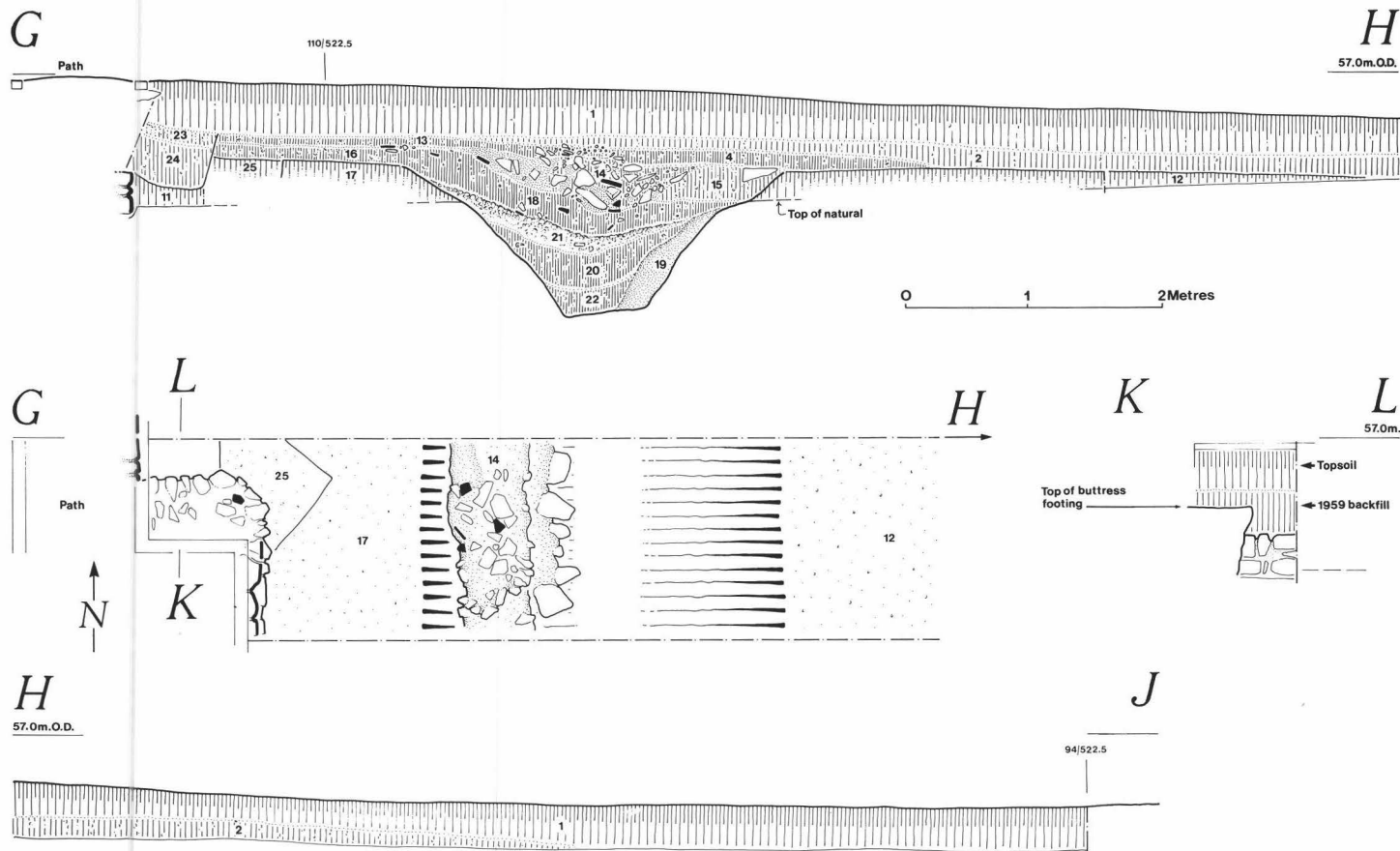


Fig. 28. Plan and sections of Trench 86C.

investigation (Contexts 23 & 24). The west face of the west wall of Room 32 survives as two or three courses of mortared stone set in a foundation trench cut through an old topsoil (Context 11) into the natural bedrock (Fig. 28, Sections G-H and K-L). The wall is beneath the backfill of the 1959 excavation trench and topsoil brought in after this date in order to make up the ground before the concrete strips and metalised paths which now mark out the plan of the west wing on the surface were laid. The footing of the buttress and the single course of masonry it supports, which were thought by Frere to be contemporary with the west wall of Room 32, were also observed, but the stratigraphic relationship between the two walls could not be determined within the confines of the trench.

No trace of any western boundary wall of the villa was observed, and it seems likely that if it ever existed it has either been ploughed out, or is further away from the villa than so far investigated.

AREA 4: THE SOUTH-WEST CORNER OF THE VILLA —
Trenches 86A & B (Figs. 29-31)

Trench 86B, some 14.0 m long and 1.5 m wide, was positioned to locate the south boundary wall of the villa, and Trench 86A, some 5.0 m north-south by 4.5 m east-west, was positioned to expose the junction between the boundary wall and the footings of the southern extension of the west wing.

These features were apparently not excavated by Samuel Lysons, or at least are not shown on his plan (Lysons 1817a, pl. III), but are thought to have been found, after his death, by Daniel Lysons and John Hawkins who cast doubt upon the accuracy of Samuel's plan which had already been made into a copper plate before the errors were discovered (*see below*).

The boundary wall of the villa (Wall 1, Context 3) was found in Trench 86B at a depth of 450 mm and comprised several courses of greensand, 800 mm wide, set into the natural bedrock beneath topsoil (Context 1) and an old ploughsoil (Context 2) (Figs. 29 & 31). To the north of the wall excavation was limited to the removal of Contexts 1 and 2 to expose the tops of occupation Contexts 20 and 21, which were not investigated. To the south of the wall and beneath Contexts 1 and 2 was occupation debris (Context 19) of dark loam containing Roman tile, 1st- to 2nd-century Roman pottery including Samian ware, animal bone and a bronze brooch (*see Part 3, Fig. 27:4*).

Context 19 sealed a spread of compacted lumps of greensand up to 100 mm thick (Context 22), which included Roman pottery and tile, and this is perhaps best interpreted as a made surface, perhaps for a yard or road. The stratigraphic relationship between the wall (Context 3) and the two contexts to the south (19 & 22) was not ascertained, but the wall is probably later.

Beneath the compacted yard or road surface (Context 22) was the natural bedrock of clayey greensand, containing a number of hard, rounded greensand boulders which appear to occur naturally in this area. The natural was cut by a gully, 540 mm wide and 160 mm deep (Context 25), and a shallow cut, 760 mm wide and 120 mm deep, containing Roman tile (Context 24).

In Trench 86A the relationship between the boundary wall (Wall 1, Context 3) and the corner of the west wing (Wall 2, Contexts 4 & 13, and Wall 3, Contexts 15, 16 & 18) was confused by disturbances which are most certainly trenches excavated by John Hawkins and Daniel Lysons in 1819 (Figs. 10 & 11, Contexts 9, 10 & 12). The east wall of the west wing comprised up to two courses of ashlar set in a distinctive yellow mortar, 2.2 m wide, over a single course of unmortared greensand lumps set on edge in herring-bone style (Wall 2, Contexts 4 & 13). Narrow trenches on either side (Contexts 5 & 7) were cut through occupation layers (Contexts 6 & 8) but not down to natural, and one of them (Context 5) contained a small amount of Roman pottery. They are either foundation trenches or the result of excavations in 1819. The south wall comprised a footing up to 1.66 m wide composed of greensand lumps in the same distinctive yellow mortar set in foundation trenches (Contexts 14 & 17) cut through occupation layers (Contexts 8 & 11) into natural bedrock.

No evidence was found to suggest why the walls of the west wing were so wide, although it may have been to support a building several storeys high which, on the south-sloping ground, would have been necessary to bring the roof level to the same height as that in the west wing of the courtyard villa (the authors are grateful to Professor S. S. Frere for this suggestion).

The boundary wall of the villa (Wall 1, Context 3) appears to butt up to the south-east corner of the west wing, on which it is aligned, and thus probably post-dates it.

The excavation confirms that Samuel Lysons' plan (1817a, pl. III) is in error here and that the

BIGNOR 1986 TRENCHES A&B

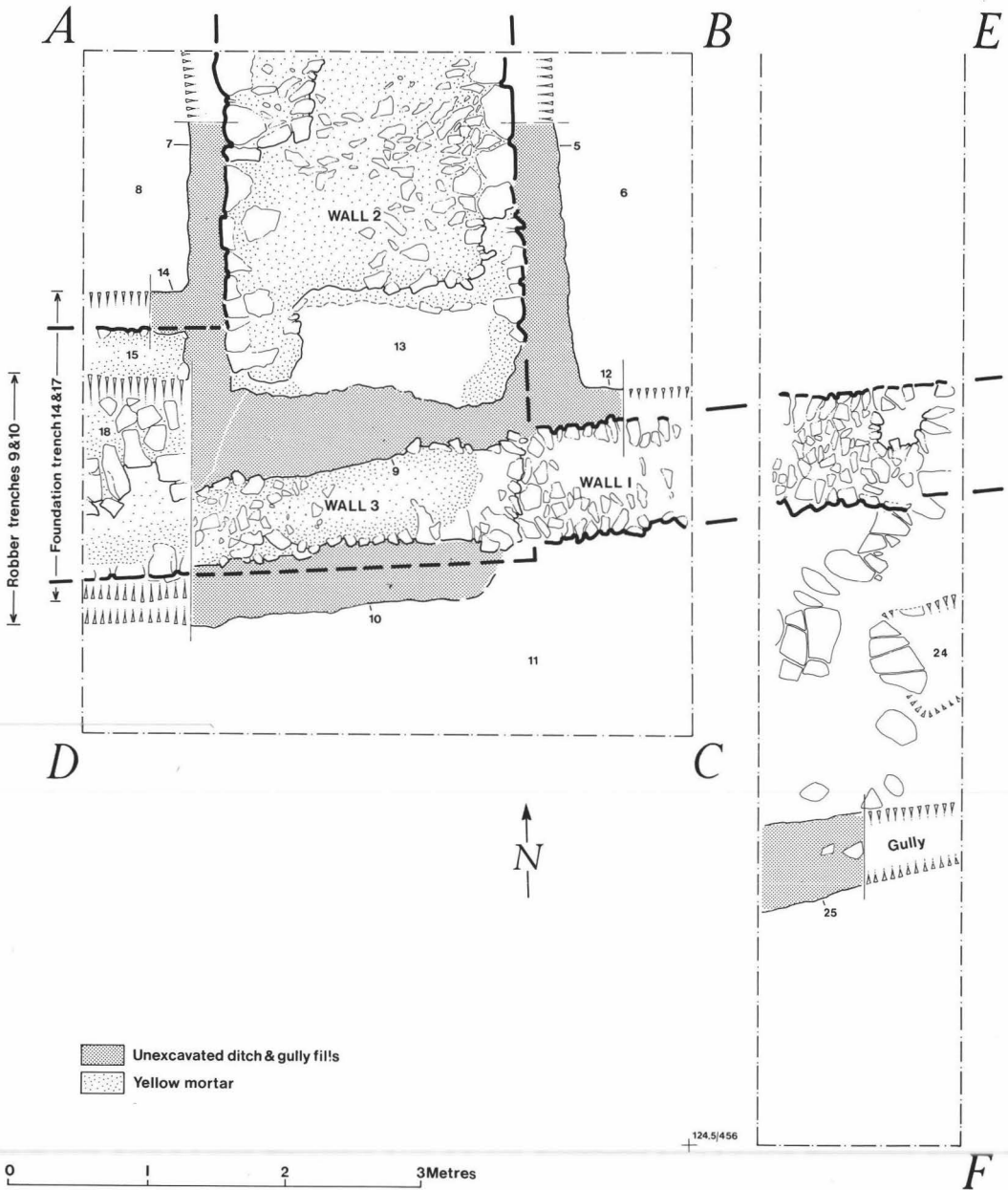


Fig. 29. Plans of Trenches 86A and 86B.

BIGNOR 1986 TRENCH A

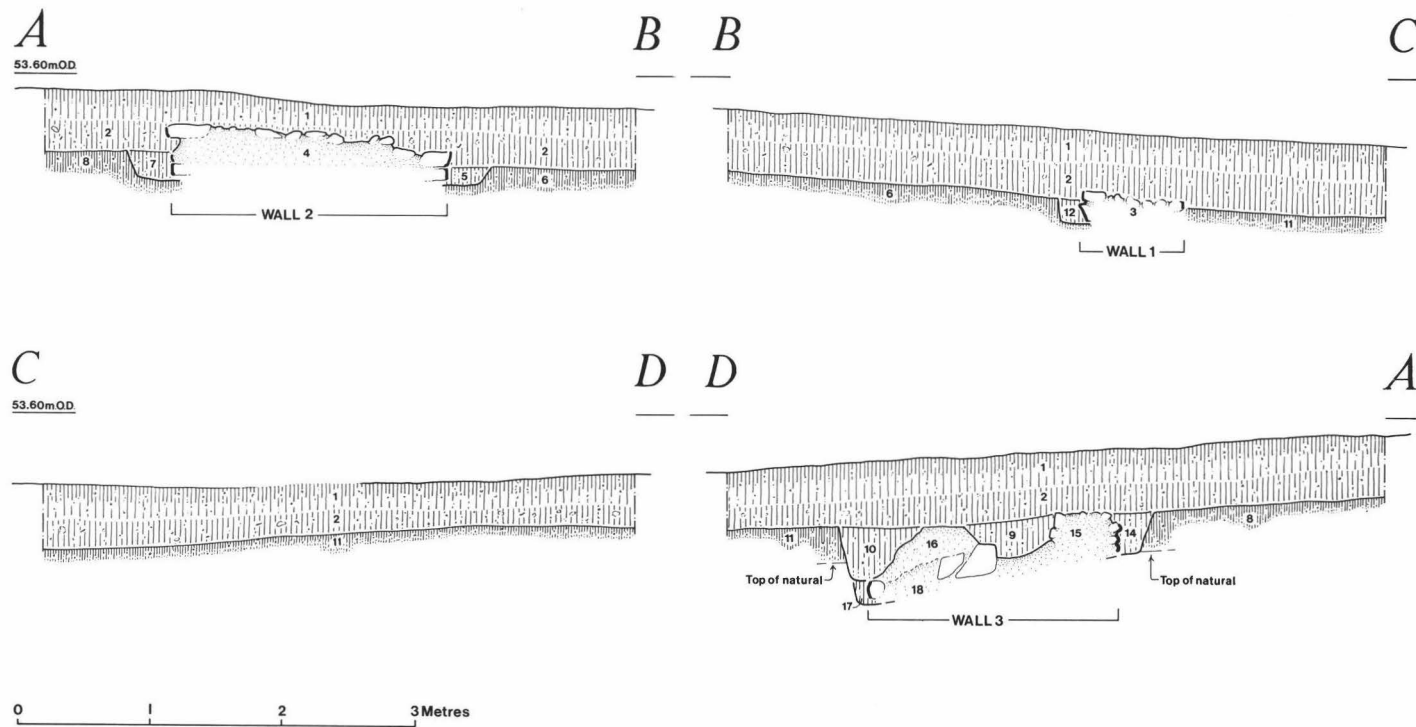


Fig. 30. Trench 86A: sections.

BIGNOR 1986 TRENCH B

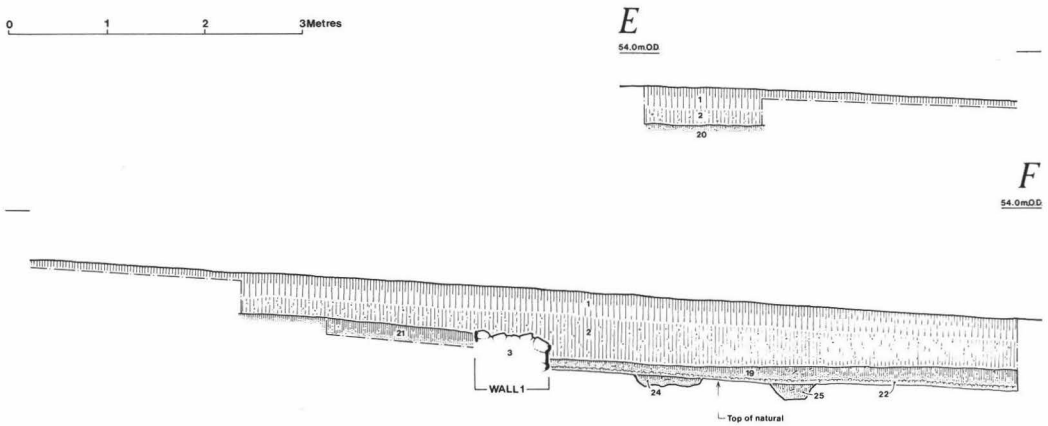


Fig. 31. Trench 86B: sections.

boundary wall is shown too far north, as John Hawkins pointed out in his letter to Daniel Lysons on the 18th November 1819 (Steer 1966, 52):

You will perceive that there has been some mistake in the measurements of the great Plan the Southern wall having been laid down too far to the North, nor is it possible to correct this mistake without re-engraving the whole plate, which the importance of the correction will not justify.

The recovery of small white stone tesserae and large red brick tesserae from the topsoil in the two trenches suggests the former existence of a mosaic floor or floors in the vicinity.

AREA 5: THE SOUTH-WEST CORNER OF THE FARMYARD — Trenches 85N & 85R (Fig. 32)

Trenches 85N and 85R were excavated to locate the south-west corner of the farmyard and to determine whether the external ditch, found outside the south-east corner of the farmyard, was present. Trench 85N was 10.5 m long and 1 m wide. The south wall of the yard was found at a depth of 250 mm and comprised one course of large blocks of greensand with a rubble infill, sitting on an irregular footing. The wall was only 600 mm wide at the top. On the south side of the wall the soil was about 550 mm deep over bedrock and at the south end of the trench it was 400 mm deep. This build-up of soil may perhaps be the remains of a pre-existing lynchet. No trace of a ditch was found.

Trench 85R was 10.5 m long and 1 m wide and

formed a westward extension of Trench 85N. The south wall of the yard was again found to be 600 mm wide, but its character appeared to change slightly in the middle of the section exposed in the south extension of the trench. On the east side it was built in the same way as in Trench 85N, but to the west it was mainly constructed of stones set on edge in herring-bone fashion. This may indicate two phases of construction but needs to be investigated further. The west wall of the farmyard was found to be 900 mm wide and constructed of massive blocks of stone with some mortar, but it terminates in a square end about 1 m short of the south wall which may indicate the location of a small entrance.

AREA 6: THE SOUTH-EAST CORNER OF THE FARMYARD AND AISLED BUILDING 2 — Trenches 85A, 85B, 85E, 85F, 85K, 85X & 85Y (Figs. 33-5)

Trench 85B, an enlargement which combined various smaller trial trenches (B, C & D), measured approximately 20 m long and 10 m wide with an 8 m southwards extension at its south-western corner. It was positioned in order to investigate the eastern end of Aisled Building 2 (Rooms 70-74) which forms the south-east corner of the farmyard. Whilst all the greensand wall footings remain in a reasonable state of preservation, deposits within and outside the aisled building were of variable quality. Those at the southern end of the trench (example Contexts 21 & 22) survived much better than those to the north (Figs. 33 & 34). The eastern wall bounding both Aisled Building 2 and the farmyard was recorded as

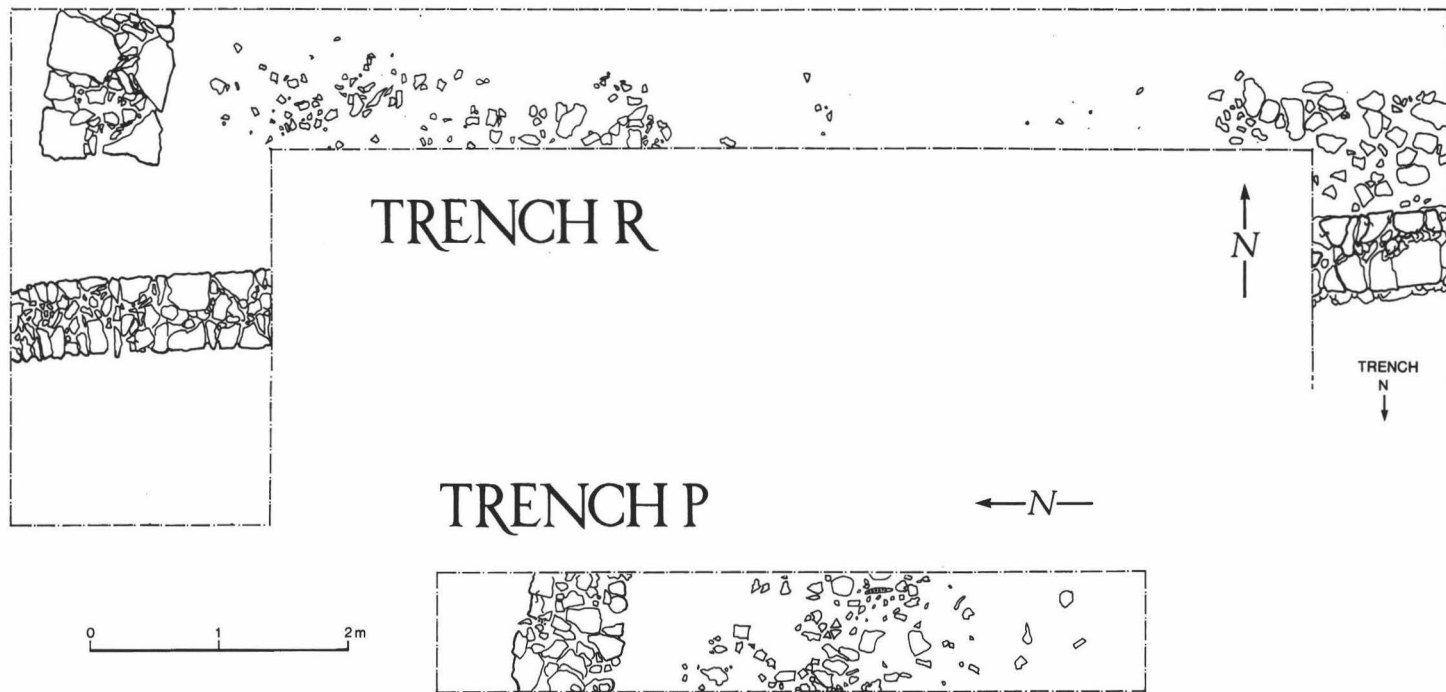


Fig. 32. Plan of Trenches 85R/N and 85P.

Contexts 13, 16 and 27. The wall is narrowest at its northern end (c. 450 mm wide) and broadest to the south (c. 750 mm wide). The appearance of the surviving footings at the northern end of the trench is also different to that of the footings at the southern end where the outer edges were more carefully constructed of larger, roughly squared stones. This difference can be partly explained by the better and deeper preservation of remains at the southern end of the trench where up to three courses of greensand blocks rest upon greensand rubble foundations. Or it may indicate different constructional periods. A possible straight-joint between Contexts 16 and 27 may also suggest different building episodes. In addition, the inner north-east corner of Room 70 is marked by a large piece of stone, and a similar stone is present on the outer face of the eastern wall in line with the northern edge of Wall 14 and the possible straight-joint discussed above. The east-west orientated Walls 14 and 15 are similar to adjoining Walls 16 and 27 in that all are of tightly packed rubble.

In contrast, the southern east-west orientated Walls 11 and 12 have more carefully constructed outer edges and are similar to Context 13. The building measured 27 m in width overall. The central area of the building or 'nave' was 7.4 m wide, the north 'aisle', which may be an addition (*see above*), 2.7 m wide, and the south 'aisle' 3.1 m wide. The aisle footings were continuous and there was no evidence to indicate the positions of aisle posts. It is possible that the wall shown by Lysons between his Rooms 70 and 73 at the west end of the building represents a bay division. If so, this aisled 'barn' may have originally comprised six bays. Its function is further discussed below. Within the rooms created by these walls only Room 72 had any well-preserved stratigraphy and this may represent the foundations for a floor. In the other two rooms (70 & 74), ploughing had almost completely destroyed the stratigraphy and the two northern walls were set directly into solid greensand bedrock, whereas further to the south the walls were built into made ground — possibly a former lynchet. In Room 72 a 700 mm wide test trench along the western edge of the trench revealed a relatively deep and varied range of deposits (Fig. 34). At the southern end of the test trench within Room 72 was a layer of compacted flint cobbling. This cobbling (Context 31) is also present to the south of Context 11 and suggests that an east-west orientated road or

trackway (c. 4.1 m wide) existed here *before* the construction of Aisled Building 2/the southern wall of the farmyard. The test trench also revealed a south-west/north-east orientated ditch approximately 2 m to the south of the cobbled surface. This ditch (Context 20), which has sloping sides, a flat bottom and is cut into the natural greensand (Figs. 33 & 34), was at least 800 mm deep and 2.5 m wide. Above a thin primary silt (Context 19) was a deep deposit of grey sandy clay (Context 18). This fill yielded an almost complete 2nd-century Hardham pottery jar (*see Part 3, illustrated Pottery Catalogue, no. 20, below*). Later the ditch was re-cut as evidenced by Context 17 and finds from it include pieces of Roman tile, but no closely dateable pottery. Beneath Context 17, and cutting Contexts 18, 19 and 20, was a post/stake-hole (Context 30) with a diameter of 100 mm. Ditch 20 may run parallel to, and be contemporary with the metalled road surface discovered just to the north. Larger-scale excavation, or possibly a geophysical survey, may help to clarify this matter.

The south-west-north-east orientated ditch (Context 20) discovered in Trench 85B was also located in Trenches 85A and 85Y (Figs. 2 & 35). In neither case was the ditch excavated. In Trench 85Y a smaller ditch or gully was found to join the main ditch from the south. This smaller ditch (Context 5) was sample excavated (Fig. 35, Section a-b). It survives to a width of approximately 1 m, has a flat bottom and a depth of 450 mm. No dateable finds were recovered.

Trial Trenches 85E and 85X (Figs. 2 & 35) were positioned in order to see whether the ditch found in Trenches 85B and 85A continued around the south-east corner of the farmyard. Although no such discovery was made, Trench 85X revealed part of another east-west orientated ditch. A deposit (Context 2) above this feature yielded a large quantity of pottery which has been dated to the 2nd-early 3rd century (*see Part 3, The Pottery*).

After the south-east corner had been located, Trench 85F was excavated to determine the alignment of the east wall of the farmyard. The trench was 7.5 m long and 1 m wide. The tops of wall footings were exposed at a depth of 200 mm but these were not fully investigated.

AREA 7: THE NORTH-EAST CORNER OF THE FARMYARD — Trench 85G (Fig. 36)

Trench 85G, an enlargement which joins several

BIGNOR ROMAN VILLA TRENCH B

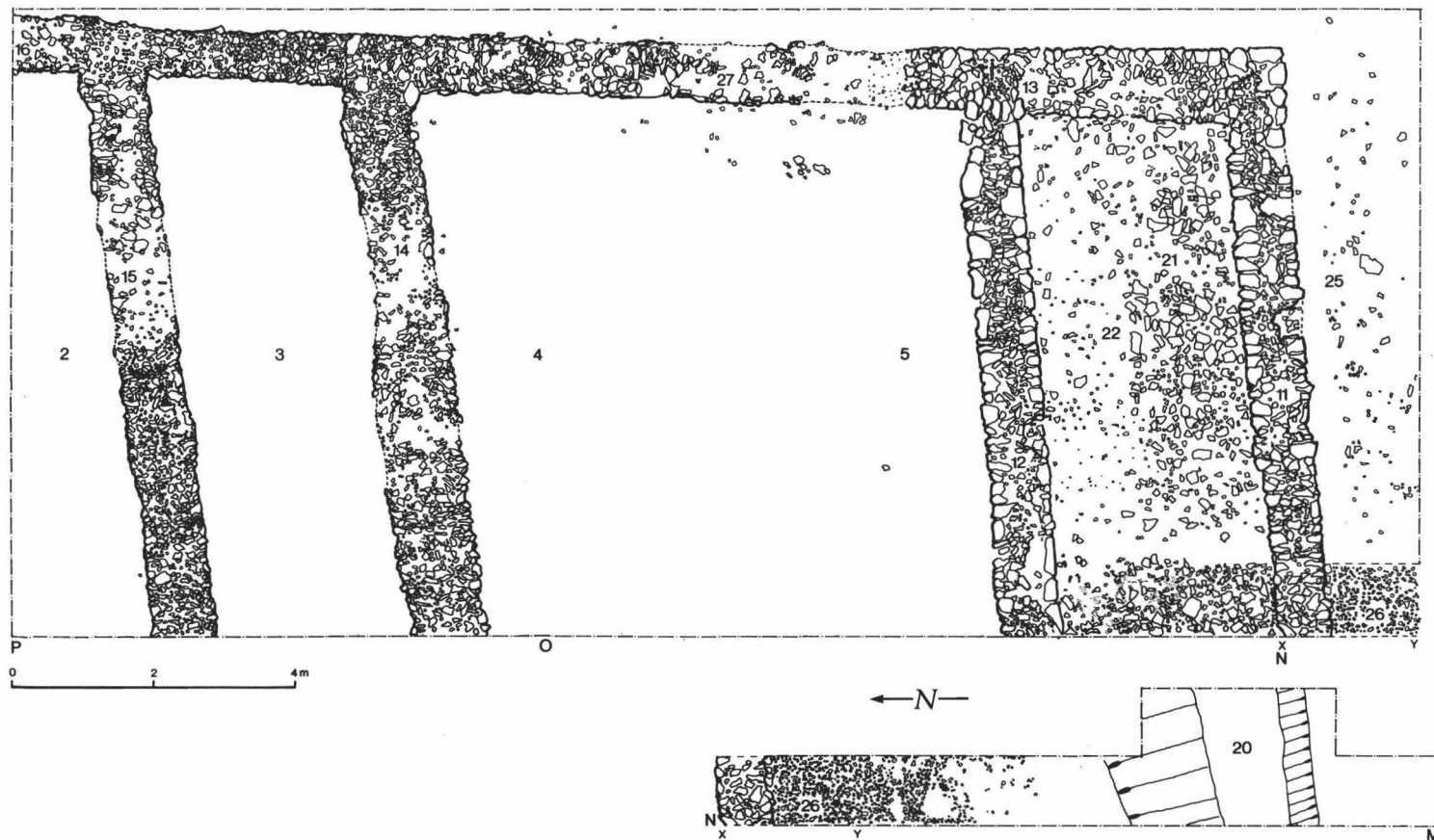


Fig. 33. Plan of Trench 85B.

BIGNOR ROMAN VILLA TRENCH B

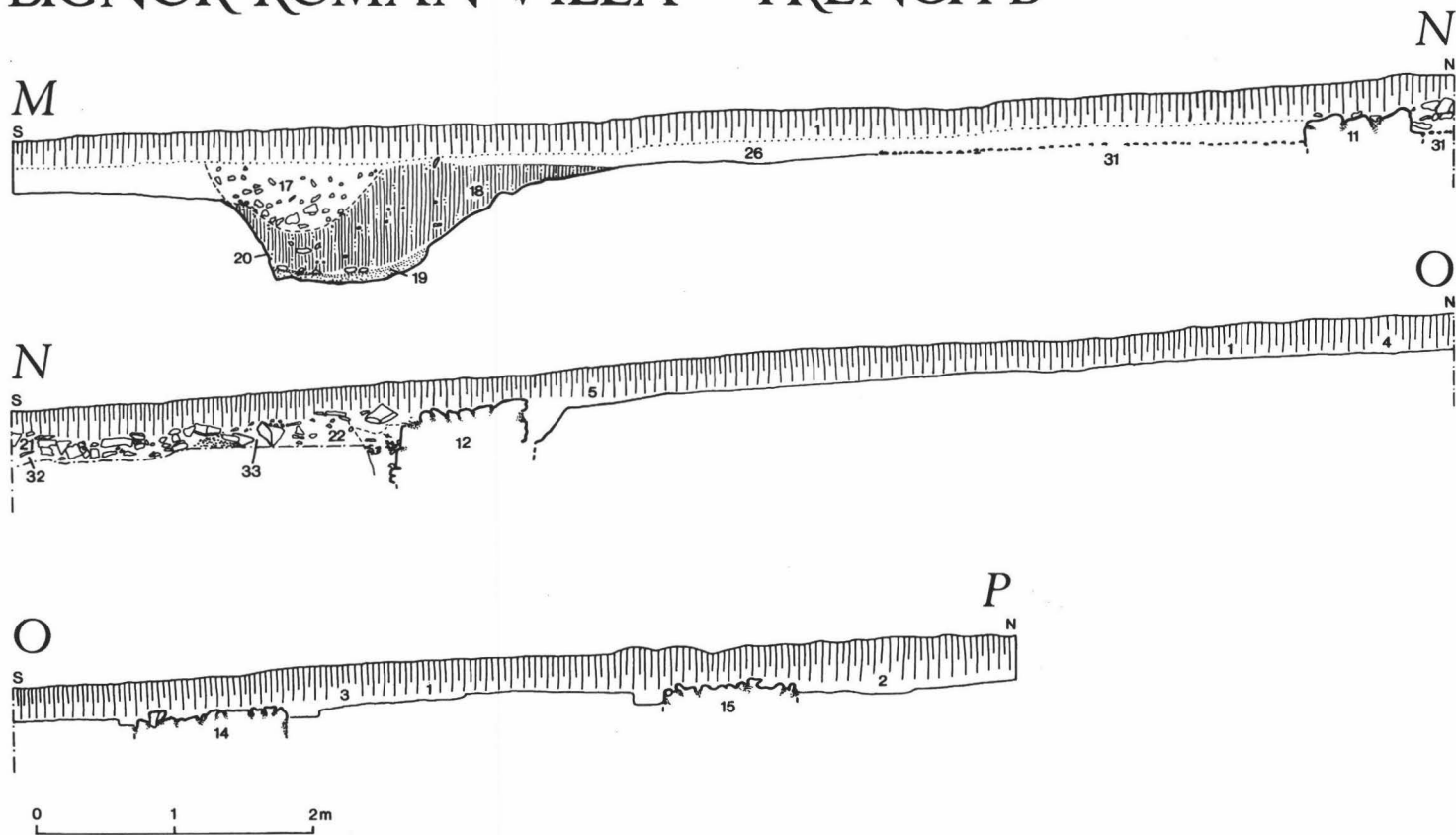
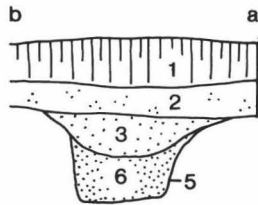
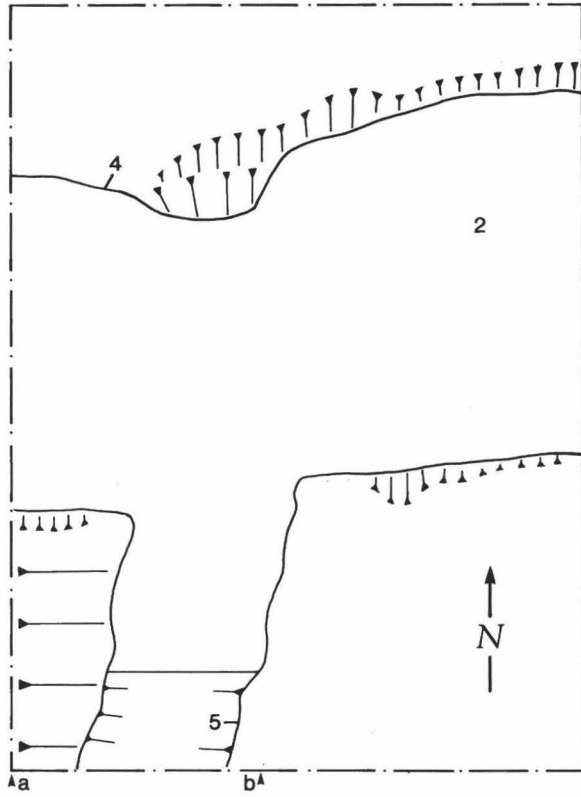


Fig. 34. Trench 85B: sections.

Trench Y



Trench X

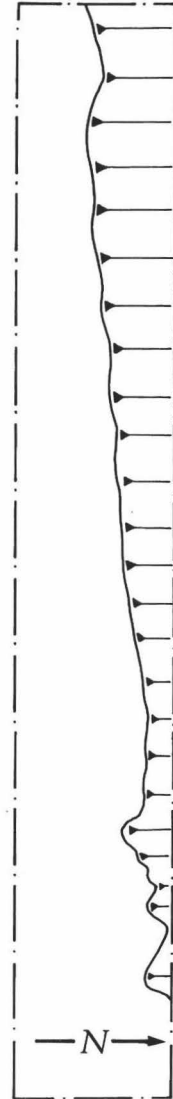
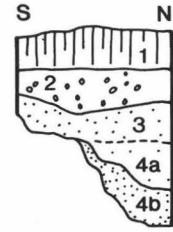


Fig. 35. Plan and sections of Trenches 85X and 85Y.

small trial trenches (G, H, J & M), measured approximately 10 m square and was positioned over the eastern end of the building (Room 69) which forms the north-east corner of the farmyard. The whole area had been subjected to considerable damage by ploughing (*Britannia* vol. XVII, 1986, pl. XXXB) and only the very bottom courses of the wall footings were revealed at an average depth of 200–250 mm. The northern wall (Context 12) was approximately 900 mm wide and consisted of generally large pieces of stone. Traces of possible foundation trenches or perhaps of Lysons' excavation trenches (Contexts 9 & 10) were recorded on both sides of the wall. The southern wall of the building (Context 14) also generally consisted of large pieces of greensand. Traces of a foundation trench (Context 6) were noted along part of the southern side of the masonry. The eastern wall (Context 13) has a very different appearance and consists of generally much denser and smaller stones. In contrast to the other two walls, the outer edges of this piece of masonry include more relatively thin rectangles of stone set at right angles to the face of the wall. The importance of these differences in foundation construction is uncertain, but could indicate that Contexts 12 and 14 were constructed at a different period from Context 13. Such a situation has been proposed by Black (1983, 98–9). Traces of foundation trenches (Contexts 8 & 11) were discovered on either side of Context 13. Immediately adjacent to the outer north-east corner of the building/farmyard was a small (15 mm diameter) undated stake/post-hole (Context 18). It contained a loose fill and is thought to have been made by a post put in by Samuel Lysons to mark the wall corner. The internal width of the farm building (Room 69) is 5.45 m.

AREA 8: THE NORTH WALL — Trenches 85P, 85S, 85SA, 85SB, 86D & 87B (Figs. 2, 27 & 32)

Trench 85P was 5.6 m long and 1 m wide and was excavated to determine the alignment of the north wall of the farmyard. A wall footing, 780 mm wide, was found at a depth of 220 mm and comprised large lumps of greensand laid irregularly in a foundation trench. There was a spread of greensand lumps and Roman tile to the south.

Trenches 85S, 85SA, and 85SB were excavated to determine the alignment and extent of the north wall of the farmyard. Trench 85S was 5.2 m long and 1 m wide. No trace of a wall was encountered. Trenches 85SA and 85SB revealed the foundations

of the wall but these petered out towards the west end of Trench SB where no trace of either a foundation trench or a robber trench was seen.

Trench 86D was excavated on the same alignment as the wall found further east in 1985. The trench was 5.0 m long and 1.5 m wide. Sealed beneath a modern topsoil (Context 1) and an old ploughsoil (Context 2) was a collection of greensand lumps which appear to be the remains of the lowest course of the footings of the wall, severely damaged by ploughing and by the previous use of this area as an orchard. Several blocks appear to be *in situ* indicating that the wall footings were probably about 900 mm wide. There were traces of a shallow foundation trench on either side of the footings cut through the natural bedrock.

Trench 87B was 50 m long and 700 mm wide and was excavated to bedrock to determine the archaeological potential of the area to the north of the boundary wall for a proposed new car park. No archaeological features were encountered. At the west end there was a ploughsoil 300 mm deep overlying light loam soil, probably deriving from the former orchard on the site, to 550 mm below present ground level. Beneath this was soft clay and disturbed bedrock overlying the natural greensand bedrock encountered at 750 mm. The layers were fairly uniform throughout the length of the trench though rising slightly so that the bedrock was encountered at a depth of 640 mm at the east end of the trench.

EXCAVATIONS IN 1990

At the invitation of the trustees of Bignor Roman villa the Field Archaeology Unit returned to the villa in 1990 in order to undertake several small excavations under the direction of David Rudling.

Trench 90 I (Figs. 37 & 38) (both on microfiche)

The excavation of a new drainage ditch along the northern edge of the public footpath which lies to the south of the villa complex (Fig. 37) revealed substantial quantities of Roman tile. In order to clarify the age and function of this deposit an 'L'-shaped trench was excavated by hand (Fig. 38). At the southern end of the trench a thick deposit (Context 3) of tile, flint and sandstone lay beneath the modern topsoil of the trackway. This deposit was much thinner to the north where it was overlain by Context 2. Whilst containing many fragments of Roman tile, Context 3 also contained 18th- to 19th-century material; as did the soil layer (Context 4),

BIGNOR ROMAN VILLA TRENCH G

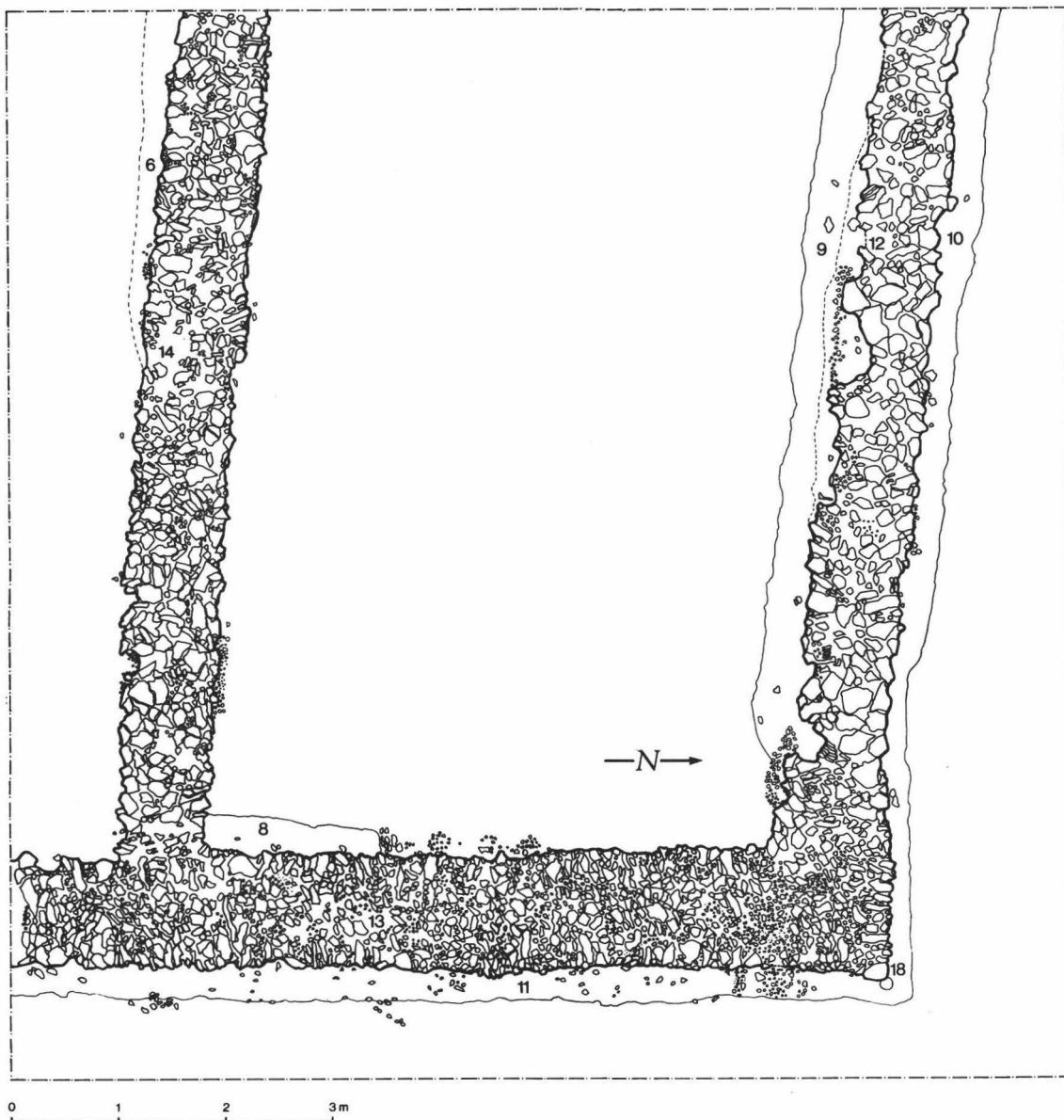


Fig. 36. Plan of Trench 85G.

beneath it. In conclusion, it is thought that Context 3 is probably an earlier trackway surface made in the 18th/19th centuries using building materials collected from the near-by villa.

Trench 90 II (Fig. 39)

A trial trench 5 m long and 900 mm wide was hand excavated in the edge of the field to the west of the modern gateway separating the new car park from

Trench II

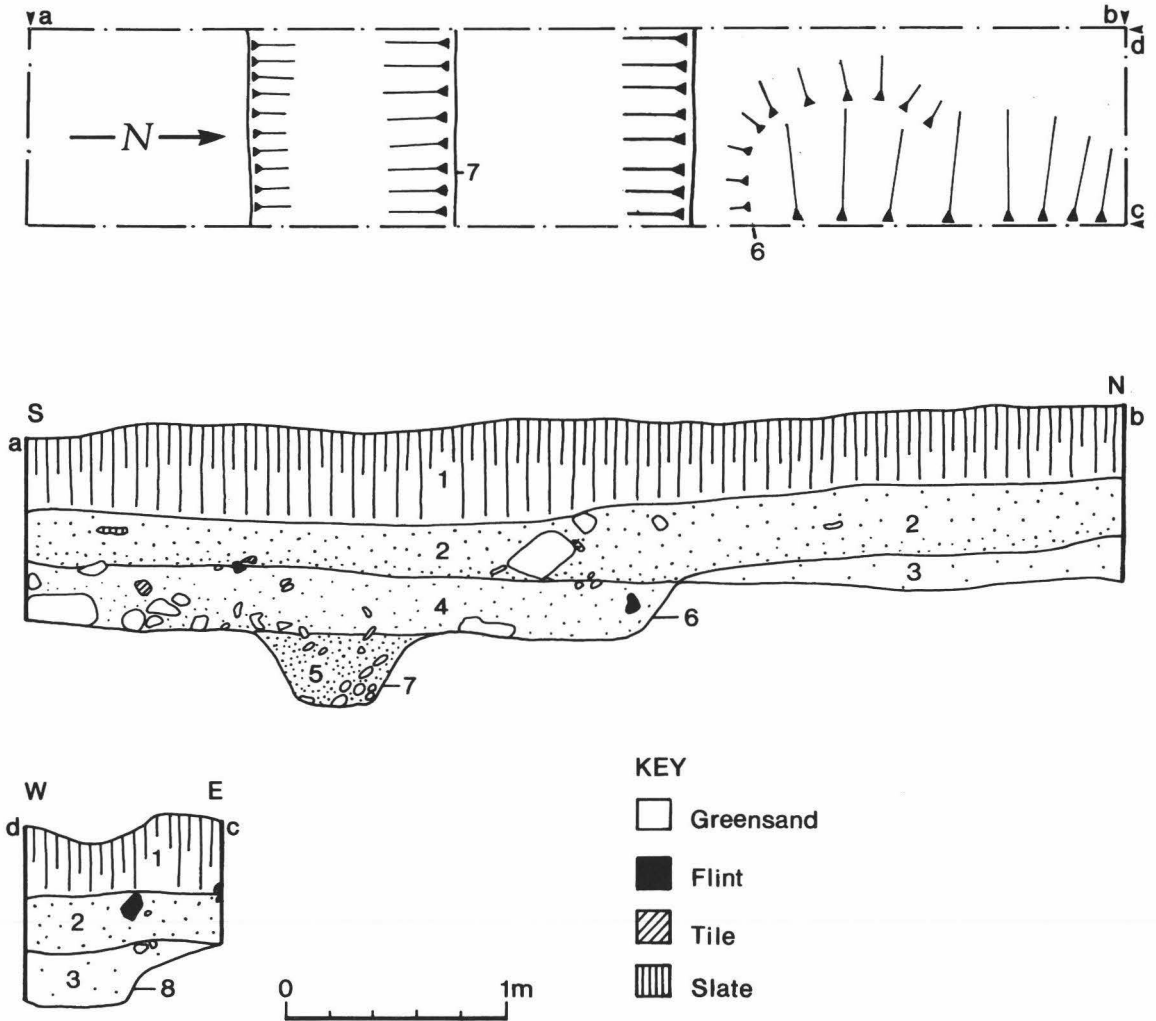


Fig. 39. Plan and sections of Trench 90 II.

the villa complex. The aim of this excavation was to investigate further the relatively little known south-west corner of the courtyard villa. Beneath the upper layers (Contexts 1 & 2) the excavations revealed a disturbed horizon (Context 3) and a possible fill (Context 4) of a negative lynchet (Context 6) cut into the natural sandstone. Finds from the fill include sherds of prehistoric and Roman pottery (2nd–early 3rd century). Beneath Context 4 and cut into the natural sandstone was an east–west orientated ditch (Context 7), whose fill (Context 5)

yielded six pottery sherds which range in date from the late Iron Age to the 13th/14th century.

Trenches 90 III & 90 V (Fig. 40)

Trench 90 III, an area 5 m long and 3.6 m wide immediately to the south of the south wall of the Roman farmyard was stripped of ploughsoil in order to see whether the metallised 'road' surface found in Trench 85B continues this far to the west. At the southern edge of the trench the ploughsoil was considerably more shallow (Fig. 40, Section a–b)

Trench III

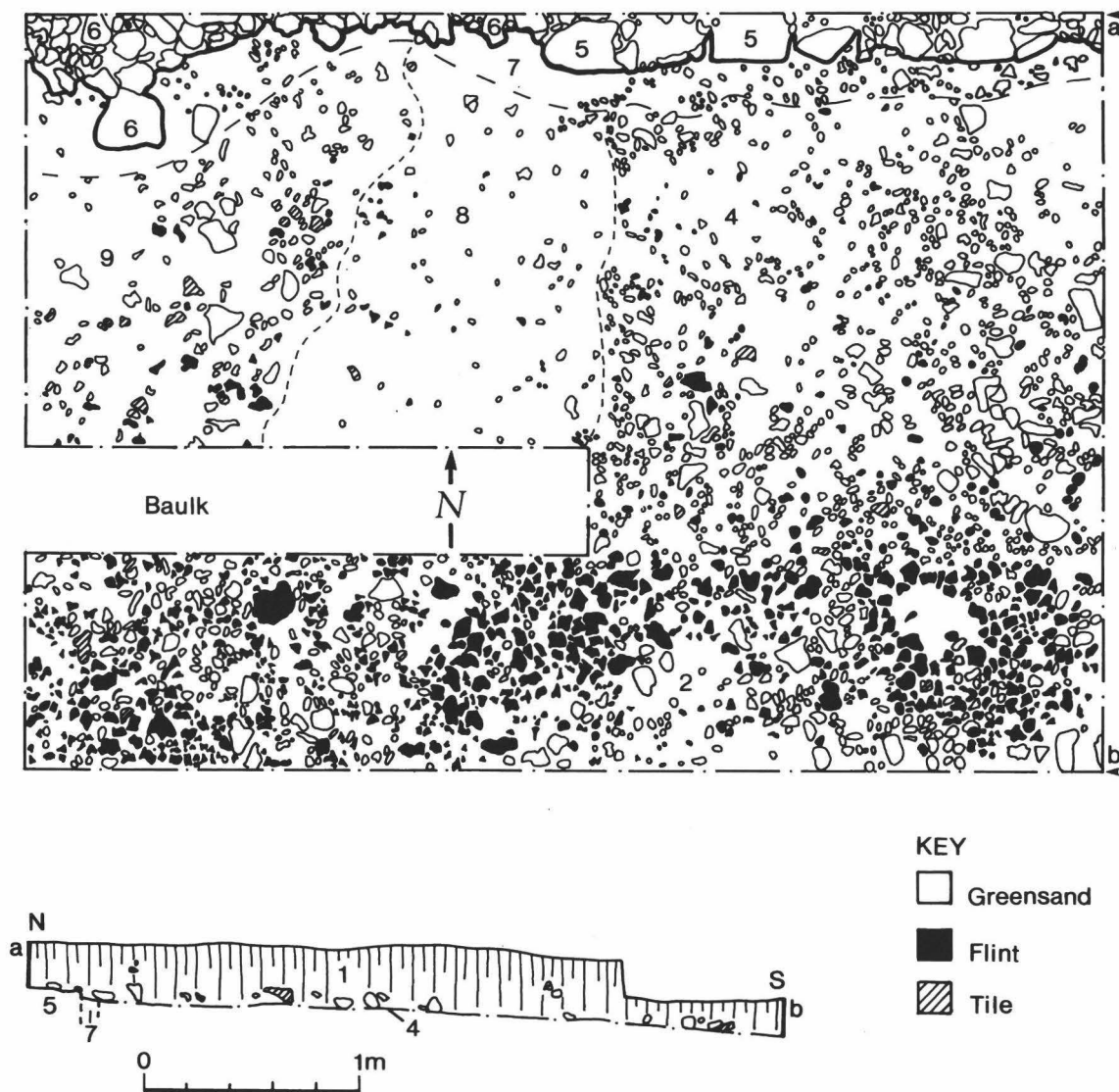


Fig. 40. Plan and sections of Trench 90 III.

owing to this area being outside the modern boundary to the villa complex, and thus subject to continuing ploughing. This southern part of the trench also revealed a high density of flints (Context 2) whereas Contexts 4 and 9 to the north contained less flint and more greensand rubble. It is probable that the flint-metalled surface extends northwards

beneath these less plough damaged strata. Context 8, with its straight eastern edge, may represent an old excavation trench. Neither it nor any of the surrounding deposits was further excavated. Along the northern boundary to the trench were traces of masonry (Contexts 5 & 6) which represent the southern wall of the farmyard. The limited

Trench IV

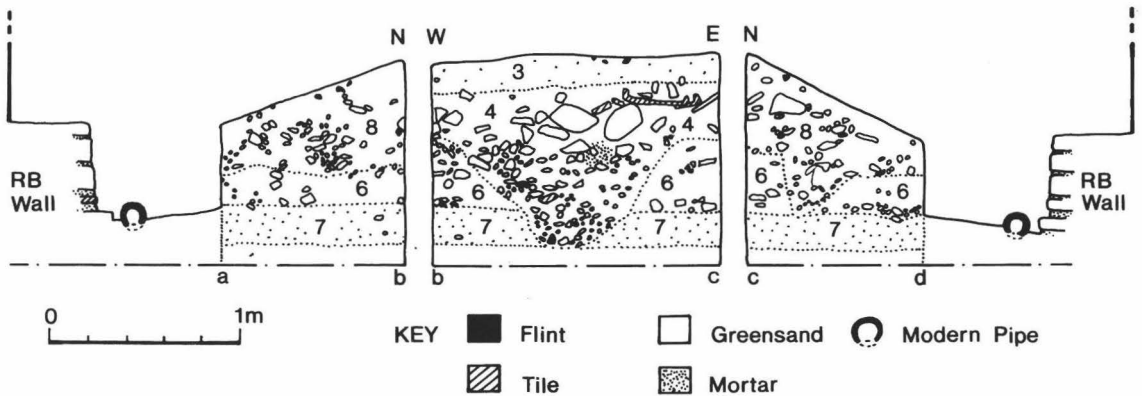


Fig. 41. Trench 90IV: sections.

excavation of this trench has demonstrated the presence of substantial quantities of flint immediately to the south of the farmyard wall. This indicates that the metallated 'road' surface observed in Trench 85B may continue westwards. In an attempt to trace the westward extent of the flint metallating a one metre square test pit (Trench 90 V) was excavated 25 m to the west of Trench 90 III. This excavation failed to locate any flint metallating and it is therefore possible that the 'road' stops or turns before this point.

Trench 90 IV (Fig. 41)

Trench 90 IV, which was 9 m long and approximately 1 m wide, was excavated immediately to the north of the north wall of Room 7. This was carried out so that essential repointing work could be undertaken in order to prevent further damp penetration to the public display area. The excavation was largely a re-excavation of a trench (I) dug by Professor Frere in 1957 (Frere 1982, fig. 140). Frere's excavations revealed a lead pipe taking water to the fountain in the piscina in Room 7, and this pipe in turn was supplied with water from a 'wooden water-main which ran roughly parallel' with the northern wall

of Room 7 (Frere 1982, 142). The lead pipe was relocated and the area to the north cut back slightly in order to re-examine the sequence of archaeological deposits. Comparing the sections drawn in 1957 and 1990 (Frere 1982, 168: fig. 20; Fig. 41) it is possible to correlate Context 7 of 1990 with Context 8 of 1957; and probably Context 6 of 1990 with Context 7 of 1957. Fill 8 of cut 9 of 1990 may also correlate with Frere's context 10 (the pipeline trench). The northern face of the trench projection however, reveals new information in the form of a V-shaped ditch (Context 5) filled by a layer (Context 4) containing large pieces of *tegulae* tiles. It is thus possible that the wooden or lead pipes may have received water from an additional pipe located in the newly discovered ditch. The source of water for these pipes remains unknown.

Possible sources of supply include a well to the north of Room 7, or water piped to the site from even further to the north. Trench 87B excavated by Fred Aldsworth was partly designed to locate any such water source contained in an underground pipe. Failure to locate any pipe or channel suggests that any water coming from this direction is likely to have been supplied *above* ground.

PART 3: THE FINDS

FLINTWORK By Robin Holgate & Chris Butler

The excavations in 1985 and 1990 produced 323 humanly-struck flints from the topsoil and Romano-British contexts, together with a further seven flints from field walking south of the Roman farmyard (see Tables 1 & 2 on microfiche p. m18

for further details). The raw material is nodular flint and dark grey-brown or grey-brown in colour. Cortex, where present, is thick and unabraded. Four pieces have a blue-white patination and a further two pieces are fire-fractured. The flint derives from superficial deposits and is similar to nodular flint which can be found in Coombe deposits at the foot of, or on the Downs to the south of the site.

The assemblage can be divided into two main components (Table 3 on microfiche p. m19): a Mesolithic industry and a later Neolithic–Bronze Age industry. The Mesolithic material consists largely of soft-hammer struck blades and bladelets, one two-platform and two single-platform bladelet cores. The later prehistoric flints are hard-hammer struck and comprise mainly debitage, nine end scrapers, two knives, a single notched flake and one piercer. In addition to the implements, a number of the flakes had been retouched. Clearly, activity took place on or in the vicinity of the site at some stage during the Mesolithic period and later Neolithic–Bronze Age, but the nature of this activity cannot be determined without further fieldwork. Note also the Neolithic/Bronze Age flintwork which was discovered during the excavations undertaken by Professor Frere (Bradley, in Frere 1982, 181).

THE POTTERY By Malcolm Lyne

a) The prehistoric pottery

The prehistoric pottery sherds are all fairly small and abraded, and are of flint-tempered wares dating to the later Bronze Age and early Iron Age periods. All the prehistoric pottery is recorded on the pottery spot-dating recording sheets which form part of the Archive.

b) The Roman pottery

Methodology

Four ceramic assemblages were analysed according to forms and fabrics present, using the Estimated Vessel Equivalent method (Orton 1975), based on pot rim percentages. A number of other, smaller, assemblages were also examined, although they were too small for detailed analysis. All the pottery from the 1985–1990 excavations was recorded on pottery spot-dating recording forms which form part of the Archive. All the Samian Ware was examined by Joanna Bird, and her catalogue/detailed descriptions form part of the microfiche section of this report (p. m17).

The fabric series

A total of 24 fabrics and fabric groupings were distinguished in the Bignor material. These are listed below with the kiln source, where known, entered in italics after the description:

- 1A. Coarse gritted grey and grey-brown fabric with profuse sub-angular grey 'grog' and black or brown ironstone inclusions [up to 1 mm grain size]. Rough surfaces.
Hardham/Wiggonholt.
- 1B. Finer version of the same fabric with inclusions up to 0.30 mm across.
Hardham/Wiggonholt.
- 1C. Sand-free brown-grey fired pinkish-orange with smooth, black micaceous surfaces and compass-scribed and combed decoration. 'London Ware'.
Hardham (Winbolt 1927).
- 1D. Sandy brown-grey fabric fired pinkish-orange with blackened, micaceous surfaces. A coarse version of Fabric 1C.
Hardham.
- 1E. The same as Fabric 1A but oxidized orange.
Hardham.
2. Fine sanded grey ware with 1 mm sub-angular black and off-white inclusions. Darker grey polished surfaces with short, horizontal, black streaks along wheel-turning striations.
Hardham.
3. Cream-buff fabric tempered with coarse sub-angular quartz sand filler [up to 2.00 mm]. Possibly a Verulamium kilns product.
4. Hard, fine-sanded orange ware with external brush marks and sooty patches. This is a very rare fabric known only from one context, Trench A (1985), Context 10.
5. Dirty grey handmade, sandy fabric fired black. Possibly a variant of the Alice Holt Fabric 8a.
6. Very fine-sanded hard, grey fabric with an orange core. Semi-vitrified.
- 7A. (?) Sand-free off-white fabric fired blue-grey. Not *Terra Nigra*. This and the other two variants of the fabric are known from others sites in Sussex and southern Hampshire. They are most common on sites in East Sussex, suggesting a source in that area. A recently discovered kiln at Chailey has 3rd-century forms in the coarse Fabric 7C version and may be part of a larger production centre near the junction of the Sussex Greensand Way with the London–Lewes Roman road.
- 7B. Fine-sanded off-white fabric with inclusions up to 0.30 mm grain size and fired blue-grey.
- 7C. Coarse-sanded, off-white fabric with inclusions up to 1.00 mm grain size and fired blue-grey.
- 8A. Coarse grey and grey-brown ware with rounded and sub-angular quartz sand [up to 2.00 mm grain size].
Alice Holt/Farnham (Lyne & Jefferies 1979, fabrics C & D).
- 8B. Fine-sanded medium-grey to blue-grey fabric with smoothed, polished or self-slipped surfaces.
Alice Holt/Farnham (Lyne & Jefferies 1979, fabric A).
- 8C. Similar fabric to 8B but with applied white or black-firing clay slip.
Alice Holt/Farnham ware of post-270 date.
- 8D. Coarse, sometimes semi-vitrified grey fabric with profuse sub-angular flint, chert and quartz-sand temper [up to 2.00 mm grain size]. The surfaces of jars are often pimply and black/white slip was sometimes applied to the interiors of hand-made or wheel-turned bowls and dishes.
Six Bells, Farnham (Lowther 1955; Lyne forthcoming).
9. Grey-cored buff/orange fabric with coarse, up to 2.00 mm grain size, sub-angular quartz inclusions in profusion.
Overwey/Alice Holt (Clark 1950; Lyne & Jefferies 1979).
10. Very hard, semi-vitrified grey fabric with very fine sand and occasional larger black, brown and white inclusions. With polished external surfaces and a hackly texture on breaks.
Rowlands Castle Ware (Hodder 1974).
11. Black, handmade fabric with coarse, up to 1.00 mm grain

size white quartz sand, and occasional larger shale, grog and chert inclusions.

Dorset BB1.

12. Black to brown-fired imitation of BB1. Hand-made and differing from the original in having sub-angular flint-based brown sand temper and occasional ironstone inclusions. Very rare at Bignor.

Probably manufactured in East Sussex (Lyne forthcoming).

13. Very fine-sanded grey ware with darker surfaces. Another very rare fabric. Possibly a Thameside product (Monaghan 1987).

14. Hand-made brown-black fabric with coarse up to 2.00 mm grain size angular and sub-angular grog of similar colour as well as chert and ironstone inclusions. Facet-burnished or rough-smoothed surfaces.

East Sussex Ware (Green 1980; Lyne forthcoming).

15. Miscellaneous grey wares. This is a dump category for a small number of poorly defined coarse fabrics.

16A. Very fine-sanded grey or buff fabric with crushed black iron slag or ironstone, chalk and fired clay grog tempering. Some vessels are wheel-turned and others hand-made. A similar but coarser ware occurs on sites in the Chilgrove Valley but, in view of the similarity of some of the inclusions to those in Hardham Fabrics 1A and B, it is possible that the Bignor vessels are of similar local origin.

16B. Coarse hand-made version of Fabric 16A with up to 1.50 mm diameter rounded buff-white inclusions, 0.50 mm angular flint grit and rounded brown grog and up to 3.00 mm rounded grey-black inclusions. Two vessels are known from the late-4th-century deposit Trench A (1988), Context 75. One is fired grey-black with facet-burnished surfaces and the other oxidized dirty brown-orange.

16C. Oxidized, hand-made orange fabric with rounded quartz sand temper [up to 1.00 mm].

17. South Gaulish Samian. Hard, red fabric with minute yellow flecks and high red surface gloss.

18. Central Gaulish Samian. Slightly micaceous red fabric with orange-red slip of variable glossiness.

19A. East Gaulish Trier Samian. Flaky pale orange pitted fabric with thin, poor quality orange slip.

19B. East Gaulish Argonne Ware. Fine orange fabric with polished orange slip.

20. Fine grey fabric with polished, metallic brown colour-coat decorated with barbotine (?) dog chasing stag between rouletted bands. Three sherds from one vessel were found in Trench A (1988), Context 125, and may come from the same source as copies of Dr 31s and 38s being supplied to Chichester during the late 3rd and 4th centuries (Young 1981, 289). Other vessels, including a Dr 38 copy, came from a deep ritual shaft at Findon, excavated by Dr Ratcliffe-Densham in 1971. It is possible that

these wares were being produced at Findon, as the very considerable quantity of pottery from the shaft included at least one grey ware waster and a sample of prepared potter's clay.

21. Nene Valley colour-coated ware.

22. Hard, dark grey, semi-vitrified fabric with purple, metallic colour coat.

New Forest (Fulford 1974, fabric 1A).

23. Micaceous orange fabric with very fine red and black inclusions and applied reddish-orange to brown colour coat. Oxfordshire (Young 1977).

24. Very fine, thin, grey fabric with metallic brown-black colour coat.

Moselkeramik.

The pottery assemblages

c. 43-100

The earliest uncontaminated assemblages were from 1985 Trench V, Contexts 11 and 12 which antedated the baths. These pot groups are very small however, having a mere four sherds between them, but including a South Gaulish Samian Dr 18/31 dish fragment.

c. 100-220

The earliest of the assemblages analyzed is from 1985 Trench X, Context 2 (hereafter 85X/2). There were rim fragments from at least 79 vessels, giving an EVE of 7.55 (Table 4 on microfiche p. m19). The pottery content is mainly of 2nd- to early-3rd-century date, although a little earlier material is also present.

The assemblage is totally dominated by the coarse Hardham/Wiggonholt kiln fabrics 1A, B, D and E, which between them account for 84.6% of all the non fine-ware elements. A heap of pottery wasters was excavated at the Hardham posting-station in 1926 and further quantities of similar material were found at Wiggonholt nearby (Winbolt 1927; Evans 1974). A kiln which produced a grey ware found at Lickfold, just north of Wiggonholt in 1955 (Evans 1974, 106), and two kilns of early-2nd-century date were excavated at Wiggonholt itself. These latter kilns were producing cream-coloured flagons, lamp-holders, bowls and platters.

Very small amounts of coarse ware from other production centres were also present. Alice Holt accounted for 2.5%, Rowlands Castle for 2.0%, BB1 for 1.4% and East Sussex Ware for 0.8% of the coarse pottery. The source or sources of the remaining 8.7% is unknown. Where dateable, nearly all the pottery from these other sources is of latest-2nd-/early-3rd-century character and may indicate that they began to be traded as the Hardham/Wiggonholt pottery industry went into sharp decline c. 200, but before the rubbish in Context 85X/2 had finished accumulating.

During the period 70-130, the kilns at Hardham had also been producing fine, black micaceous 'London Ware' bowls as well as red ware imitations of South and Central Gaulish Samian forms, but with rouletted decoration instead of appliqués (Winbolt 1927, pl. II). None of these fine wares were present in the 85X/2 assemblage, but several fragments from a Hardham 'London Ware' Fabric 1C bowl came from Trench 85R, Context 2. Other examples are known from Chichester (Pilmer 1956, fig. 11-6, 275), and elsewhere in Sussex. Vessels

with similar compass-scribed and combed decoration were also manufactured by the Thameside industry and in London during the same period (Monaghan 1987, 174; Marsh & Tyers 1976, 234). Trench 85W, Contexts 1, 12 and 18 produced residual sherds from a jar in the coarser but otherwise identical Hardham Fabric 1D.

c. 220-300

The second of the analyzed assemblages is from 1985 Trench W, Context 12 (hereafter 85W/12). The content is mainly of mid- to late-3rd-century date, plus a little intrusive early-4th-century material.

With rim fragments from more than 50 vessels making an EVE of 8.84, this is a good statistical sample (Table 5 on microfiche p. m20). It shows that the Hardham/Wiggonholt kilns had declined considerably in importance by this time and that most pottery was at that time coming from more distant sources. The biggest single supplier of coarse pottery to Bignor was now the Rowlands Castle industry on the Hampshire/Sussex border. Previous work on the industry's marketing zone has highlighted its eastern bias (Hodder 1974). It was postulated that the wares were traded along Stane Street north-east from Chichester and, with Bignor just to one side of that route, this would explain the large quantities of the fabric present in the 85W/12 assemblage. It is equally likely, from analysis of pottery groups from the Chilgrove and Sidlesham villas, as well as from Slindon, that the Rowlands castle potters were also trading large quantities of wares along other routes east, north and south of Chichester.

The second most important pottery source was Alice Holt, supplying a variety of vessel types from a kiln complex in the north-west corner of the Weald, on the Hampshire-Surrey border (Lyne & Jefferies 1979).

The Rowlands Castle and Alice Holt ranges of products were very different. Rowlands Castle produced an exceedingly limited range of pot forms which owed nothing to preceding native traditions. The forms were totally dominated by a simple, utilitarian cooking-pot form with stubby, everted rims, in the high-temperature-fired, competent grey sandy ware characteristic of the industry. The Alice Holt forms were of far greater variety and executed in a somewhat softer fine grey ware which, after c. AD 270 were decorated with bands of white-firing slip, which could also be made to fire black at slightly lower temperatures.

This Bignor assemblage can be compared with ones of similar date from Wiggonholt (Evans 1974), a short distance away on the east side of the River Arun. This site is only slightly further away from Stane Street than Bignor, but the late-3rd- to early-4th-century assemblage from Site B shows a very marked reduction in the quantities of Rowlands Castle Ware present, whereas the percentage of Alice Holt pottery is very similar to that from contemporary Bignor. It would appear that the River Arun formed something of a barrier to eastwards Rowland Castle pottery trade, and there is further evidence for this further south where a large, mainly 3rd-century assemblage from the field walking in 1974 of a site at Slindon, gave a reading of 43% of that ware, whereas the similarly dated Belloc Road ditch in Littlehampton, east of the river, yielded only 9.4%.

The large quantities of miscellaneous grey ware present at Wiggonholt probably originate for the most part from a local source, a small-scale successor to the important late-1st- and

2nd-century Wiggonholt pottery industry. The Arun once more seems to have formed something of a barrier, this time to most of the westerly trade from these kilns.

Both the Bignor 85W/12 and the Wiggonholt Site B assemblages include small quantities of handmade Dorset Black-Burnished Ware. Examination by the author of numerous 3rd- and 4th-century Sussex pottery assemblages has shown the existence of considerable coastal trade in this commodity, at least as far east as Pevensey. Large percentages are found at Chichester and Pevensey, as well as at sites near the mouths of the rivers Arun and Adur in between. The Belloc Road ditch near the south of the Arun gave a reading as high as 32.5%. Although there is a rapid reduction in quantities of BB1 away from the Sussex Coast, it is present on virtually all late Roman sites in the county.

c. 300-400+

The other two Bignor assemblages analysed, from Room 58, Trench A (1988), Contexts 75 and 125, are mid- to late 4th century in date. The pot groups are too small individually to be statistically viable, and even taken together fall short of the minimum requirements for EVE analysis. Nevertheless, a picture is clearly given of a massive increase in the amounts of Alice Holt wares being supplied to Bignor, to 57% (Table 6 on microfiche p. m20).

A pottery industry differing in several unusual respects from the immediately adjacent Alice Holt/Farnham one was supplying the site at Six Bells, Farnham (Lowther 1955). The ware is coarsely tempered and the dishes often hand-made with external fettling. The tournette-turned beaded and flanged bowls copy Alice Holt forms, even to the extent of sometimes having white or black slip applied internally but, like the simple unslipped everted rim jars from this source, are much more roughly finished. A jar and a dish are present in this Bignor assemblage and probably came in with the more orthodox Alice Holt material.

There is a marked decline to 19.3% in the percentage of Rowlands Castle Ware present, supporting the evidence from Chichester and elsewhere that the industry went into sharp decline in the last years of the 3rd century and ceased production around 370. A late-4th-century assemblage from Lickfold bathhouse at Wiggonholt (Evans 1974), shows the continued inhibiting effect of the Arun Valley on Rowlands Castle Ware marketing. Whereas the percentages of Alice Holt Ware are very similar on both sites, the Wiggonholt assemblage had only 0.4% Rowlands Castle Ware present.

Vessels in the crude hand-made fabrics 16B and C, the products of the (?)cottage industries, make up more than 15% of the coarse ware assemblage. Sussex west of the Arun is sandwiched between the 4th-century marketing zones of the handmade grog-tempered wares of East Sussex and the Hampshire Basin. The East Sussex grog-tempered wares are just present in the late-4th-century material from the Lickfold bathhouse at Wiggonholt and the grogged wares from the Hampshire Basin in small quantities at Chichester and downland sites to its north. The hand-made Chilgrove Wares and the Bignor material seem to represent the West Sussex equivalent of these larger industries and, like them, become increasingly significant during the later 4th century.

The drawn material (Figs. 42-5)

Entries for Samian fragments marked * are by Joanna Bird.

1985 Trench X, Context 2: Upper ditch fill (Fig. 42)

1. Jar in grey-black Fabric 1D fired rough black.
2. Bead-rimmed jar in dirty, medium-grey Fabric 1B.
3. Jar with rolled-over rim in grey Fabric 1A. Paralleled at Wiggonholt (Evans 1974, fig. 14-92).
4. Everted rim jar in medium-grey Fabric 1B fired flecky grey-black.
5. Jar base fragment in grey Fabric 1B with concentric grooves on underside.
6. Everted rim jar in blue-grey Fabric 8B.
7. Fragment from grey Fabric 10 jar with 'batch mark' incised before firing.
8. Necked bowl in medium grey Fabric 1B.
9. Flat-rimmed bowl in blotchy black-orange-grey Fabric 1B.
10. Lid-seated bowl rim in hard, blue-grey Fabric 1B. Similar but more usually reeded or plain-rimmed forms are present at Usk and Exeter between 55 and 70 (Darling 1977, fig. 6.4-19 & 6.12-14), in the earliest, Flavian, occupation at Gloucester

(Darling 1977, fig. 6.11-11) and in the late 1st- to early 2nd-century Legionary Ware range at York (Perrin 1977, fig. 7.1-8).

11. Flanged bowl in pale blue-grey Fabric 1A. Paralleled at Hardham (Winbolt 1927, pl. VI-31).
12. Flanged bowl in pale blue-grey Fabric 1B fired dirty brown-grey.
13. Incipient-beaded-and-flanged bowl in buff-brown, sandy Fabric 15, fired black externally and over rim. Copying BB1 form dated c. 220-270.
14. Straight-sided dish in dirty grey-black Fabric 11, fired buff with black surfaces.
15. Beaker rim in medium grey Fabric 1B, fired dirty brownish-grey.
16. Everted neck-cordoned beaker rim in orange-cored brown-grey Fabric 1B.
17. Flagon neck in orange-cored buff-brown Fabric 1E with double-reeded rim.
18. Triple-reeded flagon handle in similar fabric.

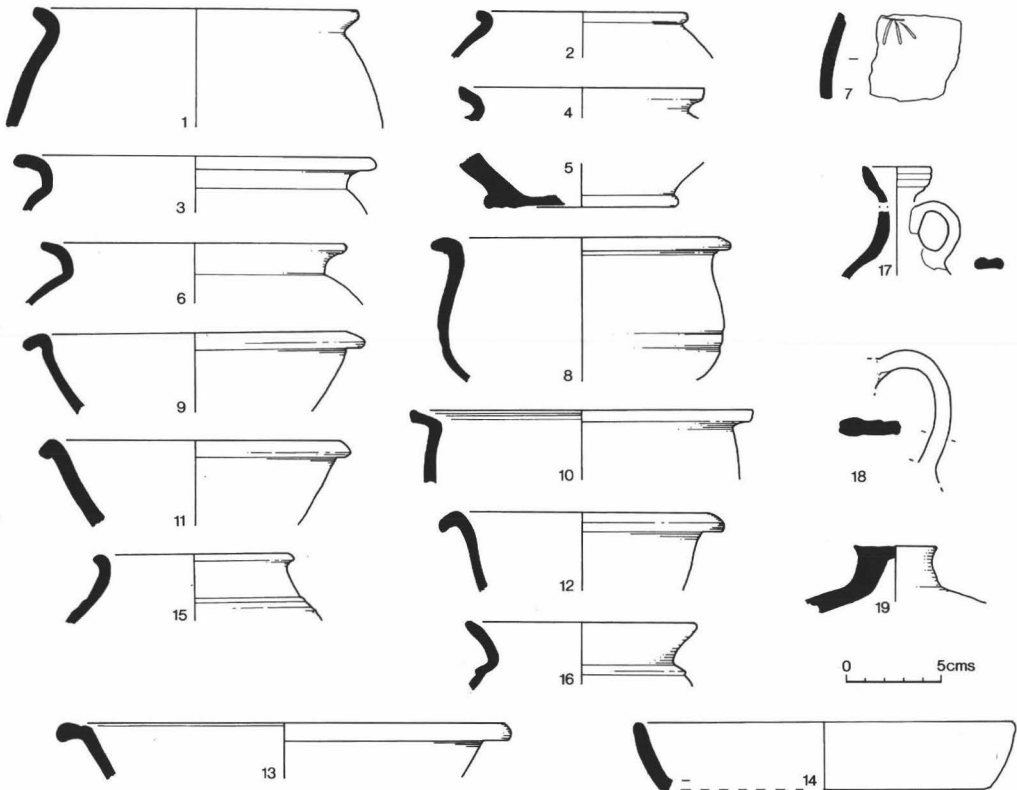


Fig. 42. Roman pottery (1/4).

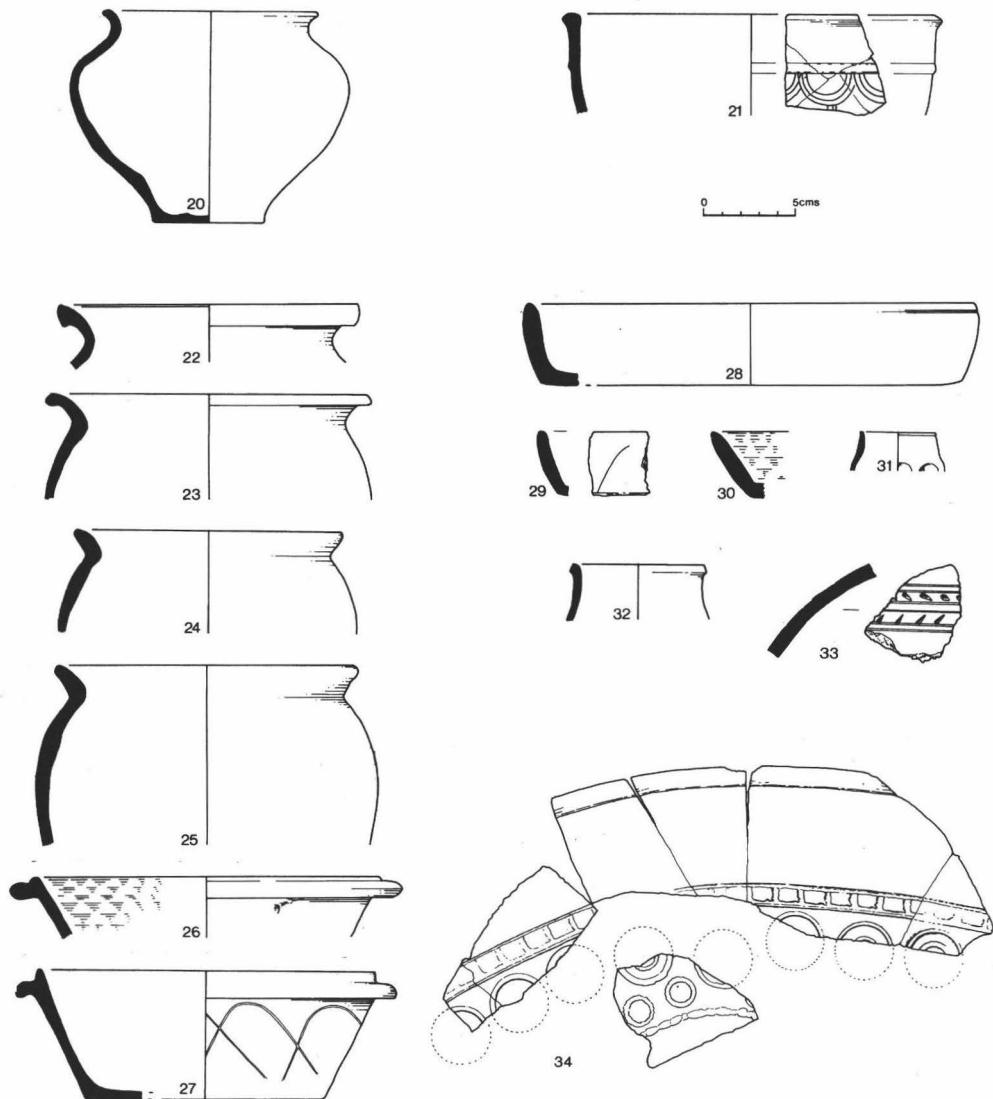


Fig. 43. Roman pottery (1/4).

*This layer also produced the following Samian Ware fragments:

Dr 18, South Gaul, Flavian.

Dech. 67, Central Gaul, Hadrianic.

Four fragments of Dr 31, Central Gaul, Antonine.

Bowl foot, Central Gaul, Antonine.

Four fragments Dr 33, Central Gaul, Antonine; two are burnt.

Two fragments Dr 36, East Gaul (both Trier). Later 2nd to mid-3rd century.

Six Central Gaulish sherds, two of them burnt.

1985 Trench X, Context 1: Plough-soil above ditch (Fig. 42)
19. Hand-made lid boss in hard blue-grey Fabric 1B with rough surfaces.

1985 Trench B, Context 18: Boundary ditch-fill (Fig. 43)
20. Almost complete Hardham jar with weakly everted rim and in blue-grey Fabric 2. 2nd century.

1985 Trench R, Context 2 (Fig. 43)
21. Bowl in micaceous black Fabric 1C with compass-scribed and vertical-combed decoration. c. 70-130.

1985 Trench W, Context 12 (Fig. 43)

22. Hook-rimmed jar in charcoal grey Fabric 8B.
23. Everted rimmed jar in medium grey Fabric 1B.
24. Everted rimmed jar in flecked grey Fabric 10.
25. Similar jar in similar fabric.
26. Incipient beaded-and-flanged bowl in micaceous, grey-black Fabric 8B.
27. Developed beaded-and-flanged bowl in black Fabric 11 with external arcaded decoration over horizontal fettling.
28. Straight-sided dish in black Fabric 11.
29. Straight-sided dish in similar fabric but with external burnished arcading.
30. Straight-sided dish in micaceous dirty grey Fabric 8B fired brown with blotchy brown-black surface.
31. Rim sherd from small New Forest beaker in Fabric 22. Fulford's type 27.12 dated 260 or later.
32. Rim sherd from beaker in micaceous grey Fabric 8B fired brown with smooth black surfaces.
33. Body sherd from storage jar in grey Fabric 1B with stabbed shoulder cordon.

*34. Dr 37, Trier. The ovolo and basal band of astragalus ornament occur regularly on bowls of the Censor group (*cf.* Folzer 1913, Taf. 16), and the fine bead row, sometimes blurring into a straight line, shown by Folzer is probably that on the Bignor bowl. The arrangement of the medallions is unclear and may be irregular — there are at least three plain single medallions (Gard 1937, type K9) together, and at least two double medallions (probably Gard type K8) together. Both types of medallion contain a corded ring (Gard type K18), and the ring also fills the spaces beneath them. The general style suggests a later potter, working in the tradition of the Censor group, while the pale fabric, poor slip and high (52 mm) band between decoration and rim indicate a date after *c.* AD 225. The bowl is badly worn and pitted, the slip almost completely gone.

The layer also contained the following other Samian sherds:

Lud. Tx with rosette stamp, probably Central Gaulish and late Antonine.

Dr 31 (R), Central Gaul, mid-late Antonine.

Dr 31, East Gaul, Antonine to early 3rd century.

Dr 31/Lud. Sa, Sb, East Gaul (Trier), later 2nd century to mid-3rd century; worn slip.

Dr 31/Lud. Sa, Sb, base, East Gaul, later 2nd century to mid-3rd century.

1988 Trench A: The baths sequence (Fig. 44) Period 1. Context 101

35. Body sherd from Alice Holt Class 9 storage jar in grey Fabric 8A with graffiti incised before firing. Probably 2nd century.
36. Body sherd from poppy-head beaker with barbotine decoration, in Fabric 7B. 2nd century.

*37. Dr 37, Central Gaul, probably by a potter of the Sucer-Attianus group. For a similar arrangement of the rings, *cf.* Stanfield & Simpson 1958, pl. 86, no. 10; the small double medallion is on pl. 86, no. 10. Hadrianic to early Antonine.

Period 2: First masonry structure

38. Rim sherd from everted rim jar in pinkish Fabric 10 fired hard grey. 2nd-3rd century. Context 70.

39. Rim sherd from Class 3B Alice Holt jar in grey Fabric 8C with white slip. *c.* 270+. Context 70.

40. Rim sherd from fine, sanded, pink mortarium. Probably from source in south-east Britain. Pre-270. Context 70.

*- Body sherd from (?) Argonne Ware bowl. Context 70. *c.* 270-425+.

41. Class 3B-9 Alice Holt jar in grey Fabric 8B with polished self-slip. *c.* 200-270. Context 78.

42. Incipient beaded-and-flanged bowl in black Fabric 11. *c.* 220-280. Context 68.

43. Mortarium in buff, fine-sanded Verulamium Fabric. *c.* 120-160/180. Context 78.

Period 3A and later: The baths

44. Rim jar in fabric 8D fired hard blue-grey. *c.* 270-400+. Context 75.

45. Alice Holt Class 3C-1 jar rim in grey Fabric 8B. *c.* 220-270+. Context 75.

46. Alice Holt Class 3B jar rim in grey Fabric 8C with applied white slip. Context 75. *c.* 270-400+.

47. Alice Holt Class 3B jar rim in similar fabric to the above. *c.* 270-400+. Context 75.

48. Latticed body sherd from Alice Holt Class 3B jar in grey Fabric 8C. Context 75.

49. Crude, hand-made jar in lumpy, orange Fabric 16B with internal surface cracking. Context 75.

50. Alice Holt Class 6C-1 beaded-and-flanged dish in grey-black Fabric 8C with internal black slip. *c.* 330-300+. Context 75.

51. Basal sherd from Alice Holt Class 5B bowl in Fabric 5C with internal black slip and linear burnished pattern on underside in imitation of those on contemporary BB1 beaded-and-flanged bowls. *c.* 270-400+. Context 75.

52. Rim sherd from Alice Holt class 6A-12 straight-sided dish in grey Fabric 8C with internal white slip. *c.* 270-400+. Context 75.

53. Hand-made straight-sided dish rim in orange Fabric 16C with scribed loops on exterior. Context 75.

54. Alice Holt Class 3C jar rim in grey Fabric 8B. *c.* 220-400+. Context 125.

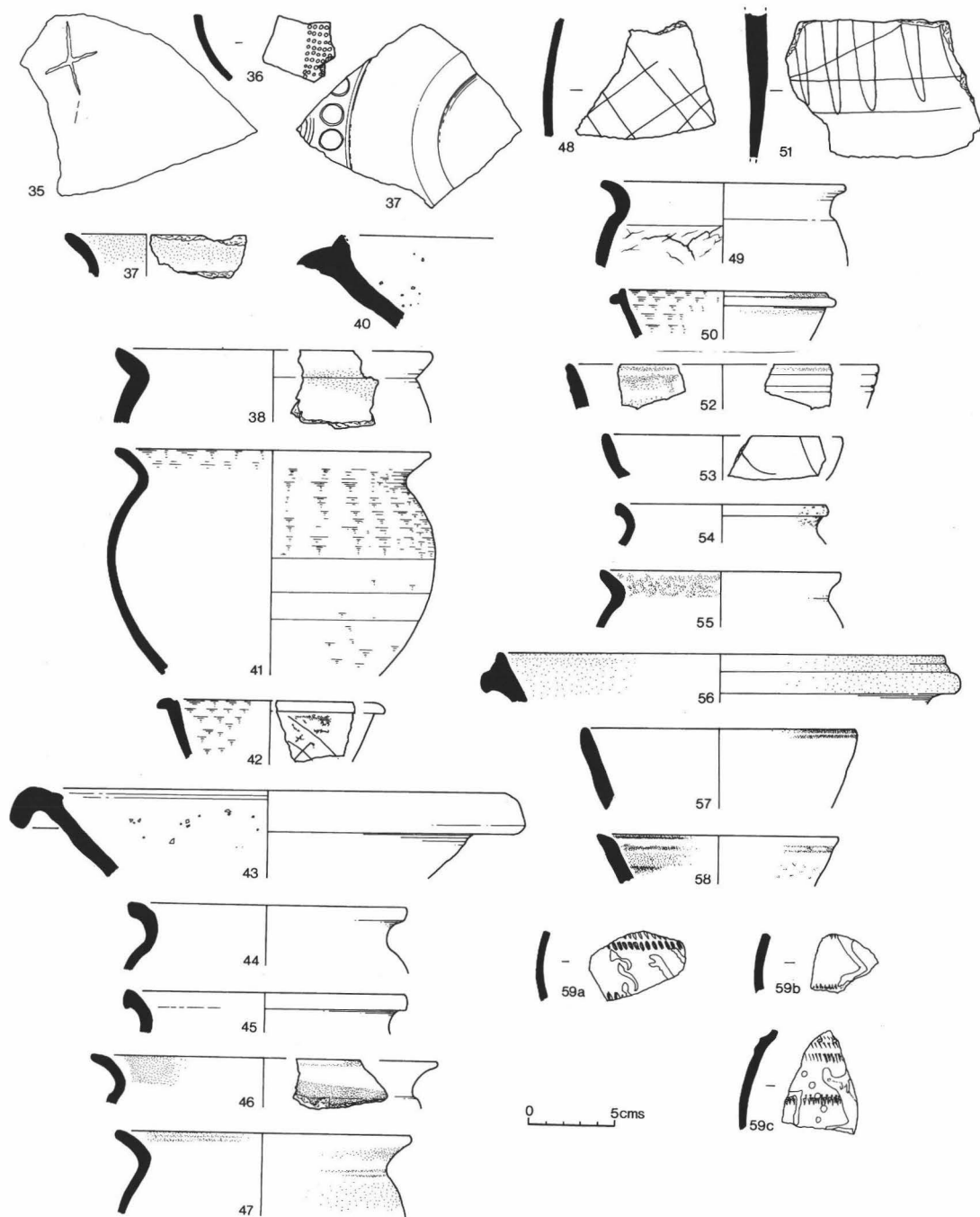


Fig. 44. Roman pottery (1/4).

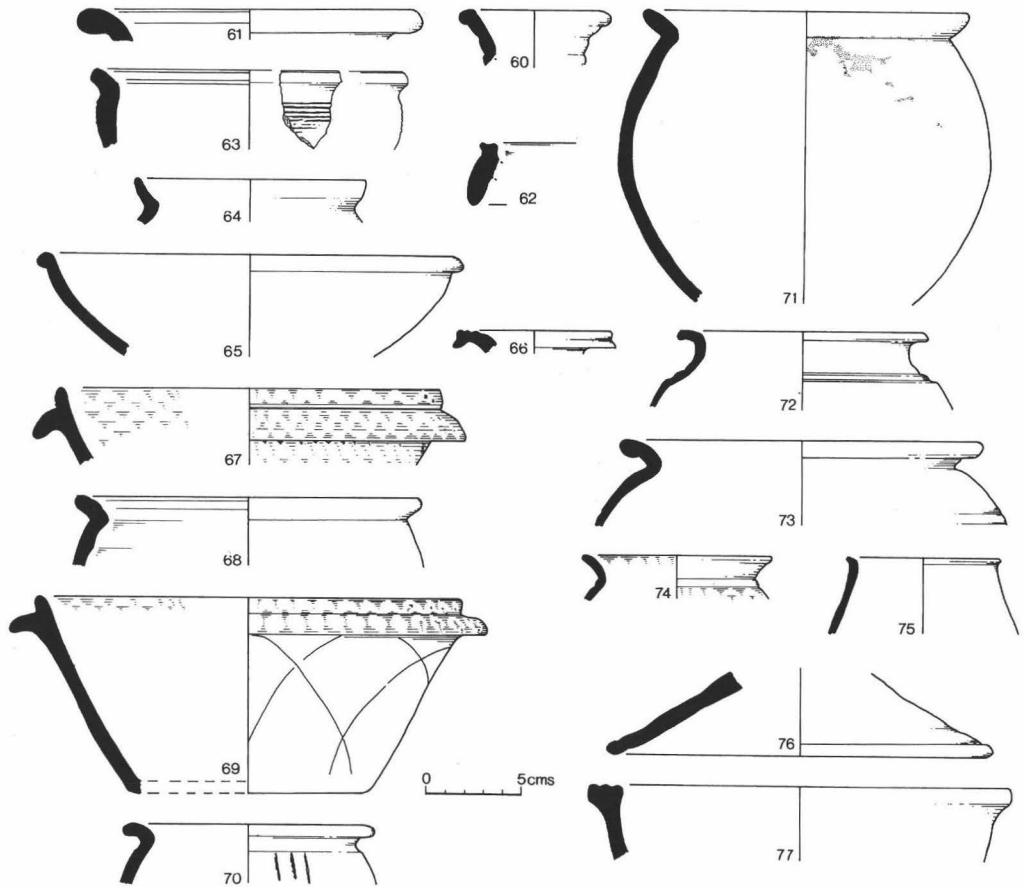


Fig. 45. Roman pottery (1/4).

55. Rim sherd from Rowlands Castle Ware cooking pot in grey Fabric 10. The more than usually developed everted rim with slight vertical rim edge flattening suggests that this is a late example from that source, and could be 4th century in date. Context 125.

56. Rim sherd from Alice Holt Class 5B-8 bowl in Fabric 8C with internal white slip extending over flange. *c.* 270-400+. Context 125.

57. Rim sherd from dish in coarse grey Fabric 8D with internal slate-coloured slip. *c.* 270-400+. Context 125.

58. Rim sherd from dish in grey Fabric 10. 2nd to early 3rd century in date, and therefore residual in this context. Context 125.

59. Three body sherds from beaker in grey Fabric 20 fired orange-brown with polished exterior surfaces. Barbotine decoration of (?) hounds chasing stag. A similar fabric was noted in late contexts at Chichester (Young 1981, 289). Late 4th century. Context 125.

Miscellaneous (Fig. 45)

60. Flagon neck in rough grey Fabric 1B. 2nd century. Context 86A/117.

61. Storage jar rim in coarse, grey, gritty Fabric 15, fired slightly darker. This may be a late-1st- to 2nd-century aberrant Alice Holt Class 9 vessel. Context 86A/71.

62. Mortarium with upright rim and downward-pointing flange, in buff-orange fine-sanded fabric with a black core from burning. Possibly a Verulamium product but the re-firing makes this uncertain. *c.* 180-250. Context 86A/71.

63. Rilled bowl in Hardham Fabric 1B. Paralleled at Hardham (Winbolt 1927, pl. VIII-18). Context 85R/1.

64. Lid-seated jar rim in Hardham Fabric 1B. Context 85L/1.

65. Oxfordshire C.45 dish in orange Fabric 23. *c.* 270-400+. Context 85L/1.

66. Flagon rim in grey-cored orange Fabric 1E. 2nd century.

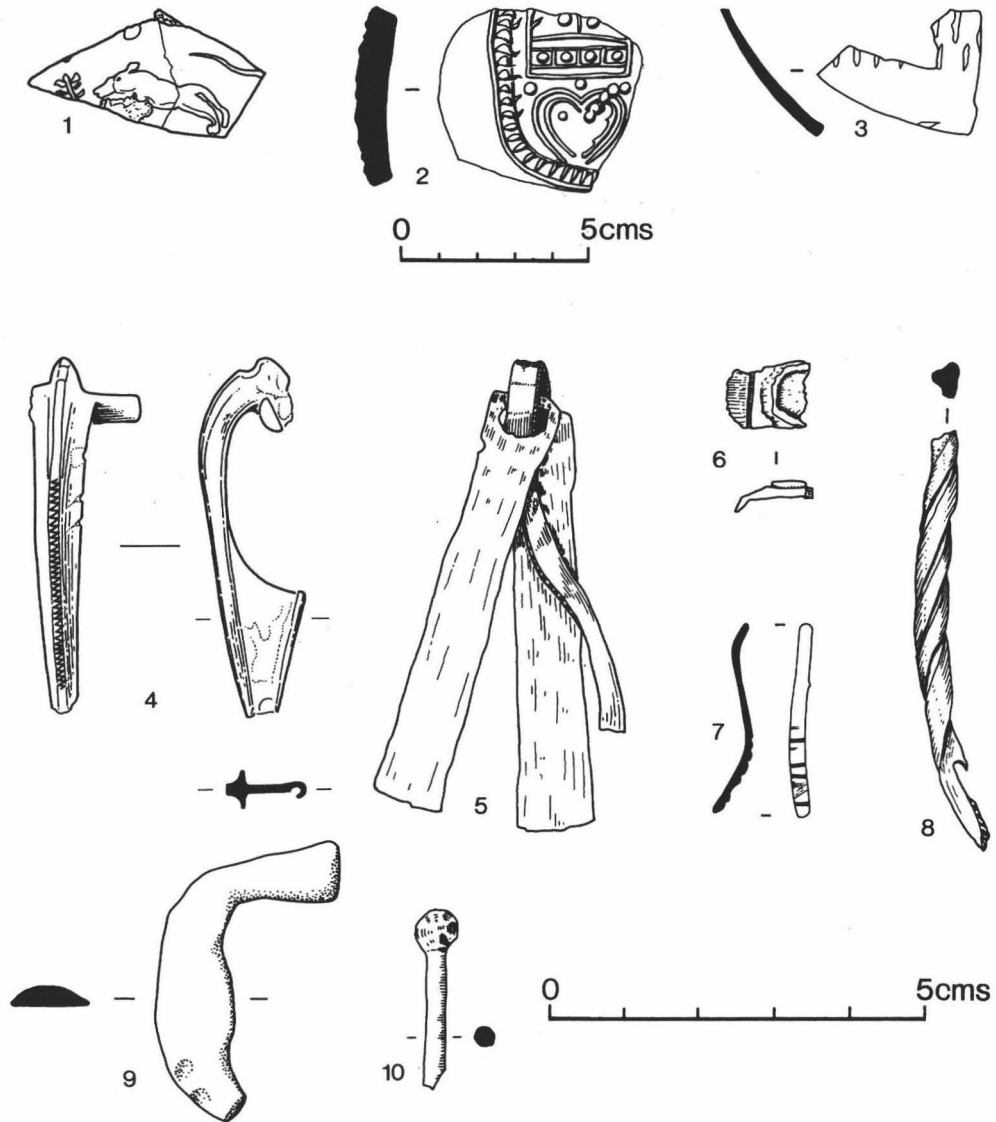


Fig. 46. Samian, Stoneware and Glass (1/2); Copper-alloy and Bone (1/1).

Context 85L/3.

67. Beaded-and-flanged bowl in dirty brown Fabric 15, fired glossy black. Context 85L/7.

68. Reeded Rowlands Castle jar rim in grey Fabric 10. 2nd century-early 3rd century. Context 86C/15.

69. Developed beaded-and-flanged bowl in black Fabric 11. c. 240-300. Context 86C/20.

70. Rowlands Castle cooking pot in grey Fabric 10 with batch mark on the shoulder. 2nd century. Context 86C/21.

71. Similar cooking pot, also in Fabric 10. Context 86C/20.

72. Cordoned jar in hard grey Fabric 6. Late-2nd-century form. Context 86C/20.

73. Everted-rim jar in Hardham-Wiggonholt Fabric 1A. 2nd century. Context 86C/20.

74. Alice Holt Class 2-1 pedestalled beaker in grey Fabric 8B. c. 150-270. Context 86C/20.

75. Thameside beaker rim of Monaghan's Class 2C and in Fabric 13. c. 220-250. Context 86C/20.

76. Lid in dirty grey, handmade Fabric 5 fired black. This may be an Alice Holt product as a few 2nd-century Class 6A dishes and Class 7 lids from that source were handmade. 2nd century. Context 86C/20.

77. Reeded bowl rim in cream-buff Fabric 3. 2nd century. Context 85VA/9.

*78. Fragment from Central Gaulish Dr 37. The bear, Oswald type 1627, occurs regularly on bowls in the Cinnamus group. The leaf is too broken to identify certainly, while the other motif is probably a horn (*cf.* Rogers types U239-262). Antonine. Trench 85VA, Context 9. (Fig. 46:1).

Amphorae By David Williams

Three sherds were submitted for examination. None can be positively identified, and none are illustrated in this report.

79. Part of the neck of an amphora, possibly the flat-bottomed Southern Gaulish form Pélichet 47/Gaulise 4. This type was imported into Britain soon after the early 60s AD until at least the early 4th century. During the 2nd century it became the most common wine amphora imported into Roman Britain (Peacock & Williams 1986, Class 10). Context 85VA/23.

80. Part of the neck of an amphora or large flagon. Probably South Gaulish fabric. Context 85W/14.

81. Body sherd from an amphora or large flagon. Probably South Gaulish fabric. Context 85X/2.

c) Medieval and post-medieval pottery

The post-Roman pottery indicates cultivation from the 12th century onwards. The medieval sherds are all fairly small and abraded. All the post-Roman pottery is recorded on the pottery spot-dating recording sheets which form part of the Archive.

One piece of post-medieval pottery is of particular interest and has been examined by Clive Orton who provides the following report.

82. Body sherd decorated with a medallion from a bellarmine in Frechen Stoneware; probably first half of the 17th century. The medallion (a Coat of Arms) is a common one in the London area. Unstratified (1987). (Fig. 46:2).

THE GLASS By John Shepherd

A total of 85 fragments of glass were recovered from the 1985 and 1990 excavations, and of these just 15 are identifiable as being Roman. The remainder are all post-medieval in date, some being as late as the 19th or 20th centuries.

The Roman assemblage is very fragmentary, but contains at least three vessel types for which further comment is possible. The first of these comes from a high quality, colourless bowl (Cat. No. 1) decorated with wheel-cut horizontal lines and rice-grain vertical facets of a type well-known among assemblages dating to the late 2nd and 3rd centuries. Vessels of a similar type, but with different arrangements of horizontal

wheel-cut lines and facets come from York (Harden 1962, 137, fig. 88:HG 205.1), Corbridge (Charlesworth 1959, 44, fig. 3:6) and Caistor-by-Yarmouth (Price & Cool forthcoming, nos. 4 & 5). A small group of bowls of an associated type were found together at Verulamium (Charlesworth 1972, 208-10, fig. 78:48-51) and may indicate that such bowls were used in matching sets.

The other two recognizable forms, the square-sectioned bottle (no. 4) and the cylindrical bottle (nos. 5-6) are well-known among assemblages dating to the late 1st or 2nd centuries. In the north-west provinces, the square-sectioned bottles can be found in almost every assemblage of that date, functioning as a container for liquid or semi-viscous commodities such as foodstuffs or cosmetics. The associated cylindrical bottle, while fulfilling the same function, can be dated primarily to the late 1st to early 2nd centuries — a period when the repertoires of the glassworkers were at their broadest.

Also represented are two small fragments (nos. 2 & 3) from the necks of narrow-necked vessels such as bottles, flasks or flagons. The colour of the glass suggests a late-1st- to early-2nd-century date for both.

None of the post-medieval fragments deserves further description. A catalogue of all 70 such fragments, however, forms part of the Archive.

The catalogue

1. Fragment from the lower part of a bowl; good colourless glass. Free-blown, decorated with a horizontal wheel-cut line with, above, a zone of vertical rice-grain shaped facets and, below, a zone of facets of similar shape but aligned horizontally. Late 2nd or 3rd century. Trench 85W, Context 18. (Fig. 46:3).

2-3. Two fragments from different vessels, of free-blown natural greenish-blue glass from the necks of flagons, flasks or bottles. Late 1st or 2nd century. Trench R, Context 2; Trench 85W, Context 1.

4. Fragment of natural greenish-blue glass from the body of a square-sectioned bottle (Isings 1957, 63, form 50). Mould-blown. Late 1st or 2nd century. Trench 85W, Context 1.

5-6. Two fragments of free-blown, natural greenish-blue glass from the bodies of cylindrical bottles (Isings 1957, 67, form 51). Late 1st or early 2nd century. Trench 85W, Context 12; Trench 85X, Context 2.

7-10. Four fragments of natural greenish-blue glass from free-blown vessels of indeterminate form. Roman. Trench 85B, Context 17; Trench 85W, Context 1 (2 fragments); Trench 85W, Context 18.

11-14. Four fragments of natural greenish-blue window glass of the cast, matt/glossy variety. Roman. Trench 85W, Context 1; Context 14 (x2); 1990 Trench III, Context 1 (x2).

15. Fragment of natural green window glass of the cast, matt/glossy variety. Roman. Trench 85W, Context 4.

THE COINS By David Rudling

a) Roman

1. Hadrian, AD 117-138. Ae Sestertius.

Obverse: [IMP CAESAR TRAIAN]VS HAD[RIANVS AVG], Bust, laureate, right, undraped.

Reverse: Legend worn flat, Fig. standing left.

This coin is very worn and is not likely to have been lost before the end of the 2nd century, and perhaps not until the middle of the 3rd century. Trench 85W, Context 1.

2. Gordian II, Africanus, AD 238. Ar Denarius. Mint of Rome. Obverse: IMP.M.ANT.GORDIANVS AFR.AVG., Bust, laureate, draped and cuirassed right.

Reverse: VICTORIA AVGG, Victory walking left, holding wreath and palm. Reference: *R.I.C.* 2. Some signs of wear on the raised surfaces; probably lost before c. AD 250.

Trench 85W, Context 3.

3. Gallienus, AD 253-268. Ae Antoninianus. Mint of Rome. Obverse: GALLIENVS AVG, radiate head right.

Reverse: DIANAE CONS AVG, antelope walking left.

Mint Mark: XII.

Reference: *R.I.C.* (sole reign) 181. Signs of wear on the raised surfaces.

Trench III (1990), Context 1.

4. Maximianus Herculeus, AD 286-305. Silvered Antoninianus c. AD 286-294. Mint of Lugdunum.

Obverse: IMP MAXIMIANVS AVG, Bust, radiate, cuirassed right.

Reverse: VIRTVS AVGG, Soldier standing left holding olive branch and spear; beside him, shield. Mintmark: 111.

Reference: *R.I.C.* 447. Some signs of wear on the raised surfaces; probably lost before c. AD 300.

Trench 85W, Context 4.

b) Post-medieval

5. George III. Copper halfpenny. Dated 1775.

Trench 85L, Context 1.

6. Napoleon III, Emperor of France. Bronze 5 centimes. Dated 1855. Mintmark: W.

Trench 85C, Context 1.

BROOCH By Don Mackreth

Colchester Derivative (Fig. 46:4)

The spring was held by means of an axis bar through the lower of two holes in a plate behind the head of the bow, the chord passed through the upper one. The plate was continued over the head to form a skeuomorph of the hook on a Colchester. The surviving wing is plain and curved to seat the spring. The bow has a flat central face, with rocker-arm ornament along it, between bordering hollow chamfers. The catch-plate is obscured by corrosion accretions, but the back seems to show a triangular piercing, the edge next to the bow being concave.

Belonging to one of the first successors of the Colchester itself, the spring-fixing arrangement is characteristic of the eastern part of England and, like the design of the brooch itself, is largely confined to the same distributional area as the parent. Variants are few, the chief ones being a groove down the central face (e.g. Cunliffe 1968: 79, pl. XXXVII:18). The rocker-arm decoration is sometimes applied to the concave faces on either side of the bow (e.g. Frere 1984, 23, fig. 6:25). This might link with another pattern in which the imitation hook is carried as a ridge right to the foot, the decoration placed on each side with a consequent broadening of the flat front leaving the side faces only as a minor groove or step bordering the bow (e.g. Canterbury excavations, unpublished). The latter style seems to be confined to the area south of the Thames, chiefly

in Kent and Sussex.

Dating is relatively limited and only one definitely points to the development of the type as having taken place before the Conquest: Skeleton Green where, however, the deposit was ambiguous in its stratigraphic relationships (Partridge 1981, 35 & 137, fig. 69:25), but where the whole collection can be closed at c. AD 45. Otherwise, the dating is Bromham, Bedfordshire, said to be AD 5-35 (Tilson 1973, 56, fig. 28:278); Verulamium up to (?)c. AD 50 (Wheeler & Wheeler 1936, 207, fig. 44:22); Camulodunum, two examples, AD 43-61 (Hawkes & Hull 1947, 310, pl. XCI:36-7); Colchester, AD 43-50/55 (Crummy 1983, 12, fig. 6:50); Baldock, AD 50-70 (Stead & Rigby 1986, 112, fig. 44:79); Verulamium, redeposited Boudiccan fire debris (Frere 1984, 23, fig. 6:24), AD 55-61 (Richardson 1944, 91, fig. 4:3), AD 60-61 (Frere 1984, 23, fig. 6:21); Camulodunum, two examples AD 61-65 (Hawkes & Hull 1947, 311, pl. XCI:38-9); Verulamium, AD 60-75 (Frere 1972, 114, fig. 29:8); Fishbourne c. AD 75 or before (Cunliffe 1971, 104, fig. 39:31); Chichester, Flavian (Down 1978, 279, fig. 10.26, 7); Nettleton, AD 60-117 (Wedlake 1982, 125, fig. 52:46); Baldock, AD 70-90 (Stead & Rigby 1986, 112, fig. 44:77); Richborough, AD 80-120 (Bushe-Fox 1932, 77, pl. IX:10); Baldock, AD 90-120 (Stead & Rigby 1986, 112, fig. 44:73). The tenor is that by Flavian times the type had largely passed out of use and any dating to after c. AD 75 should be residual in their deposits. The example from Bromham has probably been wrongly dated, but a start date of c. 35/40 might just accommodate it.

1986 Trench B, Context 19.

OTHER COPPER-ALLOY OBJECTS By David Rudling

1. Possibly a hinge from a small decorative box or a strap fitting (suggestions made by Mr Ralph Jackson of the British Museum). Made of two strips of metal, with one piece having a hole at one end through which passes the narrower part of the second piece. One rivet hole and traces of silvering or tinning.

Trench 85V, Context 20. (Fig. 46:5).

2. Part of a finger-ring. The bezel contains traces of white (?)paste.

Trench 85W, Context 1. (Fig. 46:6).

3. Part of a (?)ring with transverse grooves.

Trench 85W, Context 12. (Fig. 46:7).

4. Part of a three-strand cable armllet. At Colchester the majority of copper-alloy armllets date to the late 3rd and 4th centuries (Crummy 1983; 37).

Trench 85W, Context 12. (Fig. 46:8).

5. Part of a round-cornered shoe buckle. 18th century. (cf. Read 1988, fig. 51:8 & 9).

Trench 85L, Context 1. (Fig. 46:9).

6. Not illustrated. Strip fragment: 37 mm × 9 mm × 5 mm.

Trench 85W, Context 1.

7. Not illustrated. Strip fragment: 16 mm × 5 mm × 2 mm.

Trench 85W, Context 18.

8. Not illustrated. Part of a rod: 6 mm in diameter. Copper-alloy surface, iron core.

Trench 85W, Context 18.

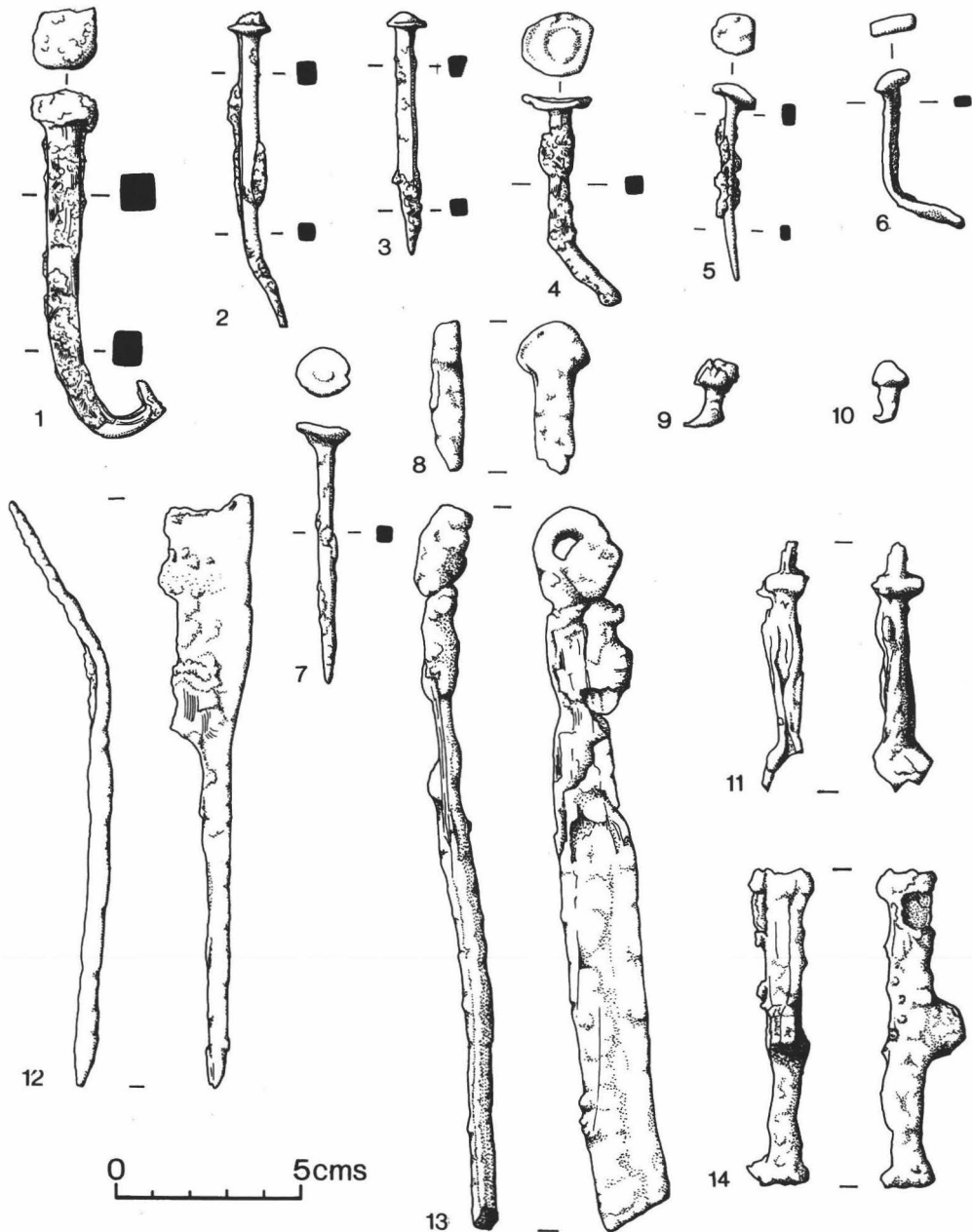


Fig. 47. Iron (1/2).

9-12. Not illustrated. Single sheet fragments were recovered from: Trench 85B, Context 1; Trench 85V, Context 1; Trench 85W, Contexts 1 & 4.

IRON OBJECTS By David Rudling

As at most Romano-British sites, the majority of finds made of iron at Bignor are nails. The 1985 and 1990 excavations

produced a total of 248 complete or fragmentary nails, and these include two main types: Type I, with a square-sectioned tapering stem and having a round, conical, pyramidal or flat head; and Type II, with a square-sectioned tapering stem and a triangular head (Manning 1976, 41-3). There are a number of hobnails, including 11 (perhaps from a shoe or shoes) from Trench 85W, Context 12. A selection of the nails is illustrated

in this report.

- 1-5. Nails of Type I.
Trench 85V, Context 1. (Fig. 47:1-5).
6. Nail of Type II; the head is flattened by hammering.
Trench 85V, Context 1. (Fig. 47:6).
7. Nail of Type I.
Trench 85W, Context 1. (Fig. 47:7).
8. Nail of Type II.
Trench 85W, Context 4. (Fig. 47:8).
9. Hobnail.
Trench 85W, Context 12. (Fig. 47:9).
10. Hobnail.
Trench III (1990), Context 3. (Fig. 47:10).

Excluding nails, there were only a few iron objects, and almost all of these come from topsoil contexts and their dating is thus uncertain. A selection are catalogued below.

11. (?)Stylus with lost tip and damaged eraser.
Trench 85B, Context 1. (Fig. 47:11).
12. Knife with long tang.
Trench 85V, Context 1. (Fig. 47:12).
13. Piece of (?)binding with rounded end pierced by a hole.
Trench 85X, Context 2. (Fig. 47:13).
14. T-staple with rounded terminals to its arms.
Trench 85L, Context 1. (Fig. 46:19).

OBJECTS OF LEAD By David Rudling

1. Steelyard weight with traces of an iron attachment hook. Compare with the similar weights from Bullock Down (Drewett 1982, fig. 54:136; fig. 55:215). Context: 1987, Wall 7. (Fig. 48:1).
2. Spindle whorl.
Trench III (1990), Context 1. (Fig. 48:2).
- 3-4. Spindle whorls.
Context: 1987, Wall 7. (Fig. 48:3-4).
5. Perforated (?)counter or weight.
Trench III (1990), Context 1. (Fig. 48:5).
- 6-7. Not illustrated. Sheet fragments.
Trench 85W, Context 1.
- 8-11. Not illustrated. Single fragments/droplets of lead were recovered from: Trench 85B, Context 1; Trench 85G, Context 1; Trench 85V, Context 1; Trench III (1990), Context 1.

BONE PIN By David Rudling

Fragment of a bone pin with hand-cut globular head.

Trench W, Context 12. (Fig. 46:10).

At Colchester pins with a more or less spherical head (Type 3) have been dated to the period c. 200 to the end of the Roman

period (Crummy 1983, 22).

THE BONES

a) Large vertebrates By Philip Armitage, David Rudling & Simon Parfitt

With the exception of the small vertebrate bones described below by Simon Parfitt, all the other bones found during the excavations in 1985 were submitted for identification to Dr Philip Armitage, who in 1985 was the Principal Keeper (Natural Sciences) at the Booth Museum of Natural History, Brighton. Dr Armitage kindly produced a catalogue of the bones and this Level II Report forms part of the Archive. Since producing the Level II Report, Dr Armitage has moved to the United States of America, and a summary report of his findings is therefore provided by David Rudling.

Unfortunately, most of the bones recovered in 1985 were from topsoil or unsealed contexts, and their archaeological dating is thus uncertain. The range of species present includes *Bos* (cattle), *Sus* (pig), *Ovis* (sheep), *Ovis/Capra* (sheep/goat), *Equus* (horse), *Canis* (dog), *Gallus gallus* (chicken), *Cervus elaphus* (red deer), *Oryctolagus cuniculus* (rabbit — post-Roman), and unidentified bird species. Table 7 (microfiche p. m21) provides a summary of the numbers of fragments of bone per species by context.

The largest sealed group of animal bones (273 fragments) was recovered from Trench 85W, Context 12 (the fill of a depression/pit). Pottery finds (see above) date this deposit to the late 3rd/early 4th century. The majority of the 160 identifiable pieces of bone belong to cattle (125 fragments or 78%). Other species present include sheep/goat (24 fragments or 15%), pig (8 fragments or 5%) and single bones (0.6% each) of deer, chicken and an unidentified bird species. Various bones from this context exhibit butchery marks (details are recorded in the Archive report) and some have spiral fracturing which was probably caused by the bones having been smashed open for their marrow. Several bones show signs of dog gnawing. The deer bone is a tine (probably the brow tine) and has a jagged base which bears several chop-marks: evidence that the tine had been hacked off the antler beam and therefore that the tine is a waste product of antler working.

In the absence of bone reports from earlier excavations at Bignor, the total assemblage of bones recovered in 1985 is of interest, even if the majority were found in unsealed contexts. Thus, Table 7 (on microfiche p. m21) clearly shows the great importance of cattle, the 267 identifiable cattle bone fragments representing 73% of the total number (366) of identifiable bone. Cattle are followed in order of quantity of identifiable bones by sheep/goat (17%), pig (5%), horse (1.6%), dog (1.1%), chicken (1.1%), deer (0.8%), unidentified bird species (0.8%), and post-Roman rabbit (0.03%). These percentage figures are very similar to those provided for the one large sealed Roman context (85W/12) discussed above. Only a very limited amount of soil was wet-sieved in 1985, and this should be borne in mind with regard to the small quantities of bird, fish and other small vertebrate bones.

The excavations at Bignor in 1990 yielded only a small quantity of bone fragments. All 114 fragments were examined by Simon Parfitt, whose detailed report forms part of the Archive. A summary of the material is presented in Table 8 (on microfiche p. m21). The bones from Trenches 90 II-IV are considered as one assemblage. The domestic animals, in order of decreasing fragment numbers, are cow, pig, horse, dog and sheep.

A complete astragalus from Trench 90 II(2) was identified as wild boar on the basis of its large size (greatest length lateral half (GLL) 53.3 mm greatest length medial half (GLM) 51 mm). The astragalus was from a large boar, with an estimated shoulder height of 980 mm using Teichert's (1969) conversion factor. In comparison, contemporary domestic pigs were generally slender, short limbed animals with a mean estimated shoulder height of about 720 mm. Corresponding astragalus lengths from British Iron Age and Roman domestic pigs range from 33-42 mm with a mean length of 39 mm.

Wild boar is only very occasionally found in British archaeological assemblages. Prior to its extinction in Britain in the 17th century (Corbett & Harris 1991), the wild boar probably had a very restricted distribution owing to forest clearance and over-hunting. In Sussex wild boar has been identified from Period I (AD 43-75) deposits at Fishbourne (Grant 1971); the Bignor and Fishbourne finds indicate that there were still areas of woodland which could support a viable population of wild boars during the Roman period.

Discussion By D. Rudling

Finds made during the 1985 and 1990 excavations indicate that the most common animal bones at Bignor are those of cattle. In comparison, bones of sheep/goat and pig are of relatively minor importance. In addition, as a source of meat the relative importance of cattle compared with either sheep/goat or pig is even larger, given the greater carcass weight of cattle. There is an obvious reliance on domesticated animals in the meat diet of the site, a small number of red deer, a wild boar, and unidentified bird species being the only hunted food present. The limited evidence available, therefore, does not support recent suggestions that during its heyday, Bignor villa was a substantial hunting lodge.

b) Small Vertebrates By Simon Parfitt

In 1985 small vertebrates were recovered from two contexts within a 2nd-century ditch (Trench 85B, Contexts 12 & 17). The following taxa were identified from the two wet sieved samples:

i) Trench B, Context 12 PISCES

Anguilla anguilla (L.), eel Vertebral centrum
(i.d. Brian Irving)

AVES

Unidentifiable small bird(s) Coracoid, radius

MAMMALIA

Neomys fodiens (Pennant), water shrew Ulna
Microtus agrestis (L.), field vole M¹, upper incisor
Arvicola terrestris (L.), water vole Femur
Apodemus cf. sylvaticus (L.), wood mouse Upper incisor
Mus sp., house mouse Maxilla with M¹⁻³
Micromys minutus (Pallas), harvest mouse Upper incisor

ii) Trench B, Context 17 MAMMALIA

Apodemus cf. sylvaticus (L.), wood mouse Upper incisor

The assemblage is surprisingly diverse considering the small number of identifiable fragments recovered, and includes two species: *Neomys fodiens* (water shrew) and *Micromys minutus* (harvest mouse) which are uncommon in small mammal assemblages from archaeological sites.

The house mouse (*Mus sp.*) was introduced into Britain before the Roman conquest. It has been recovered from a small number of Iron Age and early Roman sites and was probably not very widespread until the medieval period (Brothwell 1981). The occurrence of the house mouse at Bignor, in Roman deposits at the Goring villa (Parfitt, in Rudling forthcoming a), and in a number of contexts at the Beddingham Villa (Parfitt, in Rudling forthcoming b) indicate that it was a common pest species in rural settlements in Sussex during the Roman period.

The harvest mouse (*Micromys minutus*), represented at Bignor by a single, characteristic upper incisor, is only known from three other Roman contexts in Britain (Harris 1979; Reumer in preparation). Its scarcity in archaeological small mammal assemblages is intriguing as it occasionally overwinters in farm buildings and hayricks, and forest clearance and cereal cultivation have increased the species habitat, leading to a relatively close association between the harvest mouse and man.

MARINE MOLLUSCS By Caroline Cartwright

Twenty-one contexts from 1985 Trenches B, L, R, V, VA and W produced a total of 55 minimum number of individuals of marine molluscs (Table 9 on microfiche p. m22). Generally speaking, the shells were not in a very good state of preservation, tending to disintegrate in laminar fragments. A number of small fragments could not be quantified owing to the lack of a diagnostic feature.

Oyster is overwhelmingly represented, in comparison with the other two species: mussel and whelk. Oyster accounts for 52 m.n.i. from 20 contexts, whereas mussel only has two m.n.i. and there is one (well-preserved) whelk specimen.

Fragments of crushed oyster shell can be identified from mortar B mix (see mortar report). One may assume that apart from the secondary use of shells as a possible mortar constituent, the bulk of material represents food debris. It may be possible to postulate a commodity trade in agricultural produce, perhaps with coastal communities which provided shellfish and marine resources in return.

The oyster shells commonly fall into the size range of 64 mm to 87 mm, but it may be noted that those from contexts in Trench VA (interpreted as redeposited occupation debris) are significantly larger — 102 mm to 131 mm in length. It is not feasible to assign specimens to an estuarine or marine source owing to the poor preservation; both seem likely.

CHARRED SEEDS By Pat Hinton

Ten charred seeds and one charred shell fragment were recovered from four contexts from the 1985 excavations. The seeds were found by the excavators as a result of wet-sieving small (unquantified) soil samples from various sealed contexts. Trench B, Contexts 17 and 28, yielded one grain each of *Triticum cf. spelta* (Spelt wheat); Trench 85W, Context 12, produced 5 grains of Spelt wheat, two other grains of wheat, and one shell fragment of *Corylus avellana* (hazel). Trench 85B, Context 18, yielded one seed of *Galium aparine* (cleavers). The wheat grains are all more or less damaged by the charring, but most appear to be within the range of *Triticum spelta* (Spelt).

Identification cannot be certain in the absence of any characteristic chaff fragments.

Spelt was the principal wheat of the Roman period, and cleavers a frequently occurring crop weed.

NB. As stated above in the introduction, the main aim of the 1985–1990 assessment excavations was to reveal and record the surface of the last phase of archaeological features/deposits. As a result of both this policy, and the nature of the archaeological features/deposits revealed by the excavations, there were very few opportunities for sampling for economic and environmental evidence. The Charred Seeds and Charcoal sections of this report, however, are the only such information so far available for Bignor villa.

CHARCOAL

By Caroline Cartwright

During 1985 Trenches B (Contexts 17, 18 & 28), V (Context 3), VA (Context 13), and W (Contexts 1, 11 & 12) produced a total of 175 grams of charcoal (Table 10 on microfiche p. m22). Six genera of trees are represented, with the highest proportion of charcoal ascribed to oak (*Quercus* sp.): 80 g ash (*Fraxinus* sp.) accounts for 35 g followed by hazel (*Corylus* sp.) with 29.5 g and hawthorn (*Crataegus* sp.) with 22 g. In addition, 5 g of *Prunus* type wood (plum, etc.) occurs in one context (V/3), from which also comes 2 g of willow/poplar (*Salix/Populus*) charcoal.

Oak is a prime choice of timber for structural elements for both domestic and agricultural buildings. There are isolated stands of oak away from woodland areas, but oak is mainly found in company with ash, hazel and other elements of the woodland environment. Large and small roundwood charcoal is present. Ash is an extremely useful all-round timber also — probably of most use in structural elements here too. Using ash for fuel seems unnecessarily extravagant, although there is no reason why small twigs and branches could not have been utilized thus. Some of the ash charcoal fragments derive from large roundwood pieces, but there is a sizeable component from small roundwood (including twigs) also. The hazel charcoal is almost exclusively from small to medium-size stem diameter roundwood, possibly coppiced stands. Hawthorn is common on the chalk downlands to the north of the villa as a feature of scrub environments. It is impossible to specify whether the *Prunus* was growing on site, or brought in from the neighbourhood. Perhaps we should expect a larger representation of *Prunus* from on-site trees? Willow/poplar favour a stream-side location and the mere 2 g of charcoal does not suggest a particularly prolific source nearby. Nevertheless, willow/poplar provides a wide range of useful timber in the small artefact and basketry range.

GEOLOGICAL MATERIAL

By Caroline Cartwright

In addition to the flintwork described above, the excavations at Bignor in 1985 also yielded a wide range of other geological material. A catalogue of all this material forms part of the Archive. The geological fragments include: quartzite beach pebbles, greensand, ferruginous sandstone, quartzite sandstone, fine-grained Wealden sandstone (including 'Horsham slab'), chalk, limestone, shale and slate. A selection of the fragments is described below.

1. Fine-grained micaceous sandstone ?rubber/grinder. Trench 85B, Context 17.
2. 'Horsham slab' roofing tiles. Trench 85B, Context 17.

3. Purplish-black shale floor-tile: 140 × 83 × (max.) 16 mm. Trench 85V, Context 1. (Fig. 48:6).
4. Fine-grained compact, highly calcareous buff greensand tessera: 25 × 21.5 × 20.5 mm. Trench 85V, Context 1.
5. Limestone tessera: 15 × 11 × 11.5 mm. Trench 85V, Context 1.
6. ?Kimmeridge shale. Possibly turned. Trench 85V, Context 2. (Fig. 48:7).
7. Cornish slate (identification by the Geological Museum). Part of a finely-tooled, bevel-edged ?palette or ?hone. Trench 85V, Context 23. (Fig. 48:8).
8. 'Horsham slab' roof tile. Roughly triangular shape: 118 × 119 × 116 mm × 11 mm thick, with iron nail penetrating through one apex. Trench 85W, Context 4.
9. 'Horsham slab' hearthstone/quern, with one entirely flat, smoothed surface. Shape of side of fragment is roughly semi-circular, but no diameter measurement can accurately be obtained; c. 35 mm thick. Trench 85W, Context 4.
10. Brownish-black shale floor-tile: 142 × (min.) 110 × (min.) 13 mm Trench 85W, Context 12.
11. 'Horsham slab' ?hearthstone/quern. Trench 85W, Context 12.
12. 'Horsham slab' roof tile. Trench 85W, Context 12.
13. Highly calcareous, fine-grained, ferruginous sandstone. Samples from the possible hearth. Trench 85W, Context 31.
14. Buff-coloured greensand. Fragment from an upper rotary quern stone with raised hopper (identification by David Buckley). Trench 85X, Context 2.
15. Greensand ?pestle. Trench 85L, Context 1. (Fig. 48:9).

Sources of the geological material

Fragmented roofing, building, artefactual and raw material were present in Bignor contexts. Reliance on Wealden Series sources for raw material for these categories is clear, although there are imports also.

Quartzite beach pebble material is selected for its hard, compact properties — ideal for use as hammerstones. This quartzite contains abundant quartz grains cemented in a ferruginous-quartzose matrix. Feldspar minerals (plagioclase and micro line) are present. Quartzite pebbles of non-local origin may be collected on the shore; presumably transported to these locations as erratics.

The Upper and Lower Greensand contain a number of (calcareous) glauconitic and sometimes ferruginous, fine- and medium-grained sandstones, often known as greensand or 'hearthstone'. Greensand commonly comprises much quartz, glauconite, calcite and some biotite. Iron minerals may be present. A calcitic or ferruginous matrix may be seen. In some specimens, muscovite is prominent. Current research focuses on particular outcrops and quarries. Some of the Bignor greensand fragments may be ascribed to the Lower Greensand, with the nearest available quarries in the Petworth and Pulborough areas. This is a compact, calcareous variety of

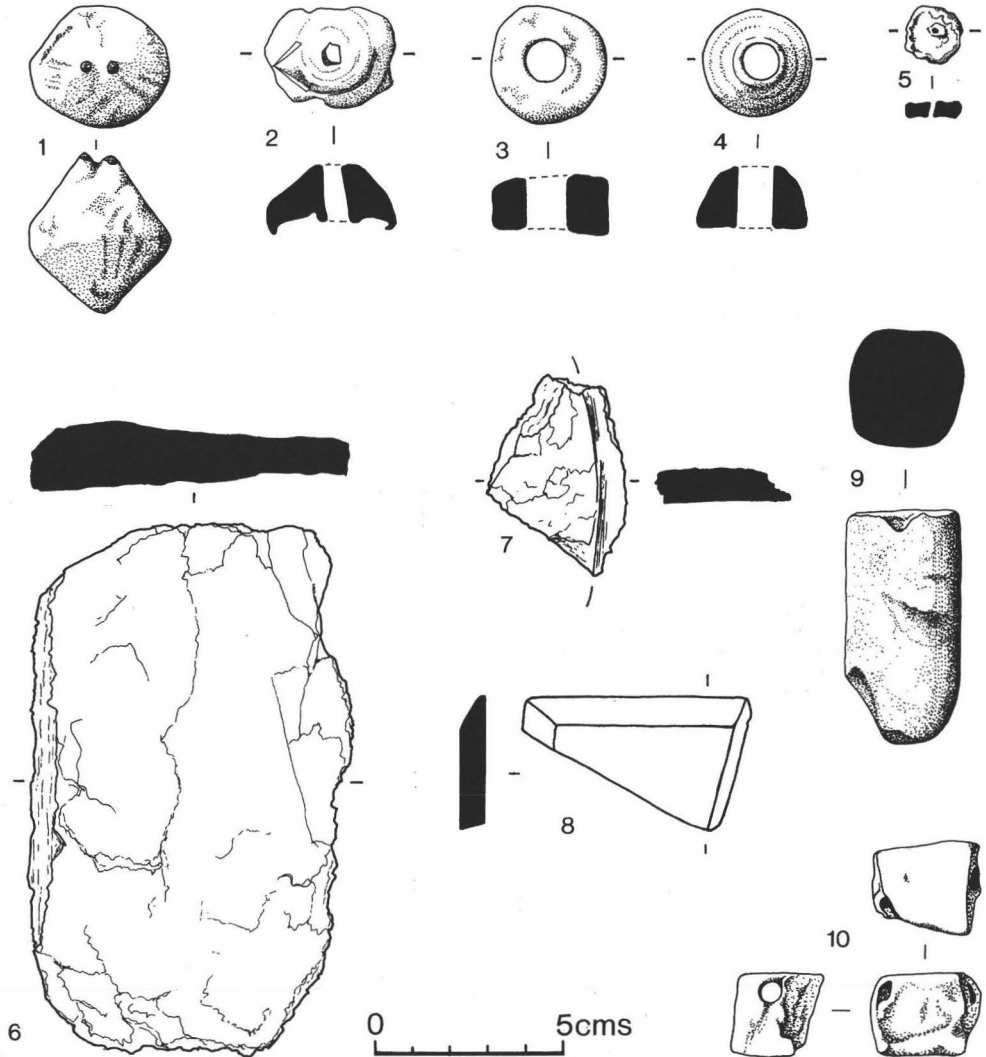


Fig. 48. Lead, stone, and tesserae (1/2).

glaucinitic sandstone (suitable for masonry) derived from the Bargate Beds of the Lower Greensand. Fine-grained silty sandstones, well-suited for whetstones, can be traced to Upper Greensand beds in the Petworth-Petersfield arc.

The ferruginous sandstones are common features of the Wealden Series. Those from Bignor consist of many quartz grains, some glauconite inclusions and iron minerals set in a ferruginous matrix. Most are ideal for building, hearthstone or quernstone and other grinding purposes. Those with a loose, friable texture are particularly susceptible to weathering, and may fragment noticeably under archaeological buried environments.

Also from the Wealden Series, the coarse quartzitic sandstones, and quartz-sandstones with prominent inclusions, offer the grinding surfaces necessary for preparing corn or other

produce. Some irregularities in building or roofing stone surfaces are natural weathering products which serve as 'keying' for mortar adhesion.

Fine-grained Wealden sandstones, commonly buff or ochre in colour, but on occasion appearing quite reddish-brown through higher ferruginous content, are familiar from the Horsham region. 'Horsham slab' has a distinctive fine-grained sandstone texture with naturally parallel sides and smoothed weathered surfaces — ideal for roofing tiles and thicker fragments for building material.

Chalk fragments from Bignor presumably derive from the Chalk formation outcropping to the north of the site. Although obviously highly prone to weathering and the effects of percolating water, chalk has been used on the site for small 'protected' items.

The limestone fragments present at Bignor have a Cretaceous origin; most can be linked to exploitation of the Petworth sources. Fragments of 'ragstone' from the Hythe Beds of the Lower Greensand are present — prime material for building stone, and commercially exploited from Roman periods onwards.

PAINTED WALL PLASTER — A PRELIMINARY EXAMINATION By Madelaine Abey-Koch

The painted wall plaster samples found during the 1985 excavations at Bignor were examined to determine the types of plaster and pigments and the decorative techniques used. The findings in this preliminary report are all subject to analytical confirmation.

Wall plaster

Four distinct types of lime plaster were evident. The plasters were categorized according to (a) colour; (b) type and size of inclusions; (c) number of arriccio layers; (d) colour, depth and quality of the intonaco layers. All of the wall plasters were examined at $\times 7$ magnification. None of the examples in any of the four plaster categories showed any evidence of keying marks, or replastering. All the plaster types possessed only one intonaco layer. The intonaco layers varied in depth and in some cases were so thin that inclusions from the arriccio layer protruded through the surface of the intonaco layer. All the intonaco layers were crudely prepared; none showed signs of burnishing.

Type A

Two arriccio layers were visible, both were the same colour and composed of similar materials. The lime plaster was pale grey in colour, the aggregate was predominantly a rounded, water-worn fine sand, to which had been added a small quantity of chalk.

The first arriccio layer, the layer that was applied to the wall, contained the impressions left by an organic filler. The impressions suggested that the material may have been chopped grass or straw.

The intonaco layer of Type A was far superior to that of the other plaster types in that it attained a maximum depth of 2 mm, and contained crushed marble or calcite dust, thus giving the wall painting an iridescent quality. The intonaco layer of Type A was predominantly white, but some pink intonaco was found. The pink colour could be attributed to the presence of finely ground grog.

Type B

The main aggregate, as with Type A, was a water-rounded sand, but unlike Type A, the sand had a distinctive yellow colour. The lime plaster also contained small quantities of sparsely distributed chalk, chopped straw or grass, and crushed flint. The intonaco layer was very thin and reached a maximum depth of 1 mm.

Type C

Type C was composed of two distinct arriccio layers. The first layer contained predominantly fine, water-rounded sand, while chopped straw or grass, chalk and crushed flint had been more sparsely added to the lime plaster. The second layer was strongly pink in colour as the predominant aggregate was finely crushed grog. The intonaco layer was very thin, roughly applied, and reached a maximum depth of 1 mm.

Type D

Type D consisted of one arriccio layer, which was strongly pink in colour from the main aggregate, grog. The grog inclusions were large, some measuring up to 10 mm in length. The intonaco layer was crudely and thinly applied, and measured less than 0.5 mm in depth.

Decorative techniques

The pigments had been applied to the plaster in the fresco manner. Painted details were added to the design after the fresco had dried, using the fresco secco method. The decoration which remained on the plaster pieces suggested that three basic decorative forms had been employed:

- a) Plain coloured grounds.
- b) Coloured grounds splattered with other colours in imitation of various stone types (a technique favoured in the Roman period and often used to decorate the dado).
- c) Linear designs used to create the impression of panels.

The pigments were crudely applied. The uneven brush strokes suggest the work of an unskilled painter.

The pigments

A preliminary examination showed that seven colours had been used: two types of red, one each of yellow, green, blue, black and white. The blue was clearly visible at $\times 7$ magnification and showed all the characteristics of the artificial pigment, Egyptian blue, otherwise known as blue frit. This blue pigment had been used in conjunction with green to create a blue-green colour, possibly to imitate the natural, but expensive, pigment celadonite. Many mixtures of colours were used to achieve different effects, most notably, a blue had been given a warm glow by laying it on a pink ground. The more vibrant of the two reds was probably the much sought-after pigment vermilion. With the exception of the blue frit, vermilion and black, all the colours were probably common earth colours. All the pigments need to be microscopically examined to determine their identity.

Decoration and colours on plaster types

From the samples found it was possible to see that some plaster types were plainly decorated and lacked the variety of pigments present on other plaster types:

Type A Decor: coloured grounds and linear decoration.
Colours: red, yellow, green.

Type B Decor: linear decoration
Colours: red, yellow, green, white, blue, black.

Type C Decor: coloured grounds, linear and splattered decoration.
Colours: red (both varieties), yellow, green, blue.

Type D Decor: coloured grounds.
Colours: red, white.

Types of wall plasters found within the 1985 excavation trenches

It would appear that certain types of wall plaster may possibly

have been used in association with certain types of decoration. Table 11 (on microfiche p. m22) shows the types of plaster in each trench.

Conclusions

The amount of information gleaned from the 1985 Bignor samples so far suggests that further analysis would certainly be profitable. Further examination of the pigments may yield information about their origins, and further analysis of the plasters would permit an accurate comparison to be made with other Roman villas of the south-east region of England.

Glossary

- Arriccio:** a lime plaster preparatory layer coarsened with crushed stone or brick. The arriccio was applied directly to the supporting wall to even out its contours. One or more arriccio layers may have been applied.
- Intonaco:** one or more fine-grained lime plaster layers to which the pigments were applied.
- Grog:** crushed brick or other earthenware ceramic.
- Fresco secco:** pigments mixed with lime water were applied to the dried fresco surface.

MORTAR ANALYSIS

By Caroline Cartwright

Eleven mortar samples were submitted for analysis from 1985 Trenches W and Z. Context details are as follows: Samples 1, 2 and 4: Trench W, Context 7; Samples 3 and 7: Trench W, Context 6; Sample 5: Trench W, Context 10; Samples 6 and 8: Trench W, Context 8; Sample 9: Trench W, Context 34; Sample 10: Trench Z, Context 2; Sample 11: Trench Z, Context 5.

Disaggregation of these samples revealed a division into two broad categories of mortar 'families': Mortar A and Mortar B. There are individual variations amongst the mixes within these families, but their similarities outweigh their differences.

Mortar A (Samples 4, 7, 8 & 10):

Analysis of the fine-grained calcareous silty matrix reveals the following main constituents: abundant sub-rounded and rounded quartz grains, crushed carbonized inclusions, glauconite inclusions, occasional iron mineral inclusions and one or two tiny ceramic fragments. Sources of raw material in the soils deriving from the Upper and Lower Greensand sedimentary series seem to provide a close match for this mortar mix.

Mortar B (Samples 1, 2, 3, 5, 6, 9 & 11)

Analysis of this coarse, compacted, highly calcareous matrix reveals abundant sub-angular quartz grains, numerous iron minerals, fragmented charcoal and other carbonized inclusions and crushed (oyster) shell fragments. The sources of raw material for this mix may comprise local soils and geological material, which in the case of those samples with more angular quartz grains, may have been crushed for the mix. Secondary use of discarded shells from oyster consumption has already been noted.

There do not seem to be obvious chronological differences in the use of these two mixes, e.g. Trench W, Context 7 contains both. Perhaps the separation is functional?

BRICK AND TILE IN 1985 AND 1990

By David Rudling
All of the tile from the excavations in 1985 (except that from Trench V) and 1990 was sorted by a visual assessment of fabrics and, where possible, by tile types, and catalogued on recording forms which form part of the Archive. The 1990 tile finds were catalogued by Natalie Barber.

Fabrics

Most of the tiles are made of fine, hard, sandy orange fabrics. Some of these fabrics have flint inclusions, either scattered throughout or concentrated on the underside of the tile. Other fabrics include hard, buff, sandy fabrics (sometimes with flint inclusions); highly fired, hard, sandy fabrics; fine, soft, laminar, red-buff fabrics; and hard, orange fabrics with organic inclusions. Some of these fabric variations are probably due to firing conditions.

Tile types

All the identified tile types are represented in the general tile report by Fred Aldsworth (*see below*). The *tegulae* flanges vary in height from 30 mm to 50 mm. Several of the *tegulae* bear one, two or three shallow semi-circular finger-scribed 'signature' marks. Several *tegulae* have fixing holes at the upper end, and in some cases the iron fixing nails are still present.

Trench IV (1990) yielded two complete *tegulae* tiles. The first tile, from Context 2, measures 400 mm long, is 320 mm wide at the top end and tapers to 280 mm wide at the lower end. The flange height is 45 mm. There is a fixing hole (still containing the iron nail) 35 mm down from the centre of the top of the tile. This tile bears two concentric semi-circular 'signature' marks at the lower end. The second tile, from Context 4, measures 420 mm long, is 320 mm wide at the top end and tapers to 295 mm wide at the lower end. The flange height is 40 mm. Again there is a fixing hole (but this time with no nail remaining) 35 mm down from the centre of the top of the tile. This tile has three concentric semi-circular 'signature' marks at the lower end.

The excavations in 1985 produced an almost complete *tegula* from Trench W, Context 12. This tile measures 390 mm long, is 305 mm wide at the top end, and tapers to 280 mm wide at the lower end. The flange height is 37 mm. This tile also has a fixing hole 20 mm down from the centre of the top of the tile. At the lower end of the tile are three semi-circular 'signature' marks.

One (?) *tegula* fragment (thickness 23 mm) from Trench I (1990), Context 3 (Fig. 49:1 on microfiche p. m25) bears the finger-scribed letters *LCC* (*see below*, 'Graffiti on Tile'). Although the thickness of this fragment is consistent with *tegulae* tiles, this type of tile at Bignor is not normally associated with graffiti. It is perhaps more likely that this fragment is part of a *lydion*.

The box-flue tile fragments have combed keying (3, 4, 5, 6 and 8 toothed combs have been recorded). Trench 85W, Context 2 and Trench I (1990), Context 3 contained examples of flue-tiles with double triangular 'hourglass-shaped' vents. Other examples at Bignor of flue-tiles with this type of vent are known from Trench 85V (the Baths area). This type of vent is not recorded at Fishbourne (Cunliffe 1971, 45-7), but is at Chilgrove Valley Villa 1 (Down 1979, 175-6, no. 2). It is thus possible that this form of vent dates only to the late Roman Period, i.e. late 3rd/4th century. The example from Trench I (1990), Context 3, which was keyed with the use of a five-toothed comb, is illustrated (Fig. 49:2 on microfiche p. m25).

BRICK AND TILE By Fred Aldsworth**Introduction**

The Romano-British brick and tile on display at the villa and in store in a barn owned by the trustees was examined in 1987–88. The unprovenanced material in store, which has accumulated from excavations on the site since 1811, has been re-sorted and bagged by type and marks.

The following descriptions and illustrations are intended to form a preliminary classification of the forms and marks represented in the collection.

Roof tiles*Tegulae*

Three quite distinct sizes are represented by complete examples on display (Fig. 50 on microfiche p. m25).

- A: 420 mm long and 300 mm wide, tapering to 270 mm wide.
- B: 380 mm long and 300 mm wide, tapering to 270 mm wide.
- C: 340 mm long and 260 mm wide, tapering to 240 mm wide.

In addition to the fragment on display in the museum, which bears part of a maker's name, perhaps .ROSVE. (Fig. 51 on microfiche p. m25), four other forms of maker's mark have been observed (Fig. 52 on microfiche p. m26).

- A: Shallow semi-circles scribed with a comb of four teeth measuring 35 mm wide.
- B: A small arc scribed with a comb of five teeth 27 mm wide.
- C: Fingering circles represented on fragments only. (Not illus.).
- D: Fingering diagonals, represented on fragments only. (Not illus.).

Bricks*Bessalis*

These are the small square bricks primarily used to form *pilae* columns to support the *suspensura* (hypocaust floor). At Bignor they are usually about 200 mm square and 40 mm thick. Six maker's marks have been observed (Fig. 53 on microfiche p. m27):

- A: A diagonal cross scribed with a comb of six teeth 32 mm wide.
- B: Two arcs scribed with a comb of up to four teeth 18 mm wide.
- C: A semi-circle scribed with a comb of four teeth 30 mm wide.
- D: A pointed arch scribed with a comb of five teeth about 27 mm wide.
- E: A diagonal cross scribed with a stick up to 4 mm wide.
- F: A semi-circle scribed with two fingers.

Pedalis

This is one Roman foot square and was used as the cap or base of a *pilae* column. At Bignor they are usually about 270 mm to 280 mm square and 45 mm thick. Two maker's marks have been observed (Fig. 54 on microfiche p. m26):

- A: A pair of diagonal lines scribed with two fingers.
- B: The letters 'LCC' scribed with a finger. Several examples of this type are known from Bignor and they may represent batch or tally marks, perhaps for the number 250. See also the section on 'Graffiti on tile'.

Lydion

A *lydion* is a rectangular brick used mainly for the bonding

course in walls. At Bignor they are usually about 390 mm by 280 mm and 42 mm thick. Five maker's marks have been observed (Fig 55 on microfiche p. m28):

- A: A border decoration and diagonal lines scribed with a comb of five teeth 15 mm wide.
- B: Diagonal lines and one horizontal line scribed with a comb of eleven teeth 22 mm wide.
- C: A semi-circle scribed either with three fingers or a comb of three teeth 25 mm wide.
- D: Semi-circles scribed either by fingers or a comb.
- E: The letters 'LLCC', '?LCC', 'C' scribed with a finger. Only one example of this type is known from Bignor, the tile measuring 375 mm by 265 mm and 35 mm thick (Fig. 56).

Pedalis or Lydion

There is a single fragment on display in the museum which is about 45 mm thick. It is marked around the margin with a wavy line scribed with a comb of seven fine teeth and wavy diagonal lines scribed with a stick (Fig. 55 on microfiche p. m28).

Sesquipedalis

This is one-and-a-half Roman feet square and was used mainly for floors. The single, near complete example from Bignor is 400 mm square and 50 mm thick. It is marked with wavy lines scribed with a comb of six teeth 26 mm side (Fig. 55 on microfiche p. m28).

Bipedalis

This is two Roman feet square and was usually used to bridge the gap between *pilae* columns to create the base of a hypocaust floor. At Bignor they are usually 560 mm square and 60–70 mm thick. Six maker's marks have been identified (Fig. 57 on microfiche p. m29):

- A: A complex pattern of wavy lines scribed with a comb of ten or eleven teeth 37 mm wide.
- B: A pattern of wavy lines around the edge and diagonals scribed with a comb of eleven teeth 42 mm wide.
- C: A pattern of wavy lines around the edge, with a central circle and radials, all scribed with a comb of eleven teeth 42 mm wide (possibly the same comb as used on B).
- D: A complex pattern of wavy lines and arcs scribed with a comb of ten teeth 35 mm across.
- E: A circle, radials, and a line around the edge, all scribed with a comb of eight teeth 32 mm across.
- F: Cruciform and diagonal lines scribed with two fingers.

Other bricks

In store is a large collection of brick fragments which cannot be classified by size alone. These have been sorted and bagged in the following way. The unmarked fragments are bagged together whilst the marked pieces have been bagged according to whether they are marked by combed or fingering lines, or by lines scribed in other ways.

Wall jacketing and flues*Tegula Mammata*

This is a flat brick with lumps of clay protruding from one face, usually near each corner, so as to provide a wall cavity when the tile is held against a wall by iron clamps. A fragment

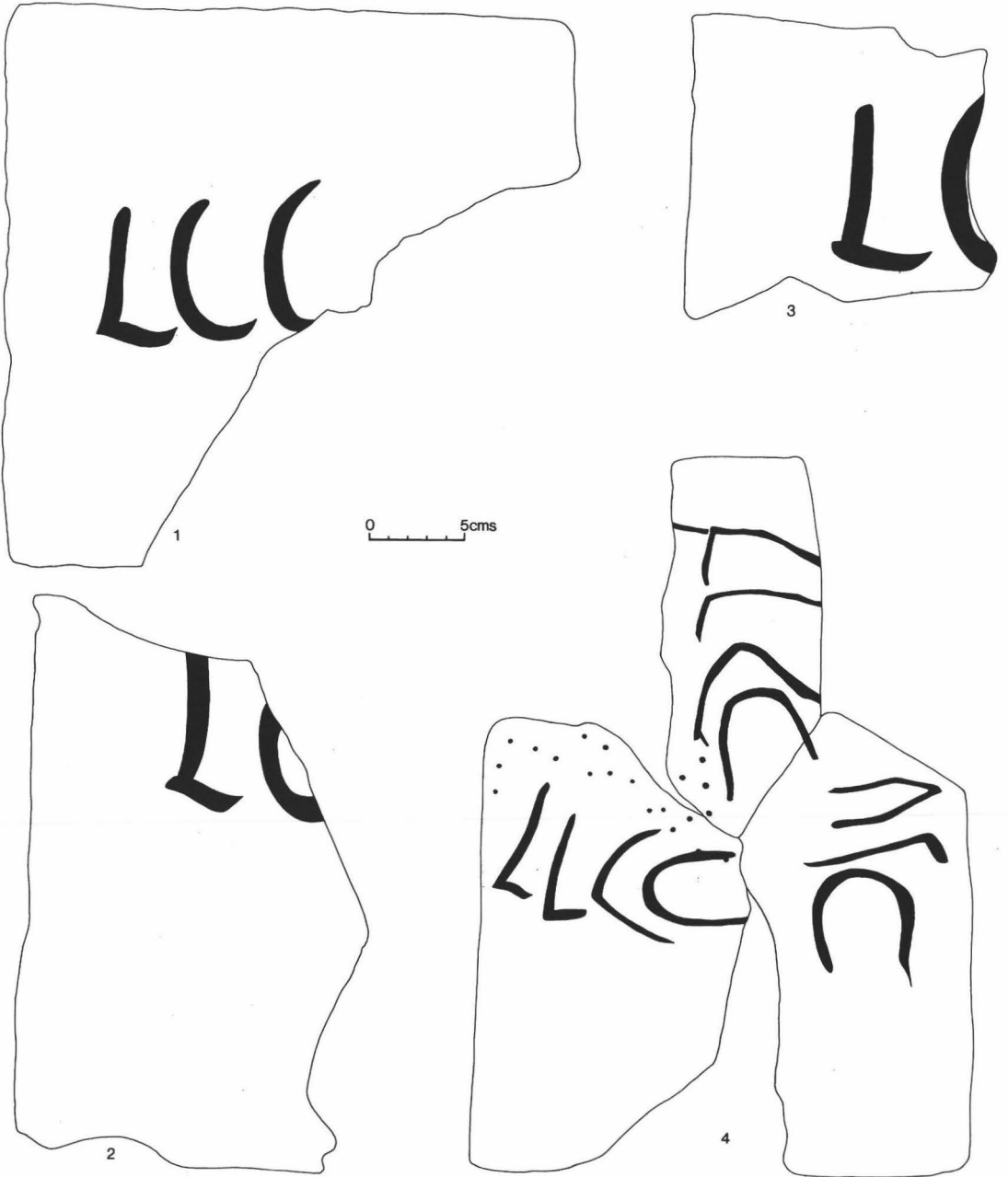


Fig. 56. Roman tile with scribed graffiti.

from one was found in Trench 88A, Layer 101 (not illustrated) and this is the only piece so far recognized at Bignor.

Half box-flue tile

This is a flanged tile used to create a cavity wall for heated air. The flanges are cut away centrally to allow the lateral movement of hot air, and the face has scoring to provide a key for plaster. They usually measure about 360 mm high, 190 mm wide and 130 mm deep. Two tile fragments from Bignor may be of this type, and both have keying patterns. One (A) has wavy lines scribed with a comb of six teeth 33 mm wide and a flange up to 60 mm deep (Fig. 58 on microfiche p. m30). The other (C) has a diagonal line scribed with a comb of four close teeth 28 mm wide, and an 80 mm flange which is cut away (Fig. 58).

Tubulus

This is a hollow, box-like flue tile used to conduct hot air up through the thickness of a wall. It is held in place by iron clamps and usually has combing, scoring, or a roller-stamped pattern to provide a key for the plaster, and a vent in the side to allow the lateral movement of hot air. At Bignor they are usually about 400 mm high, 160 to 200 mm wide, and 120 to 150 mm deep.

Four vent types have been observed (Fig. 59 on microfiche p. m31):

- A: Double triangular 'butterfly shaped'.
- B: Double triangular 'hourglass-shaped'.
- C: Rectangular.
- D: Oval.

On one side of the flue tiles with a rectangular vent there is also a small maker's mark scratched into the surface. It comprises a triangle measuring 70 mm by 55 mm, containing five straight and one curved line, and is presumably a signature or batch mark (Fig. 40: 'E').

A single fragment from a roller-stamped example (Lowther's Die 46) was found by Frere in 1959 (Frere 1982, 182) and this is on display in the museum (Fig. 60 on microfiche p. m32). Four other keying patterns have been observed (Fig. 61 on microfiche p. m33).

- A: Vertical lines and diagonals scribed with a comb of six teeth 280 mm wide.
- B: Vertical lines and a zig-zag scribed with a comb of seven teeth 22 mm wide.
- C: All-over vertical wavy lines scribed with a comb of about seven teeth 48 mm wide used three or four times across the face of the tile.
- D: A series of random diagonal lines scribed with a comb of six teeth 34 mm wide.

Tubulus Cuneatus

This is a hollow voussoir-shaped box tile, open at the sides and sometimes with vents in the face to allow the lateral movement of air. The faces are usually combed, scored or roller-stamped to provide a key for mortar. Several complete faces, 260 mm high and 200 mm wide tapering to 170 mm, and a number of fragments have been found at Bignor. The keying pattern comprises horizontal and diagonal lines scribed with combs either of four teeth 2 mm wide or five teeth 27 mm wide (Fig. 61:E on microfiche p. m33).

GRAFFITI ON TILE By Mark Hassall

The excavations at Bignor Villa in 1985 and 1990 yielded five pieces of tile bearing graffiti. Four of the tile fragments are unstratified finds from the Baths area, the other fragment was found in Trench I of 1990. All are described below.

1. The greater part of a pedalis tile, 300 mm by 290 mm, 35 mm thick. The dimensions are complete, so the tile will have originally been approximately one Roman foot square. There is a diagonal break across the tile so that the bottom right hand corner is missing, but the text, scored before firing, is complete: *LCC*. Unstratified. (Fig. 56:2).
2. Fragment from the right hand side of a tile, 290 mm by 180 mm, 45 mm thick. This is either part of a *pedalis* as No. 1 above, or a *lydion* as No. 5 below. The tile carries the beginning of a graffito scored with a finger before firing: *LC[*., presumably for *LCC*. Unstratified. (Fig. 56:2).
3. Fragment from the right hand side of a tile, 160 mm by 160 mm, 45 mm thick. This is either part of a *pedalis* as No. 1 above, or a *lydion*, as No. 5 below. The tile carries the beginning of a graffito: *LC[*., presumably for *LCC*. Unstratified. (Fig. 56:3).
4. Fragment from a tile, 110 mm by 65 mm, 23 mm thick. Given the size and thickness of this fragment, it is uncertain as to which tile type it belongs, perhaps a *tegula* or *lydion*. The tile carries a graffito: *LCC*. Trench I (1990), Context 3. (Fig. 49:1).
5. Three conjoining fragments of a tile 375 mm by 265 mm, 35 mm thick. The dimensions are complete and the tile is of the type called *lydion*. The tile carries three graffiti, all were cut before firing:
 - a. Running from near the centre left edge to a point just short of the centre of the tile: *LLCC*. There is a vertical below and prolonging the vertical of the first *L* which could be the top of an *I* or *L* but may not be significant.
 - b. Running from the centre bottom edge of the tile, and parallel to its right side to a point near the centre of the tile: *LLCC*. The imprint of the sole of a nailed shoe or sandal partly overlies the final *C*.
 - c. Retrograde and inverted, along the middle of the top of the tile: *VLC*. Unstratified. (Fig. 56:4).

Other examples of tiles carrying the letters *LCC* were found during the original excavations at Bignor by Samuel Lysons. These letters have been interpreted as the *tria nomina* (Lucius) *C*(.....) *C*(.....) (*RIB* 2, No. 2491.102). However, if, as seems likely, the three graffiti on No. 5 above, as well as another tile from Bignor with the graffito] *CCI* (*RIB* 2, No. 2491.41), are all variations of the same *LCC* texts, another expansion should be sought. The explanation that these are batch numbers in the case of the *LCC* graffiti (i.e. *CCL*, '250') also seems unlikely, since one would not expect the same number to reoccur. The three graffiti on No. 5 above are also not readily explicable as numerals.

BURNT CLAY By David Rudling

Trench 85N, Context 1 produced a large piece of fired clay with vitrified surfaces (a light green glaze). This find, which has obviously been subjected to considerable heat, is presumably part of a kiln or furnace.

TESSERAE By David Rudling

All of the tesserae found during the excavations in 1985 were sorted according to material type and then measured/counted (the resulting catalogue forms part of the Archive). The tesserae were made of three types of material: cut-up pieces of orange/red tile; white limestone; and fine-grained, compact, highly calcareous buff greensand (geological identifications by Caroline Cartwright). The tile tesserae, which range in size from

14 × 14 × 12 mm to 38 × 26 × 22 mm, were recovered from Trenches B, L, R, V, VA, W and Z. The limestone tesserae varied in size from 13 × 10 × 10 mm to 33 × 30 × 24 mm and were found in Trenches B, L, R, V, W, X and Z. The sandstone tesserae, which range in size from 18 × 15 × 12 mm to 32 × 23 × 22 mm, come from Trenches L, R, V and W. One of the tile tesserae found during the excavations in 1987 has been perforated, perhaps to make a weight (Fig. 48:10).

DISCUSSION

The excavations described in Parts 1 and 2 were successful in relocating and assessing the condition of parts of the villa which had previously been exposed during the early 19th century and subsequently re-buried. As a direct result of this work the trustees decided to remove the entire area of the courtyard villa and adjoining enclosure from arable cultivation.

The opportunity was also afforded to check Lysons' plan of the villa and in view of the new discoveries and exposures, a revised plan has been produced (Fig. 62). Frere's partial re-survey of the site (Frere 1982, fig. 1) had already demonstrated that the north and south wings were not parallel to one another, as Lysons' plan suggested, and a number of other corrections have been made, including alterations and additions at the south-west corner of the site where work had not been completed before Samuel Lysons' death.

As well as achieving this primary aim, the excavations added considerably to our knowledge of the development of occupation on the site and produced some important pottery groups.

Two flint assemblages, one belonging to the Mesolithic and the other to a later Neolithic–Bronze Age industry, and a small amount of later Bronze Age and early Iron Age pottery all attest to occupation in the vicinity prior to the first occupation of the site during the Romano-British period.

There is an ever-increasing amount of 1st-century AD material being discovered on the site, for example the Roman brooch from Trench 86B, Context 19, but as yet this material has always been encountered in later contexts. In the case of the brooch it appears in 2nd-century occupation debris. The areas of the site which are known to have been thoroughly excavated down to the top of the natural greensand are few in number (Fig. 63) and there remains the possibility that structures belonging to the 1st century AD could exist under the later villa.

The excavations under the baths produced more evidence for extensive occupation on that part of the site before the baths, and therefore before the courtyard villa, was constructed. The gullies and post-holes may be contemporary with the remains of timber-framed structures found under the west wing by Frere and these are all currently assigned to Period I which seems to belong to the 2nd century AD. These features appear to have been replaced by masonry walls, probably representing the remains of half-timbered buildings on dwarf stone footings. If these are the remains of a series of structures which are also represented by Lysons' 'diagonal' walls, then they cover an extensive area (Figs. 63 & 64), and may be roughly contemporary with Frere's, Period IIA, masonry villa. On current evidence the first masonry structures under the baths can probably be assigned to the 2nd or 3rd centuries AD. It is not clear to which phase of building work the enclosing ditch found to the west and north of the Period IIA villa belongs, but the earliest pottery in its fill belongs to the period from the mid-2nd to the mid-3rd centuries AD and it predated the addition to the Period IIA villa of a corridor with wings at either end in a phase of construction which is now assigned to Period IIE (Fig. 64).

The excavations on the site of the baths and elsewhere have clarified the phases of development to a courtyard villa perhaps at the very end of the 3rd century or at the beginning of the 4th century AD. The very clear evidence for the sequence of construction shows quite clearly for the first time that when first erected, in what is now identified as Period IIIA, the baths formed the east end of a south wing and it is likely that Room 15 probably formed the east end of the north wing (Fig. 64). The east corridor or ambulatory, with its apsidal north and south ends mirroring one another, was clearly a later addition to that plan, converting it into a courtyard villa for the first time in what is now referred to as Period IIIB (Fig. 64). The covered way or porticus on its west side is likely to be contemporary with it. Later additions to the courtyard villa included a new,

BIGNOR ROMAN VILLA

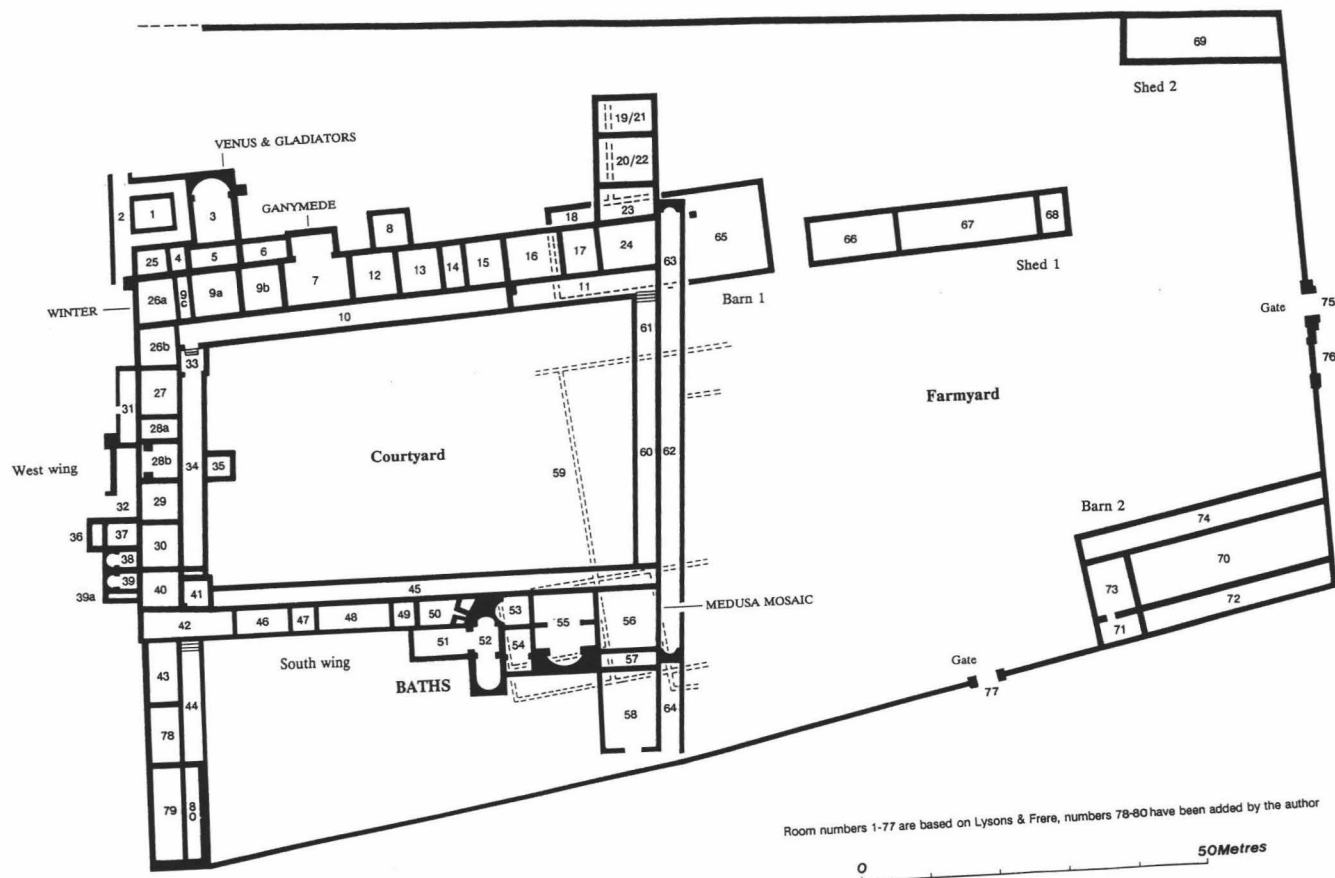


Fig. 62. Revised plan of the villa.

BIGNOR ROMAN VILLA

PERIODS I & IIA

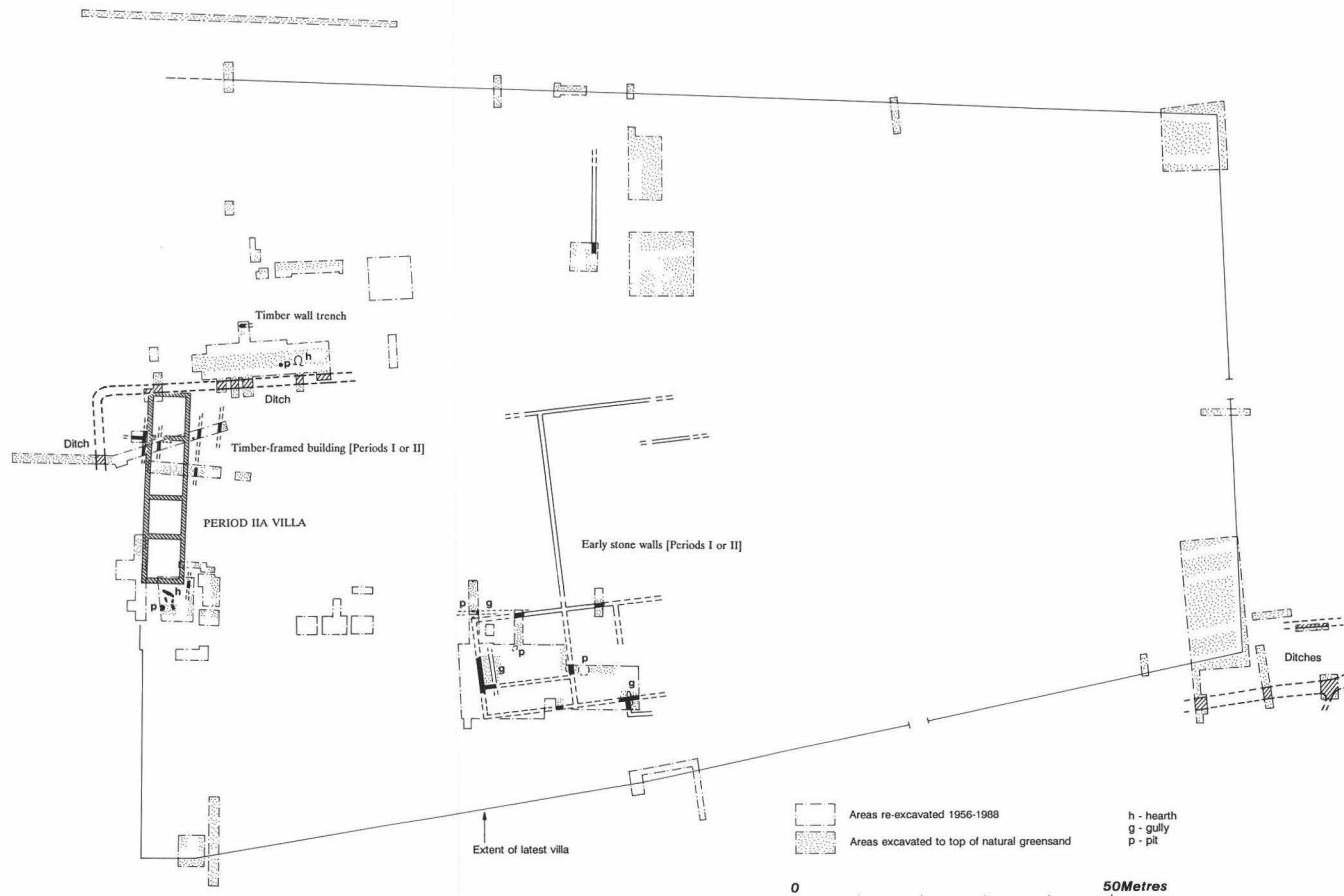


Fig. 63. Occupation in Periods I and IIA.

BIGNOR ROMAN VILLA

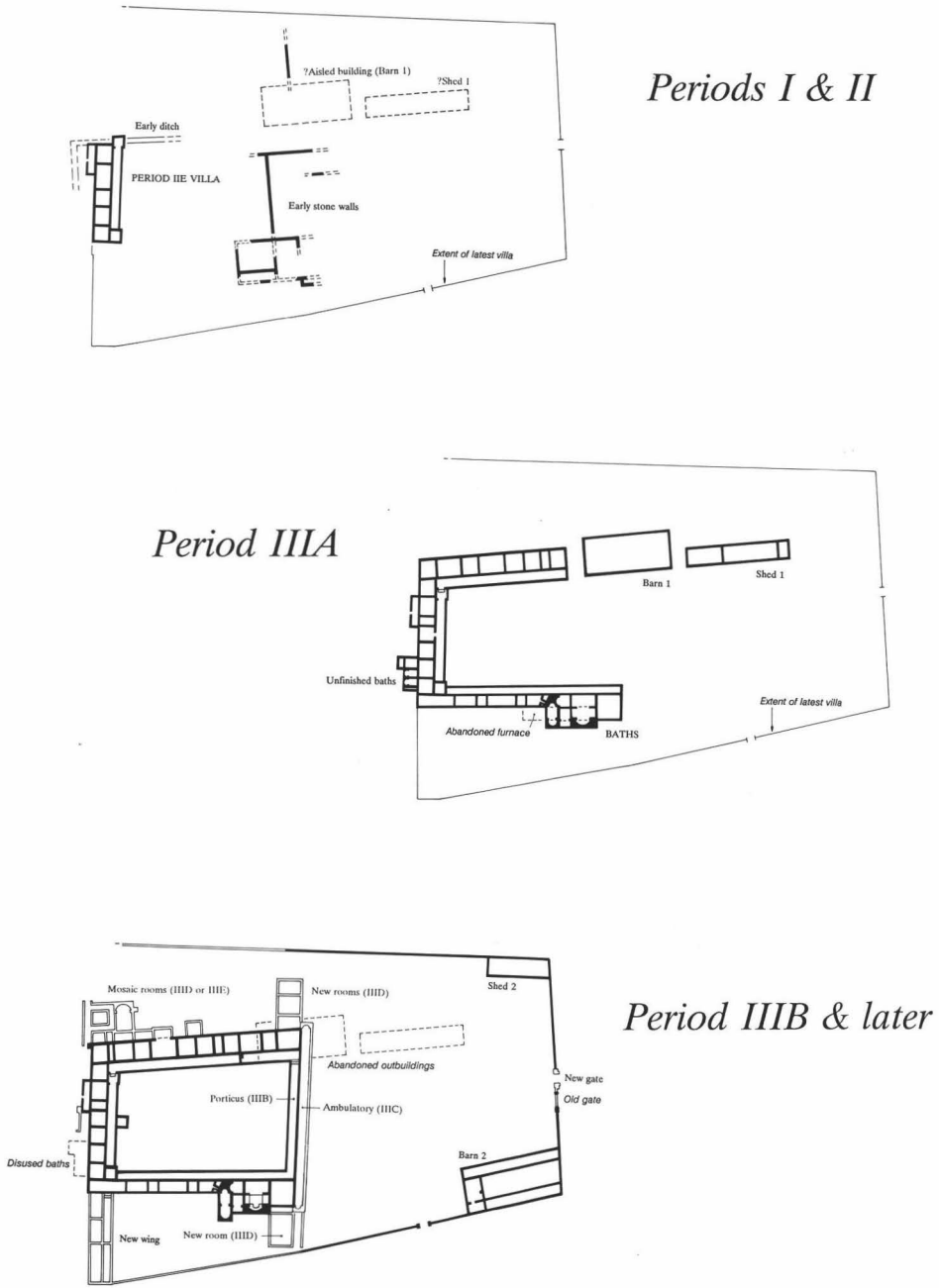


Fig. 64. Phased plans of the villa in Periods I, II, and III.

perhaps heated, room to the south of the baths (Rooms 57 & 58). Probably at the same time, the group of three rooms mirroring this arrangement at the north end of the east wing (Rooms 19-23) was constructed, as was also, probably, the south-west range (Rooms 43, 44 & 78-80); and the mosaic rooms at the north-west corner (Rooms 1-6, 8 & 25) (Figs. 62 & 64).

The addition of a north wing, which was later extended in two stages, might imply an expansion in the needs of the owner, perhaps in response to a growing family and it is possibly more than coincidence that on several occasions when the villa was extended on the north side, the extensions were in blocks of three rooms. The three-room house is frequently encountered as a basic unit of accommodation in villas in southern England, and often these comprise a small room flanked by two larger ones of similar size. At least three such units can be identified in the north wing — Rooms 13, 14 and 15, added in Period IIIA; Rooms 16, 17 and 24, added at the same time as the east corridor in Period IIIB; and Rooms 19-23, probably added at a later date along with that on the south side of the baths (Room 58) (Fig. 62) (J. T. Smith 1978). It is our view that the north-south dividing walls shown on Lysons' plan in Rooms 19/21 and 20/22 are more likely to have belonged to an earlier phase of construction and did not form part of the courtyard villa. The picture at the west end of the north wing is less clear because of the extent of later development, but it is conceivable that two further units of three rooms are represented by Room 7, 9b, and 12 and 9a, 9c and 26a. If this were the case then we could perhaps postulate that over a period of time five new accommodation units in all were provided in three stages along the north side of what became the courtyard — first three units in Period IIIA, a further one along with ambulatory in Period IIIB, and a further one later still in what we should presumably call Period IIIC. The development after this date, which we might perhaps refer to as Period IIID, comprised the expansion of the living accommodation at the west end of the north wing and the provision of lavish rooms with finely executed mosaic floors.

In addition to the work on the baths, which has thrown considerable light on the development of the courtyard villa, perhaps the other most significant results of the excavations was the

evidence revealed in Trenches 85W and 85Z for the form and function of some of the other structures. One of the main aims of the excavations was to test Ernest Black's theory that Rooms 18 and 65 were not individual rooms or yards, but were the remains of a large, rectangular building, previously referred to as 'Barn 1', which stood beyond the end of the original (Period IIIA) north wing (Black 1983, 95). Black recommended that the alignments of the north walls of Rooms 65 and 18 be checked by excavation since on Lysons' plan they are not shown on quite the same line. The excavations in 1985 confirmed that these two walls are on the same alignment, and that they do not survive to the same level as some of the other walls in the area. In addition to these findings, a further discovery was a square aisle post base, 2.6 m from the inside face of the north wall. More recently (1994), excavations by David Rudling revealed two further aisle post bases inside the south wall of the south-east corner of Room 65. Thus the 1985 and 1994 excavations have demonstrated that Rooms 18 and 65 are parts of a large free-standing building with stone footings and a nave flanked by side aisles. In the circumstances it now seems likely that both this building and the smaller one on the same alignment to the east (Rooms 66-8), referred to as 'Shed 1', belong not to the Period IIIB courtyard villa but to an earlier period of development of the site, perhaps Period IIIA or possibly even, as suggested below, Period II (Fig. 64).

The partial re-excavation in Trench 85B of part of the aisled building at the south-east corner of the site, referred to as 'Barn 2' (Rooms 70-74), also revealed fresh evidence, which included a change in masonry perhaps indicating different phases of construction. Unfortunately, no discoveries were made within the building which can help interpret its purpose. It has been assumed in the past to have had an agricultural function, especially given its ground plan and its 'position at the end of an outer court' (Morris 1979, 58). Several writers, including Applebaum (1975, 120-21), have conjectured that this structure was used for housing cattle and fodder. Lysons' plan shows that at the western end of the building the southern aisle and the 'nave' were subdivided to create two small rooms. The absence of any further subdivisions, especially given the recent re-investigation of the eastern end of the same building, suggests that the two rooms (71 & 73)

identified by Lysons may have been for domestic occupation. Whether this postulated accommodation was for the 'herdsman' (Johnston 1983, 29) or for persons of other or higher status is likely to depend upon the primary function of the building. It should be remembered that there is no evidence, such as stall divisions or drains, to support the theory that this large, impressive aisled building with stone footings was used to shelter cattle.

As in the case of the other large rectangular aisled building (Rooms 70–74), the function of the aisled building represented by Rooms 18 and 65 is also uncertain. Again it could be agricultural, but other possibilities include its use as an aisled hall, perhaps serving a semi-public purpose. J. T. Smith has pointed out that it is 'not uncommon to have the buildings of a villa grouped loosely round a courtyard, with a private house on the far side from the entrance and a longer aisled structure, that in some cases at least can be plausibly interpreted as an aisled hall, serving a semi-public purpose, flanking it' (Smith 1963, 15). The problem of interpreting such large aisled halls can be paralleled at Fishbourne where such a building is incorporated into the Period 2 Roman Palace. Cunliffe (1971, 110) suggests that possible functions of the Fishbourne Hall might include storage, public assembly or worship. Black (1994, 106–7) has suggested that some aisled buildings at villas may have been the setting for feasting — 'an aspect of Celtic society that was particularly noted by Classical writers'. Such feasts may have been attended by people not directly connected to the villa — if so the use of large free-standing buildings at some distance from the main residential core of the villa may have been an advantage.

In addition to providing support for aspects of Ernest Black's proposed scheme of development at Bignor during the 4th century (Black 1993), it should be noted that the large aisled building represented by Rooms 18 and 65, and perhaps also the building to the east represented by Rooms 66–8, could conceivably *predate* the construction of the north wing of Black's Period III (i) and our Period IIIA villa

and actually be part of an earlier arrangement on which the north wing was later aligned. If this were the case it would better explain why the orientation of the north wing diverges from that of the south wing, i.e. the north wing was constructed to continue the alignment already created by Rooms 18/65 and perhaps Rooms 66–8. The buildings represented by Rooms 18/65 and Rooms 66–8 may thus originally have been free-standing structures flanking the approach to the Period II main residential quarters, and it is noticeable on the plan that both the early Roman enclosure ditch and the early masonry structures found under the baths and Lysons' oblique walls appear to be on the same or a similar alignment (Fig. 64).

Finally, investigations outside the south-east corner of the farmyard revealed part of a metalled road or track, immediately to the south of the southern boundary wall, and several ditches. These discoveries highlight the fact that archaeological remains continue beyond the known boundary wall of the villa.

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APPENDIX 1

CONSOLIDATION OF THE COLD BATH 1987-88

Winbolt had used a pink cement mix rather than a proper Romano-British type *opus signinum* when he undertook his repairs in 1925, so his work could readily be distinguished when consolidation was commenced in 1987. Once the earlier repairs had been removed, the original fabric was carefully cleaned and recorded. At least five phases of alteration were discernible in the structure and several features were observed which had not been seen either by Lysons or by Winbolt.

It soon became clear that Winbolt (1926) had to some extent misinterpreted the evidence he saw on the ground in 1925 and in Lysons' drawings. His reconstruction can no longer be accepted as

representing any particular phase of the building as it is now understood. The main difficulty is his introduction of a step down in the middle of Room 55, which appears in both his published photographs. It is now clear that when the cross wall (Context 1) was demolished and the semi-circular chamber at the south end of Room 55 was brought into use with the centre of the room as one large cold plunge (Phase 4), the floor level in the bath was raised by up to about 300 mm (Fig. 14). Winbolt's reconstructed step can now be seen as a remnant of Wall 1 which will have been obscured at this stage of alteration.

The new reconstruction is based on a reinterpretation of the final phase of the cold plunge (Figs. 15 & 16, Sections TU & VW) and includes a reconstruction of the newly-discovered apse (Wall 6) to Roman floor level.

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Aspects of the history and archaeology of medieval Seaford

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The town of Seaford was founded in the late 11th century at the mouth of the River Ouse. It grew rapidly until about 1280, and its subsequent decline was hastened by attacks by the French during the 14th century and possibly by the effects of the Black Death. The town recovered in the late 14th and 15th centuries, but did not reach its former level of prosperity. Excavations in 1993 examined part of the frontage of Church Street and an area around a surviving medieval undercroft. Three or four tenements were recognized, and the medieval use of some areas may be identified. A study of the undercroft suggests that it was built in the mid-13th century. The undercroft and its associated building lay in a central position close to the port and the heart of the town.

The history of seaports is closely tied to the vicissitudes of geography. The coastline which allows the development of a port may alter, depriving a location of its favourable position and leaving it either inland or exposed to the ravages of the sea. The sites of many former harbours lie near to the present coastline of Sussex. These ports, having become inaccessible to ships, declined into insignificant settlements.

Changes in the configuration of the coast were, however, only part of the reason for the decline of the former port of Seaford. The growth and decline of the town have been examined only superficially in earlier work (Lower 1854; Lower & Cooper 1865). The present paper considers the changing fortunes of the medieval port in greater detail using the evidence of documentary sources and the physical remains from one area of the town.

PART 1: THE HISTORICAL EVIDENCE

Seaford is not mentioned in Domesday Book and the supposed pre-Conquest references to the place may be dismissed as spurious. A charter of the late 11th century, however, suggests it had become an established market centre, apparently growing rapidly in the years after the Conquest.¹ It seems likely that Seaford was founded at the mouth of the River Ouse as a port to replace Lewes. The latter had evidently been the main port in the district and Domesday Book notes that the burgesses of Lewes gave ship-service to the king. The growth of Seaford

mirrors the developments on the River Adur where the port of Shoreham superseded the pre-Conquest port at Steyning.²

The town of Seaford was held of three lordships. The greatest part was evidently held by the Count of Mortain, and subsequently formed part of the Duchy of Lancaster. Other lands in the town were held by the Earl of Warenne and the Prior of Lewes.³ In 1606/7 the duchy lands were granted to George Rivers and Thomas Bridges and were purchased in 1611 by the Duke of Dorset.⁴ These lands were known as the manor of Seaford Portreeve.⁵ The manor of Seaford Borough seems to have originated in the holding of the Earl of Warenne. During the 14th century Seaford passed with the other Warenne lands to the Fitzalans, Earls of Arundel. In 1483 the manor was divided between the Duke of Norfolk and the Earl of Derby. That manor of Seaford was sold in 1576 to Thomas Sackville.⁶ A further part of the town was held by the Prior of Lewes. An initial gift to the priory was made by William de Warenne and was augmented by further grants by others.⁷ In 1563 land to the west of the tenements on the west of Church Street was held of John Caryll. He had bought the manor of Atlingworth in the 1560s which included tenements at Seaford. The manor of Atlingworth had been held by Lewes Priory and it seems likely that the Seaford holdings of the Priory had been attached to these other lands.⁸ The origin of the manor of Seaford held by William Gratwicke in the early 17th century is uncertain, though John Rowe notes that it had been held by the Duke of

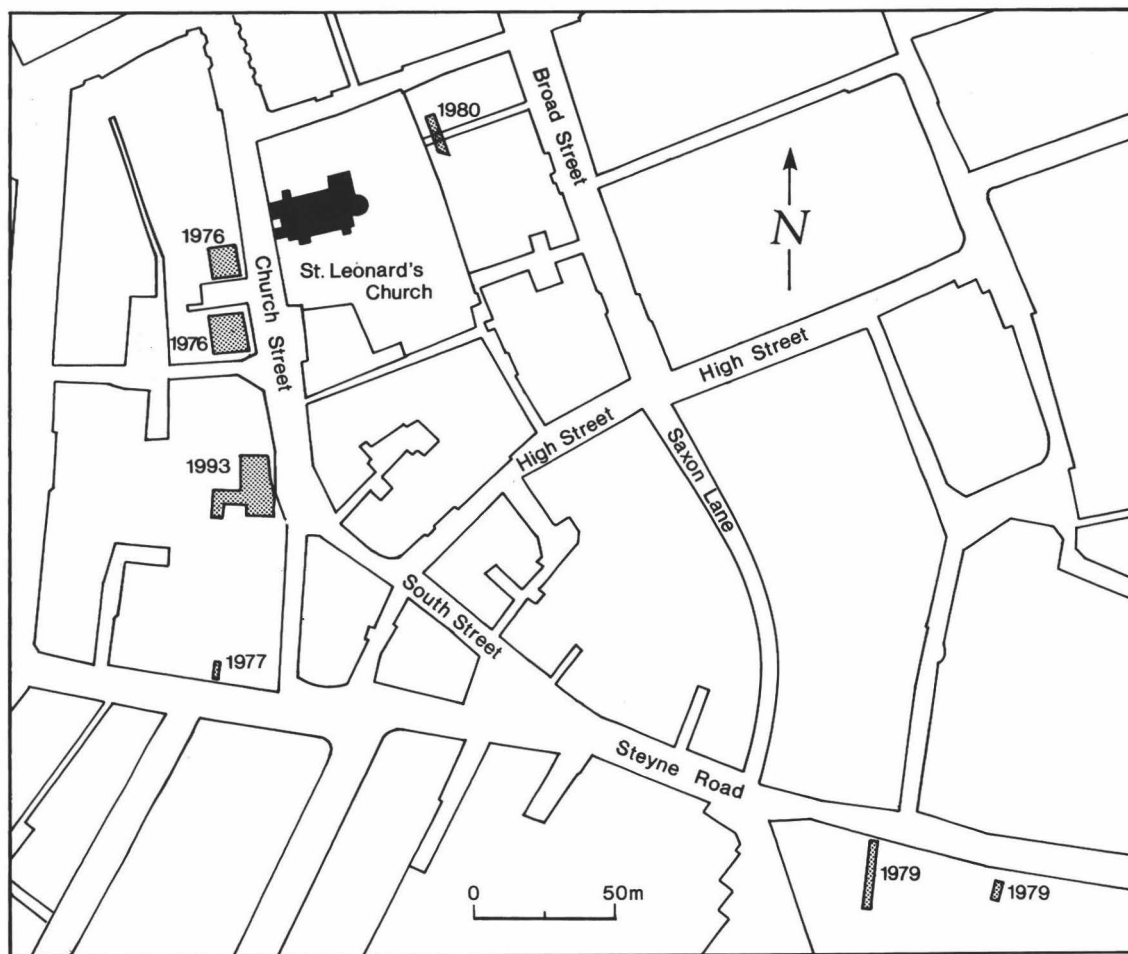


Fig. 1. Plan showing location of the 1993 work and previous excavations.

Norfolk and may have been part of the original Warenne holding.⁹

There is little evidence for the growth of Seaford during the 12th century. A leper hospital dedicated to St Leonard was founded in the mid-12th century, evidently in open land beyond the town, and beside it stood a chapel.¹⁰ About the same time the founder, Roger de Ash also gave land in Seaford to Lewes Priory. Another charter records the grant to the priory by Roger de Thorn of seven house-sites lying near to land they already held. In 1180 the market-place was moved to a new site away from the shore where it had been held. Coastal change appears to have been a continuing problem, for the hospital of St Leonard appears to have been ruined by the sea by the mid-14th century.¹¹

The returns of a tax of fifteenths on merchants in 1204 show that Seaford had become a significant centre of trade, of a similar size to Rye, but smaller than Shoreham or Chichester, and much smaller than Winchelsea. It is apparent from customs accounts from the end of the 13th century that Seaford was an important centre for the export of wool and corn.¹² Land within the town was held from an early date in burgage tenements paying 12d. each. By the late 13th century most of the tenements comprised fractions or multiples of these burgage holdings and by the 16th century there was little trace of the original pattern.¹³

Seaford's decline probably began in the 1280s or before, and may be traced in the income from the rents of lands held of the Duchy of Lancaster.



Fig. 2. Reconstruction of part of the town of Seaford in 1563 from PRO, DL42/112.

The rent declined from £6 in 1284–85 to £4 11s. 10d. in 1288–89. The latter figure agrees reasonably well with a late-13th-century rental which lists 96 tenants paying a total of £4 8s. 3d. From 1291–92 the rent was fixed at the slightly higher value of 94s. 0d.¹⁴ Seaford, like other Sussex ports, was vulnerable to French attack during the Hundred Years' War and this undoubtedly hastened its decline. The town could not easily be defended as it was not protected by a wall, though a trebuchet

mentioned in 1334 was presumably to protect the port.¹⁵ It may have been attacked in 1339, when there were raids elsewhere along the Sussex coast, and in 1340 lands in the vicinity were said to be uncultivated for fear of French attack.¹⁶

In 1355 a large number of tenements remained in the lord's hands for want of tenants. The inhabitants petitioned the king the following year noting that the greater part of the town had been burnt, evidently in French raids, and damaged by

disease. They requested that James Archer and others be prevented from demolishing unburnt buildings and selling the materials.¹⁷ Relief from the lay subsidy was granted in 1380 and 1384 on account of the invasion and burning of the town 'lately suffered'. A possible date of that attack was the summer of 1377 when Rye, Winchelsea, Hastings and Rottingdean were also raided. An entry on an account roll refers to the arrears from the year 50 Edward III (1376–77), 'after the burning'. The rents paid for pasture on the empty plots in the 1380s is ample comment on the state of the town.¹⁸

The town made a partial recovery in the late 14th century. The rent of Seaford Portreeve, which had been farmed since at least 1382–83 for a value of 29s. 7d., was newly assessed in 1392–93 at 38s. 11d. A new rent-list was compiled two years later when the rent had increased to 40s. 9d. and was revised again in 1397–98 when the rent was 47s. 3d. A comparison of the rentals made in 1392–93 and five years later shows a significant number of new tenants holding lands within the town. Yet even after the recovery the rent paid was still about half the level of a century earlier and there were only 55 tenants in the 1397–98 rental.¹⁹

The 15th-century account rolls of the Fitzalan holding in Seaford also attribute the high level of decayed rents to the burning of the town and note that the small sum received from pickage (rent from stalls) was due to the paucity of merchants coming to the port. The nominal value of the assized rents was 118s., a figure presumably dating from before the Black Death and French attacks, but the sum collected was about half of this. There are clear signs of a recovery in the middle of the 15th century. The rents increased from 62s. in 1445–46 to 64s. 10d. ten years later and reached 67s. 7d. in 1465–66.²⁰ That growth in prosperity was evidently maintained throughout the later 15th century, for by 1523–24 the rents were worth 83s. 8d.²¹ By the mid-16th century more lands in the town were occupied than at any time since the French raids and the onset of the plague 200 years before. Nevertheless, a detailed survey of the tenements held of the Duchy of Lancaster made in 1563 suggests that it was no longer a significant urban centre (Fig. 2). The port, which had been the town's *raison d'être*, had so declined that it was described as 'a duckpool' and was of little significance for shipping.²² Some slight evidence of the extent of the medieval town is given by the tithe plan of 1839, made before the late-19th-

century revival of Seaford. It shows two fields surrounded by roads, which were probably once occupied by buildings.²³

PART 2: EXCAVATIONS AND SURVEY AT 'THE CRYPT', CHURCH STREET

The medieval undercroft erroneously known as 'The Crypt' is one of a very small number of standing medieval buildings in Seaford. The land to the north and west of 'The Crypt' has been open since buildings on the site were destroyed by bombing in the Second World War and has been used as a car park in recent years. 'The Crypt' had become dilapidated by 1935 and during the 1950s it deteriorated further. Some time after 1958 the upper ground floor was demolished, the remaining part was capped with concrete and the north-west corner was consolidated (Fig. 9).²⁴ Lewes District Council decided in 1992 to redevelop the street frontage and roof over 'The Crypt'. In October that year Ian Greig of the Field Archaeology Unit (Institute of Archaeology) undertook an assessment of the archaeology of the area in advance of construction and showed that a considerable number of cut features survived. In January 1993 Lewes District Council commissioned the Field Archaeology Unit to excavate an area between the present street frontage and the undercroft, and around the undercroft itself in advance of construction work. A survey of the standing remains was also undertaken.

The excavation site lay on the west side of Church Street on land which slopes gently to the south. Excavations by Freke in 1976 had examined an area 80 m to the north on the same side of the street where the geology was similar (Fig. 1). Upper Chalk was capped by a Pleistocene deposit of brown clay interspersed by patches of sand originating from the Woolwich Beds (Freke 1978, 220). The west side of Church Street was moved in 1947 to increase its width and the medieval frontage of both sites now lies under the pavement and, perhaps, the road.

The tarmac and underlying 19th-century masonry were stripped by machine from an area approximately L-shaped in plan. One limb of the area examined lay against the street frontage and the other along the side of the undercroft (Fig. 3). The depth of surviving archaeological deposits was comparatively slight and these had been removed in part by later buildings. The stratigraphy on the uphill side of the site, the north, had been heavily disturbed by later buildings.

The survival of the stratigraphy in relationship to the original external ground surface and medieval floor levels may be ascertained from the surviving features (Figs. 4 & 8):

A hearth (87) of Flemish brick of probable 14th-century date which must have stood at or close to floor level.

Two 13th-century pottery vessels used for water storage lay in a pit. Their rims are likely to have been at floor level, and although the tops of the vessels did not survive, their approximate heights can be reconstructed. For a similar use of a pot, see Barr-Hamilton 1961, 55.

Render on the north and east sides of the

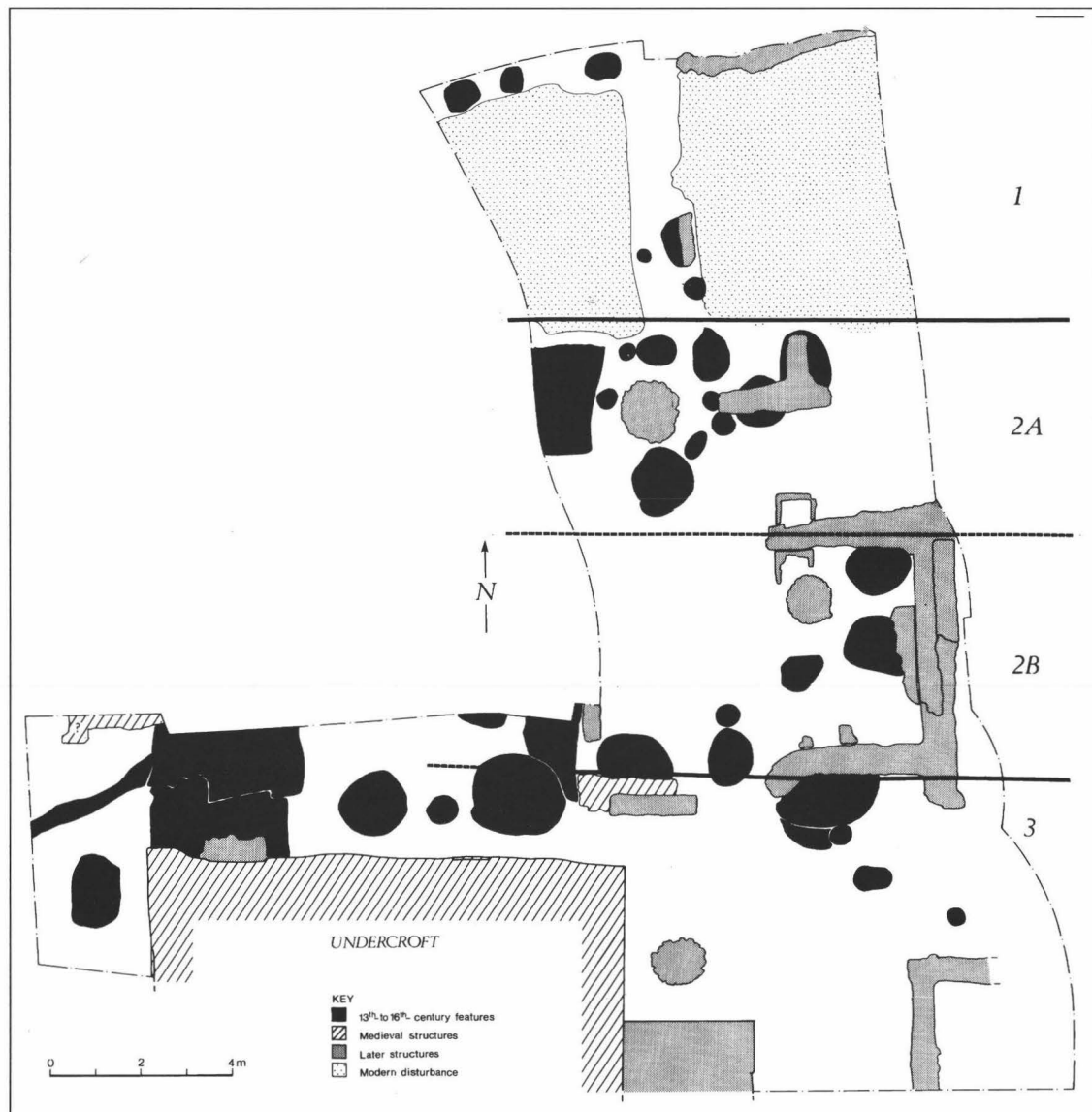


Fig. 3. Plan of excavated features.

Tenement 3 | Tenement 2B | Tenement 2A | Tenement I

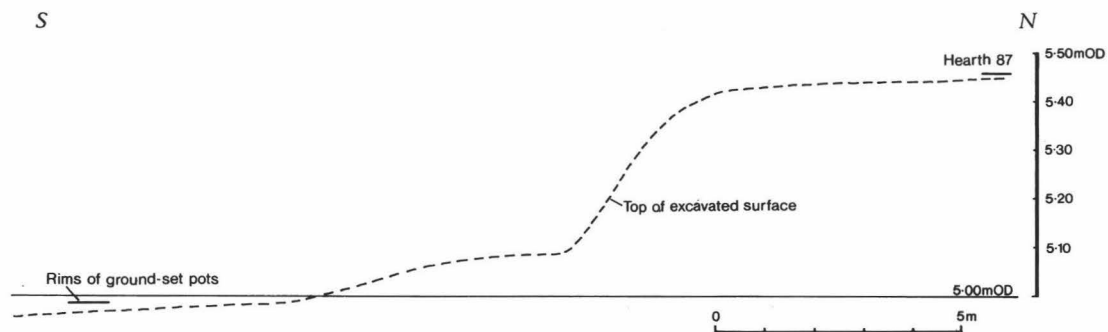


Fig. 4. Schematic north-south section showing the evidence for former ground levels and the level of surviving deposits.

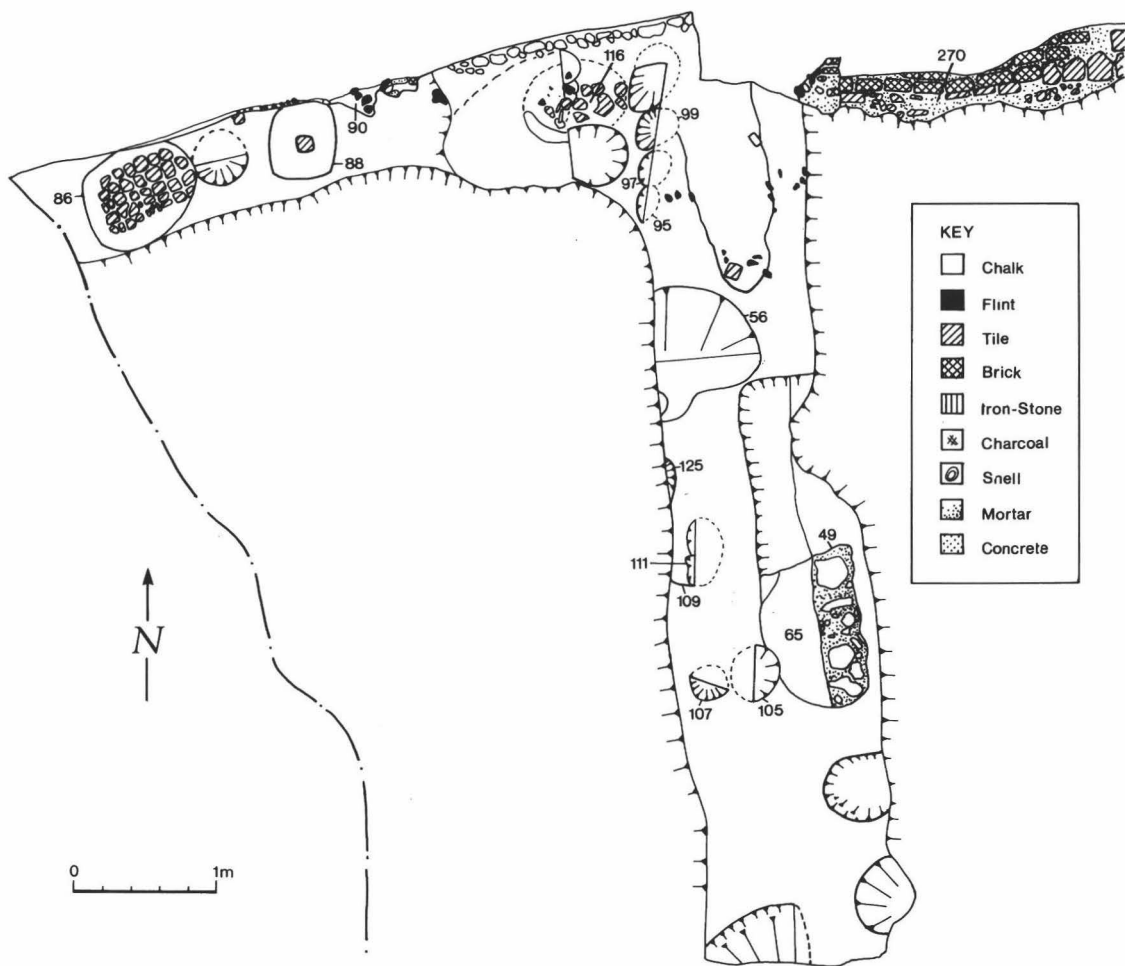


Fig. 5. Tenement 1 and key.

undercroft is likely to have been extended down to the ground level or floor surfaces. The level of the boundary between footings and superstructure confirms the approximate level of the ground. The sill of the undercroft window (W1) on the north elevation would have been set in a shallow light well.

The stratigraphy over much of the site had been truncated by later disturbance. The upper surface revealed by machining on the north side of the undercroft was 0.5 m, and in some places more, below the medieval ground level. The deposits survived more completely on the north-east of the site, but in other areas only deeper features are likely to have remained.

Few traces of structural remains were recorded apart from the undercroft, though it is possible to infer the presence of other buildings. Rubbish- or cesspits are hardly likely to have been dug within buildings, and their presence indicates open ground. Conversely, hearths will have been situated within buildings. It is possible to divide the site into three or four tenements using such indicators and the evidence of the terracing of the underlying natural clay.

TENEMENT 1 (Fig. 5)

A very considerable area of the tenement had been removed by later buildings leaving two strips of land, one running approximately east–west along the edge of the excavation and a second aligned north–south. At the north of the excavated area lay a wall (90) and an area of floor tiles (270). The former could not be dated, but its footings were above the level of the medieval floor-surface indicated by a Flemish brick hearth (86) and it was probably of post-medieval construction. The floor tiles were of 19th- or 20th-century type.

The surviving medieval features in Tenement 1 suggest that the excavated area lay within the interior of a building. Three hearths, which would have been within a room, were recorded. The best preserved of these was 86 which had a surface of broken Flemish bricks. The hearth overlay a fire-pit containing fills of burnt clay. Nearby were two other hearths (88, 116). These had also been initially dug as fire-pits, and were later infilled with burnt clay and charcoal, and the levelled surface capped with tile, brick and stone to make surfaces for hearths. A shallow pit nearby (56) contained fired clay, though

there was no evidence of *in situ* burning.

A series of shallow post-holes (95, 97, 99, 105, 109, 111, 125) contained no datable material. Three medieval sherds were found in Feature 107, and a shallow pit (65), which had evidently been truncated, contained a single piece of 13th-century pottery.

TENEMENT 2A (Fig. 6)

The boundary between Tenements 1 and 2A is indicated by a change in the level of the natural clay (Fig. 4). Clay had been removed from the north side of Tenement 2A to form a level platform. A medieval date for the levelling is suggested by the flint cobbling which sealed Pit 166. The deposit of flint, which contained pieces of medieval stone mortar and sherds of medieval pottery, sloped downwards towards the south in a manner which suggested that it had been dumped after the clay had been cut away for levelling.

The boundary between the two tenements is also indicated by a cluster of rubbish-pits along the northern edge of the Tenement 2A. Pits 60, 150, 152, 166 and 209 lay in a broad band along the presumed tenement boundary and all, except for the last, contained 13th-century pottery. Other medieval pits lay close by, of which the largest were 67 and 206. The base of Pit 195 was heavily burnt and the thin layer immediately above was full of charcoal. Unlike the fire-pits in Tenement 1, this feature comprised two depressions, perhaps representing the fire-hole and chamber of a small oven. Pottery from the fill suggests a 13th-century date.

TENEMENT 2B (Fig. 6)

There was no well-defined boundary between Tenements 2A and B, but the scarcity of medieval pits and the presence of 16th-century deposits in the latter may suggest that the two were separate holdings. A large rubbish-pit (225) was capped with a deposit of tile, flint and slate, possibly to seal the fill. The finds suggest a 16th-century date. Near by were two shallow depressions (245, 254) largely filled with dumps of slate. Pottery from the first of these suggests a 16th-century date for deposition.

Rubbish-pit 225 and the dumps of building material which adjoined it (234, 235, 246, 255) indicate that the investigated area of Tenement 2B was open in the 16th century. These deposits lay about 5 m from the presumed line of the former frontage, a sufficient distance to accommodate a small building.

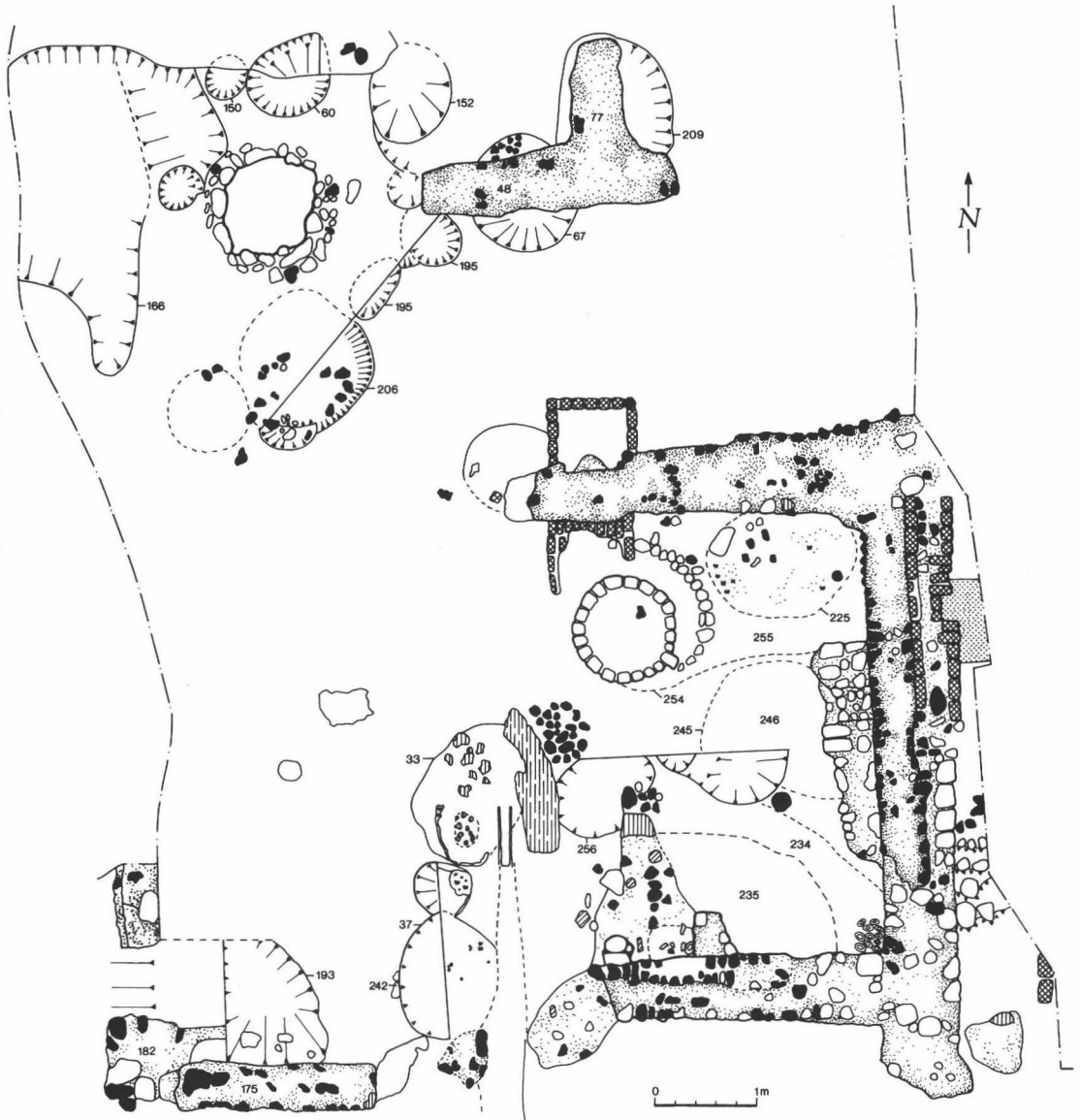


Fig. 6. Tenements 2A and B.

Feature 33 was not excavated, but the ironstone and burnt clay on the surface suggest that it may have been a hearth. Rubbish-pits nearby (37, 193, 256) contained 13th- and 14th-century pottery indicating the rear of the tenement was open land at that period. Slight chalk footings (242) of uncertain date had been built over the fill of Pit 37.

TENEMENT 3 (Figs. 8–12)

Most of the development by Lewes District Council did not affect the area behind the street frontage and it was not appropriate to investigate the rear of Tenements 1, 2A and 2B. However, the construction of a building to the north and west of the undercroft disturbed a strip of land extending further back from



Fig. 7. Photograph of the north elevation of the undercroft in 1958 before demolition of the upper ground floor (reproduced with permission from East Sussex Record Office C/C69/216).

the frontage and allowed an opportunity to investigate it.

The boundary between Tenements 2 and 3 (Fig. 11) was marked by a short length of footings and superstructure (182) of probable medieval date which had been partly removed by a 19th-century wall with a painted internal face (175). The wall almost certainly belonged to the building shown on a large-scale Ordnance Survey map of 1873. The supposed tenement boundary may be projected backwards from the road and coincides approximately with a change in levels at the west end of the trench, presumably produced by the levelling of the ground surface (Fig. 4). Chalk footings of a wall of unknown date (Fig. 12:273) situated in Tenement 2B lay at the very edge of the excavation trench.

The building known as 'The Crypt' occupied the greater part of the rear of Tenement 3.

The standing remains (Figs. 8–10) By David & Barbara Martin The two-bay mid-13th-century undercroft was sited within a rear range of the tenement, well away from the street. It measured 8.35 m by 4.05 m internally

and was constructed partially above ground with a raised upper room over. All the visible walls are of flint cobble construction with occasional inclusion of chalk blocks to the internal face of the undercroft. The external work is of roughly-coursed flint cobbles with Caen dressing to the northern quoins. There are no indications of a dressed quoin at the south-western external corner. The internal angles within the undercroft are of Caen stone, but the vaulting ribs and associated carved bosses are of sandstone. Much of the rendering still survives within the undercroft, and there are further patches of original plaster towards the southern end of the east wall within the former street range and towards the base of the northern external elevation (Fig. 8). The rendering or plaster in all three areas finishes in a distinct line which indicates the levels of the original floors and external ground surface. Small 'Flemish' style bricks are recognizable incorporated into a cupboard recess (Fig. 8:C1), the slot for a locking bar to the principal doorway and into the remains of a window (W2). They are fully integrated into the structure and must be contemporary with the undercroft.

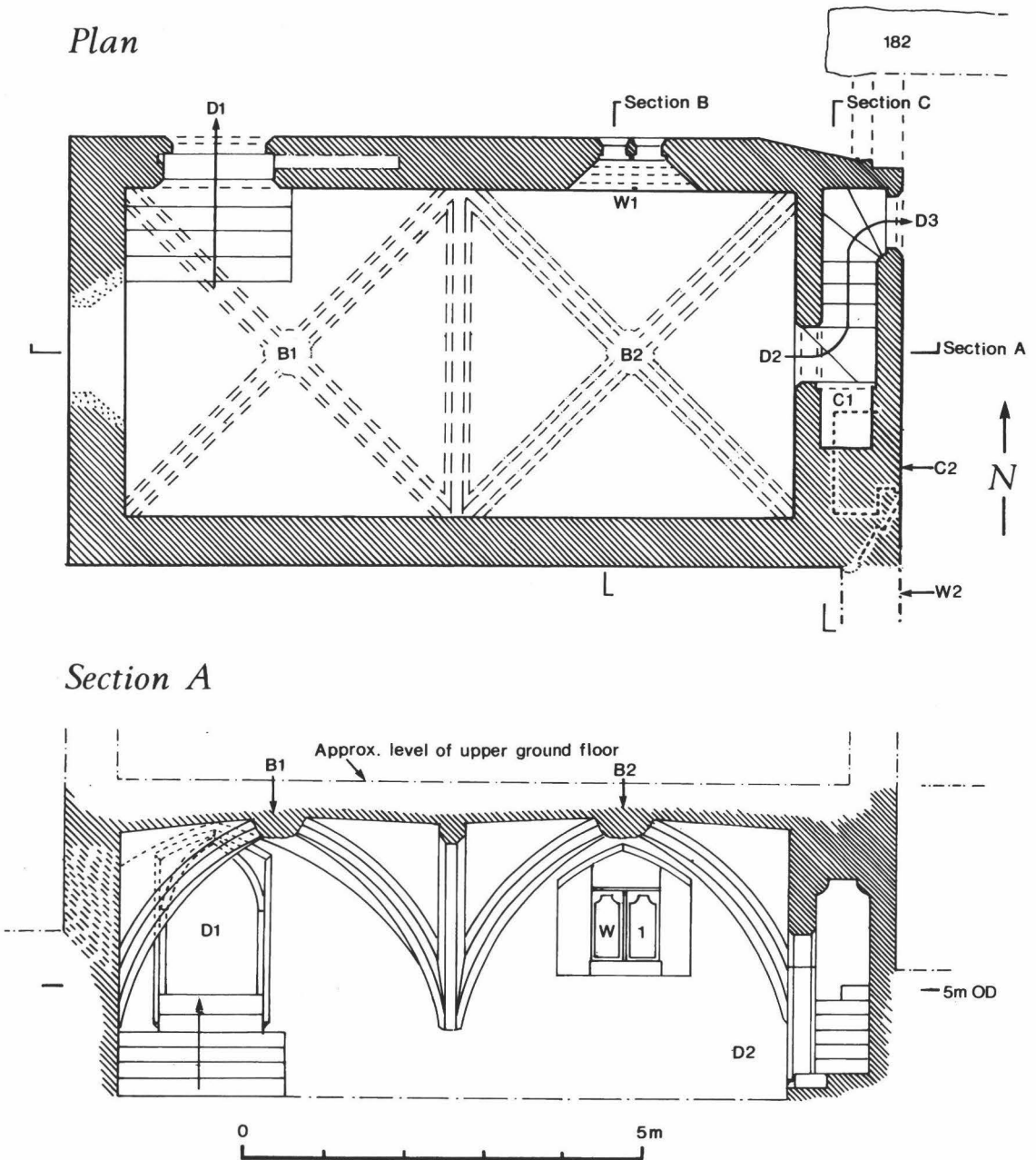


Fig. 8. Plan of undercroft and section of undercroft.

The principal means of access to the undercroft was by a wide doorway and flight of stone steps located at the extreme western end of the northern wall (Fig. 8:D1). A narrow, secondary flight at the eastern end of the undercroft built into the wall

thickness allowed access from the street-range to the east. A deep wall-cupboard was incorporated at the bottom of the secondary flight (C1). It was formerly fitted with a door and shelf at mid-height. The flight could be shut off from the street-range by a door at

the head (D3). There was no corresponding door located at the foot of the stairs (D2). The main external doorway (D1) leading to the cellar from the north was fitted with a heavy, sliding locking-bar indicated by a wall slot. The undercroft was lit by a single two-light window located high in the northern wall of the eastern bay (W1). The window still retains its slender dividing mullion and incorporates flat shouldered arches above each light, the shoulders having a convex rather than concave curvature. The rendered arch above the heads is modern. A similar two-light window incorporated into the west wall is a 19th-century antiquarian insertion and is not shown in an engraving of 1854 (Lower 1854, 118). Photographs taken prior to the destruction of the building which stood over the undercroft show that much of the southern, western and northern walls of the medieval structure still survived almost to full height (Fig. 7). The wall tops and western gable had been rebuilt in the late 18th or early 19th century and this may indicate that the structure stood ruinous when reused. The roof, an internal partition and the timber-framed eastern wall also appear to have been of late date. The photographs show a neatly formed dressed quoin at the north-western corner, with a quoin or jamb (possibly a window jamb) immediately to the east. Further to the east can be seen two narrow, single-light, square-headed stone windows, perhaps 15th-century in date. A more recent window had been intruded between the two. A large brick patch at the extreme eastern end of the wall marked where the return wall of the former street-range had been removed. No ancient architectural features can be seen in the other two walls.

Features within the eastern wall of the standing structure relate to the former street-range. The splayed jamb of a window (W2) to the south, together with the jamb of a doorway (D4) and the foundations of a return wall (182) to the north of the undercroft indicate that the former street-range extended beyond the undercroft to both south and north. The cramped location of the south window suggests that a cross-wall or other feature was situated a little distance to the south of the undercroft, preventing the window being more conveniently positioned. The same is true of the north doorway, where the northern face of the undercroft range is purposely canted inwards to allow room for the door. Immediately to the north of the southern window were the broken remains of a large (1.26 m wide)

cupboard-recess (C2) located above the mural staircase.

With the exception of the two ornately carved vaulting bosses (Figs. 8:B1, B2 & 10) the surviving work is not elaborate, though the quality of finish is generally high. There can be little doubt that the undercroft was intended to impress and must have been accessible to both the tenant's guests and clients. Use of the undercroft as a room purely for the storage of goods which needed to be kept cool can therefore be discounted. The existence of vaulted cellars of this type, of which there are large numbers in the ports of Winchelsea and Southampton, is usually attributed to the storage and sale of wine by wholesale importers, and it is probably no coincidence that the vaulting boss closest to the main entrance is decorated with grapes and vine leaves (Fig. 10 left). In the standard plan the cellar is entered via a wide doorway and associated flight of steps leading directly from the main street. In this important respect the Seaford example is not typical, for the 1993 excavations disproved the possibility of a street immediately north of the undercroft. Whether the area outside the main entrance fulfilled the function of public space, or was easily accessible from the street is not known.

The excavated remains

Little evidence survived of the street-range in Tenement 3 (Fig. 11). A jamb on the north wall of the undercroft, shown more clearly in the photograph of 1958 (Fig. 7), indicated that a door provided access from the buildings to the land at the rear. A length of medieval wall (Fig. 11:182) marked the position of the north side of the street range. No trace of the door sill or its footings, which would have been relatively slight, or of the opposing door jamb remained. The footings of the wall were more substantial and where they crossed an earlier rubbish-pit (193) had been cut through the soft fill to a firm base on the natural clay beneath. They were constructed of mortared flint pebbles and incorporated chippings of Caen stone.

The 19th-century street frontage lay 13.25 m to the east of the rear door of the street-range. The structural evidence from the undercroft and excavated wall suggests that the range measured in the order of 8.25 m wide (external dimensions). There was little evidence of the character of the interior of the range, though no trace of slight partition walls might have survived. Neither the chalk footings (13, 76), nor the pit (15) in the

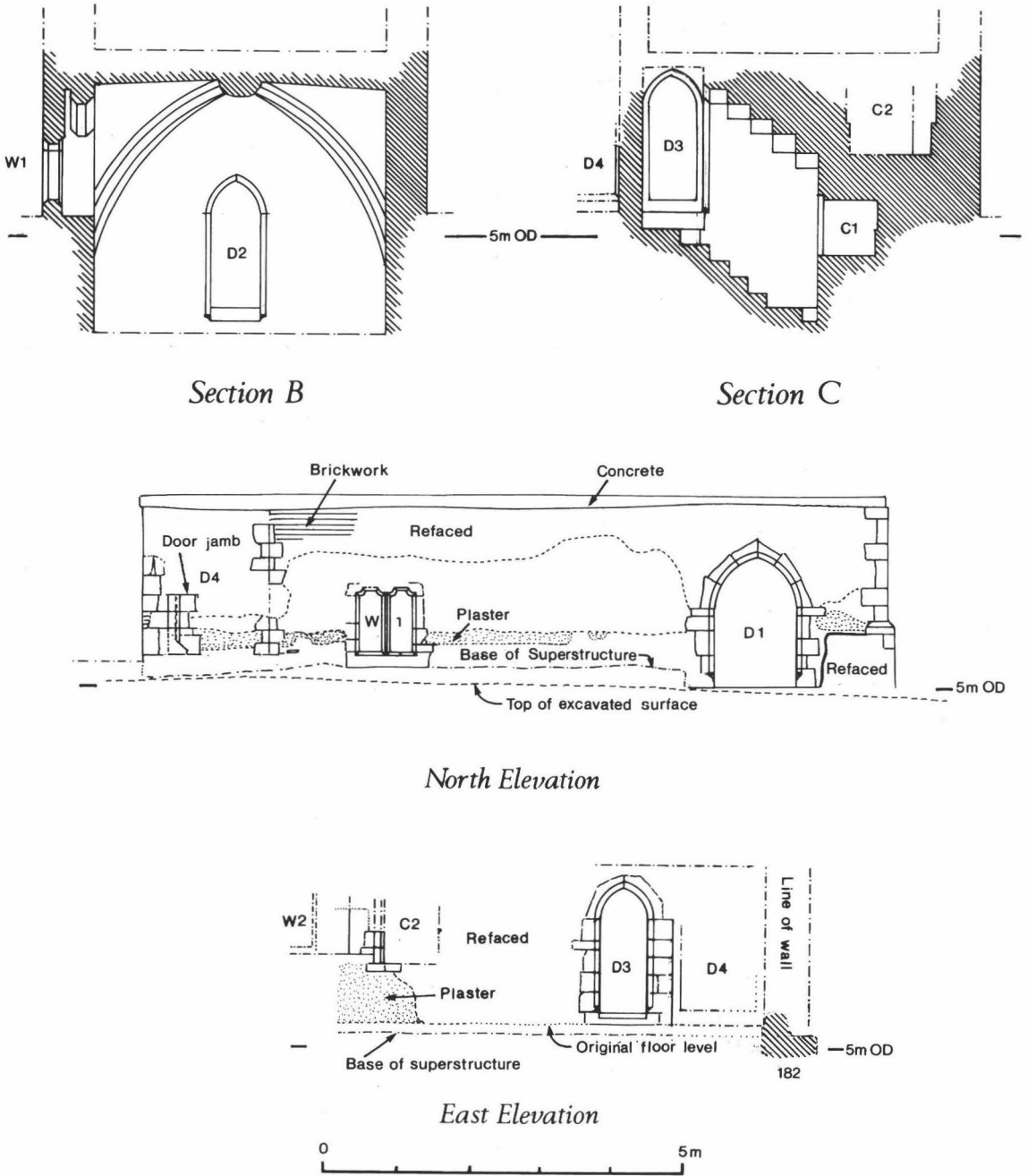


Fig. 9. Sections and elevations of undercroft.



Fig. 10. Western roof boss (B1, left) and eastern roof boss (B2, right) of undercroft.

presumed interior of the building could be dated. Pit 258, however, did contain a spindle-whorl of medieval type. A single pit (263) contained two medieval storage vessels set side by side. These survived complete, except for their rims. Both had chalky accretions on the internal faces, which had evidently precipitated from stored water. The chalky deposit was also found on the surfaces of breaks in the pots suggesting that they had continued to serve this function after they had cracked.

The area excavated adjoining the undercroft was more informative (Fig. 12). No evidence was found for a building trench for the undercroft walls. A slight depression running parallel to and immediately adjoining the walls may perhaps have been created by the collapse of soil at the edge of the undercroft trench before the construction of the walls had been completed. A box-section cut against the north wall of the undercroft confirmed that the walls of the cellar had been set hard against the edge of the construction pit.

Excavations around the main entrance to the undercroft revealed a series of surfaces. A layer of cobbles (137) to the west of the entrance was set in a mortar bed containing medieval pottery, but the adjoining layers also contained tile of probable 15th-century date or later (138, 161). To the north was a layer of clay (149) which incorporated 16th-century pottery and a later 17th-century pipe-bowl. A large post-hole of uncertain date had been cut through the cobbles (155). An impression of the post at the base showed that it was square in section with a side of 180 mm. The surfaces at the entrance partially overlay a shallow ditch (139) which had been dug to intercept water running off the bank of

the adjoining tenement to the north and channel it away from the door.

Two substantial and two smaller pits were excavated on the north side of the undercroft. One of the larger pits clearly served as a rubbish-pit (144). The other (168) was deeper than 650 mm and had probably been used as a cesspit. It had been capped with a rubbish deposit which, as the tip lines showed, was thrown in from the west side. The two larger pits contained 13th-century pottery. One of the smaller pits (163) contained no datable pottery, but did include tile of 15th-century or later type. The second (not shown on plan) contained 13th-century pottery and had been cut by Wall 182, which was associated with the undercroft.

A single medieval pit (132) was recorded on the west side of the undercroft. The feature was not bottomed, but its vertical sides suggest that it may have been of considerable depth. It is comparable to the cess-pits cut into similar soil at Church Street recorded by Freke. The fill, which comprised slate and large flint pebbles, was similar to Freke's 'topping-up layers', that is rubbish and hardcore used to level the pit as the contents settled (Freke 1978, 201). Late-14th-century pottery was found amongst the upper fill.

THE MEDIEVAL PLAN

It has been argued above that the area examined by excavation was divided into three, or possibly four, tenements (Fig. 3). Very little structural evidence was found in the excavation to indicate the nature of the medieval buildings, although the general plan and development of the site may be inferred.

Modern building work had removed most of the

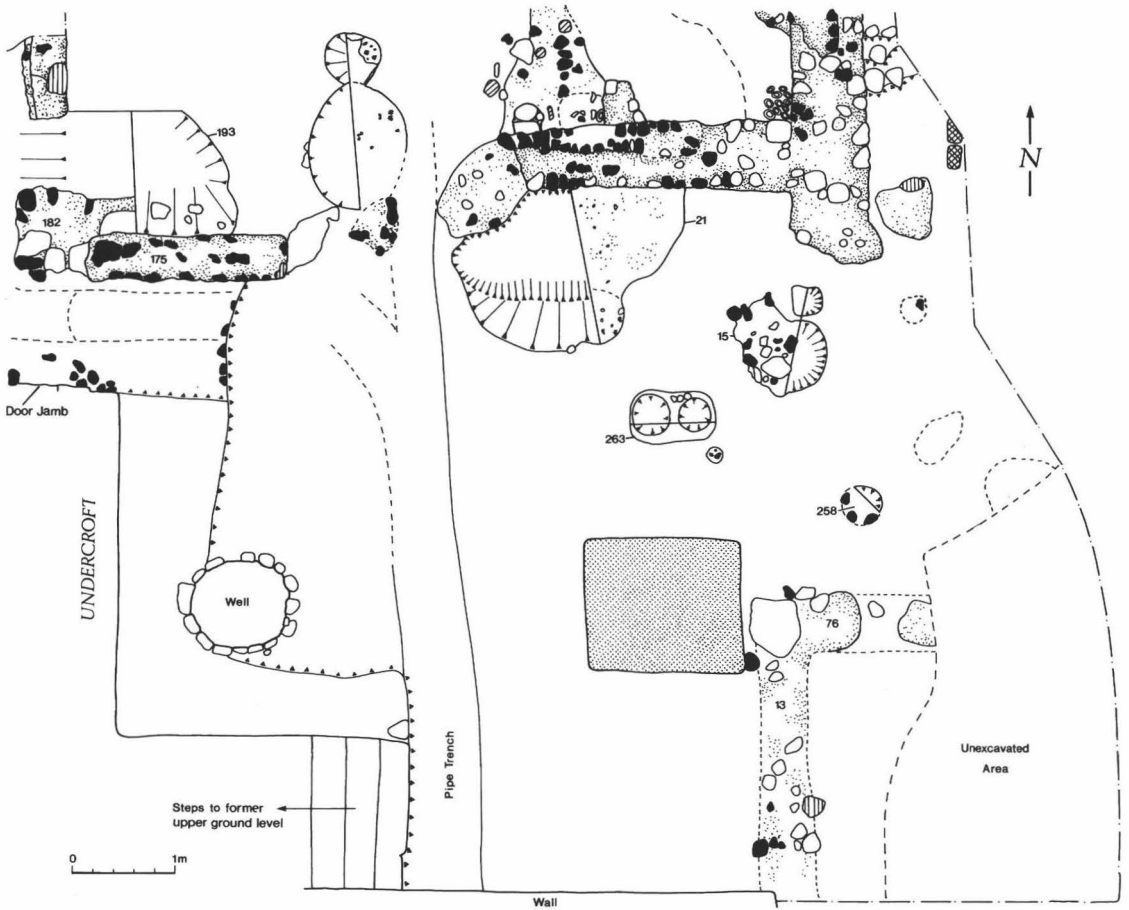


Fig. 11. Tenement 3: portion adjoining street.

medieval remains in Tenement 1 and no coherent plan can be made of the pattern of post-holes. The three excavated hearths may have been used for heating or for cooking, but their interpretation may be suggested by considering them in conjunction with the possible oven (195) in Tenement 2A and the probable hearth (33) in Tenement 2B. All these would have lain towards the rear of the buildings, the most likely position for a kitchen. There is no evidence to indicate whether the kitchen was integral with the street range, perhaps set at the rear of the building running backwards from the street, or was a detached building.

We may at least infer that these hearths were situated inside buildings and, similarly, that the rubbish-pits were dug in open ground behind. These features allow the sequence of building construction

and destruction to be traced. Pits 67 and 209 in Tenement 2A are both late 14th-century and may suggest that an area nearer the street not previously used for rubbish disposal had become available, either through the contraction of buildings on the plot or through the demolition of all structures. Similarly, the 16th-century pits in Tenement 2B (225, 245) indicate the presence of vacant land near the street. By contrast, the building in Tenement 3 was constructed in the mid-13th century to occupy land which had been previously open and was built over an earlier rubbish-pit (193). It cannot be determined whether the other rubbish-pits found beside the undercroft were contemporary with it or preceded its construction.

The clearest evidence for a building plan has been obtained from Tenement 3 where the largest

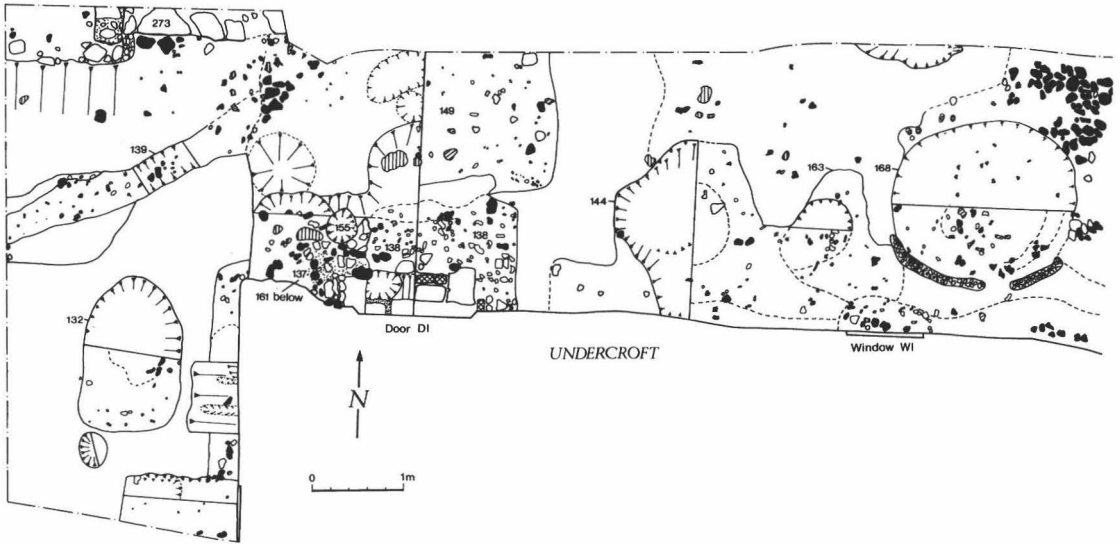


Fig. 12. Tenement 3: portion adjoining undercroft.

area was excavated and a standing structure survives in part. The boundary of the tenement was established on the north side only. It has been suggested above that the splayed jamb of the window in the west wall of the undercroft indicates that there was a wall on the south. That wall perhaps ran along the south side of the tenement giving a width of about 8.25 m (27 ft) for the holding. The east wall of the undercroft lies 13.25 m (43 ft 6 in.) behind the pre-1940s street frontage. The dimensions indicate that the street-range was set, like the undercroft, at right-angles to the street. Wall 182 shows that the building was wholly or substantially constructed in stone. There is little indication of the internal plan of the building, although the ground-set pots (263) suggest that the existence of a passage along the north side of the building to the door adjoining the north side of the undercroft is improbable. The pots also imply that the room in which they were situated may have had a domestic function.

The Martins have drawn attention to the uncommon position of the undercroft at the rear of the tenement. Undercrofts frequently did not have direct communication with the rooms above, except by means of external stairs. Faulkner (1966, 129) has argued that undercrofts and the upper ground-floor rooms were often let separately. The Seaford undercroft, however, had direct internal communication with the street-range. The provision

of a draw-bar to secure the main doorway from the inside indicates that it was intended to be locked by the occupants of the ground floor of the street-range, for once the bar had been drawn their exit could have been into that building only.

Most of the excavated remains belong to the 13th and 14th centuries. The 15th-century remains are, as so often in towns, poorly represented in the archaeological record. It is more surprising that 12th-century features are absent from the excavated area. Freke, who likewise found no 12th-century remains in his excavation, suggested that the early town lay further south, but the results of the present excavations and the study of the topography provide no evidence to support that idea. The 12th-century remains may have been so slight that the later buildings have entirely removed all trace. Given the shallowness of the stratigraphy and the terracing of the ground during the medieval period, the absence of earlier activity should not be considered conclusive.

POST-MEDIEVAL USAGE

The evidence for post-medieval activity was vestigial. Some of the post-medieval deposits were removed by machining, but generally there were few cut features attributable to the period. The surfacing laid down in the late 15th or 16th century outside the entrance to the undercroft has already been discussed

and implies that the entrance to the building continued to be used. It has been suggested that part, or perhaps all, of Tenement 2B may have been open during the 16th century when rubbish-pits were dug and building material was dumped.

There is little clear evidence for post-medieval

building-plans. None of the walls or footings recorded in the excavation could be dated except in relationship to underlying material. The base of the footings (49) (Fig. 5) had been cut into a medieval pit and the two bonded walls (48 & 77) (Fig. 6) overlay a 14th-century pit.

THE FINDS

POTTERY (Fig. 13) By Tessa Machling

A total of 1161 sherds of medieval and post-medieval pottery was recovered from the excavations in Church Street in 1992. Owing to the small quantities of pottery recovered, this report deals only with the more important types and assemblages found. A more detailed context by context list and precise fabric descriptions can be found in the pottery archive.

In general the pottery ranges between the 12th and 16th centuries with the majority of sherds coming from the 13th and 14th centuries. A substantial proportion of non-local types might be expected in the medieval port of Seaford, but only a handful were recovered from the excavation, the majority of which originated from northern France. Of particular interest are a single sherd of *c ramique onctueuse* from southern Brittany and a fragment of a Scarborough aquamanile (Fig. 13:2).

C ramique onctueuse has been found on very few British sites and is thought to have had a very limited production and distribution area. The sherd was identified by John Cotton (Canterbury Archaeological Trust) as a late 14th-century type. The sherd's origin in south Brittany suggests a trading link with that area which is rarely recognized in Britain (Orton, in Rudling in prep.). The 1992 Seaford aquamanile is of a Scarborough Phase II fabric type with an all over deep green lustrous glaze (Farmer 1979). The animal has square peg feet with a large triangular applied tail. The handle of the vessel would appear to be of strap form fixed with two decorative thumb prints. Vertical lines of upturned 'scales' have been pinched out of the vessel body in equal intervals around the rear end of the vessel. The considerable length of the tail on the vessel might suggest that the creature is a horse and possibly once had a rider through which water was poured into the aquamanile. The Phase II fabrics date from the early 13th until the mid-14th centuries and the stratigraphic evidence suggests that this vessel dates from the earlier part of that date range.

The aquamanile is the second to have been found in Seaford, and apparently only the third to have been found in Sussex, the other having been found at Lewes in 1846 (Fig 1848, 44-5). The first Seaford 'knight jug' was located at a school in the town in 1858 (Fig 1858). The Church Street aquamanile is dissimilar to both of the previous Sussex examples in decoration, although seems to be closer to the Lewes example than to the Seaford example in form and style.

Description of fabric types

F1A Coarse to 3.5 mm multi-coloured flint sand and shell, with grey brown core and grey/black surfaces. This fabric is moderately hard with a rough feel and a hackly texture.

F1B Coarse to 2 mm multi-coloured flint sand and shell, with grey core and red/brown surfaces. This fabric is hard with a rough feel and an irregular texture.

F1C Coarse flint, multi-coloured flint sand and fine to medium quartz sand and occasional shell. Hard fabric with rough feel and irregular texture. Occasionally has spotted glaze on exterior.

F2 Medium grey quartz sand and coarse shell, with grey core and brown/red surfaces. Hard fabric with a rough feel and irregular texture.

F3A Coarse grey quartz sand and red grog, with grey core and red/brown surfaces. Hard fabric with rough feel and irregular texture.

F3B Medium grey quartz sand and red grog with grey core and red/brown surfaces. Hard fabric with rough feel and irregular texture.

F3C Hard fired fine sandy fabric with red/orange core and orange/buff surfaces. Often with exterior green/brownish glaze.

F3D Hard fabric with fine grey quartz sand and occasional grog. Orange core with orange/buff surfaces. Often has brown mottled glaze.

F4A Hard medium grey sandy fabric with a rough to harsh feel and a fine texture. Grey core with grey to brown surfaces. Sparse fine mica inclusions.

F4B Hard fabric with a rough feel and fine texture. Abundant fine to medium grey sand with grey core and orange/buff surfaces. Occasionally has patches of green/brown exterior glaze.

In addition to these fabrics there were also examples of provenanced wares, including Rye, Siegburg, Saintonge, Rouen, Delft, Tudor Green, *c ramique onctueuse* and Scarborough wares.

Fabric F1A apparently first appears in the early 12th century, and F1B and F1C represent later developments of the fabric in the early 13th and the late 13th or 14th centuries respectively. The forms represented by the F1 fabrics are sagging-base cooking pots and storage jars. F2 may also represent a F1A derivative and is in cooking-pot and storage-jar forms, sometimes with applied thumbed strip decoration running vertically down the body of the vessel in equally spaced lines. F2 is almost indistinguishable from a late-12th- to early-13th-century fabric from Potter's Corner, Kent. However, the occurrence of this fabric so far west of that production site suggests it is unlikely to be from the same source. It is possible that F2 is from an equivalent industry in the Sussex area providing similar pottery for a more westerly market.

F3 types also appear to show a development of one fabric type. F3A apparently dates to the early 12th century, F3B from the 13th century, whilst F3C represents a late-medieval type

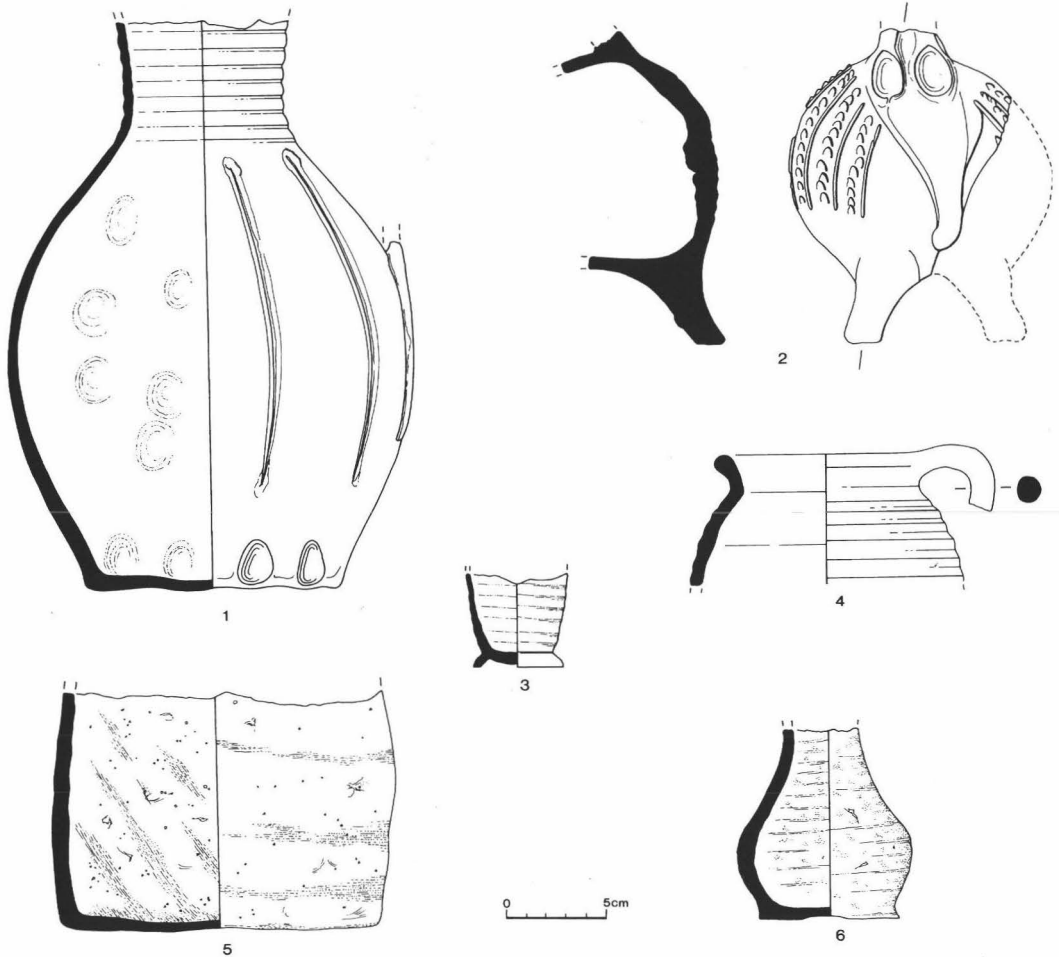


Fig. 13. Pottery.

most often associated with pinched-base jugs and bowls. F3D is a post-medieval fabric which seems to date from the 16th century onwards.

The ceramic evidence

The majority of the pottery came from pits, very few of which could be otherwise dated. Pottery was also discovered in several of the contexts adjoining the north door of the undercroft and was found below the hearth of Flemish bricks to the north of the site (Feature 86).

1. Features associated with the undercroft

It has been suggested that the area to the north of the undercroft was an open area beyond the medieval buildings. The pottery from Pits 144 and 168 seems to be contemporary with the early use of the undercroft in the mid-13th century. Pit 132 would seem to be of a late-14th-century date.

An almost complete, but broken Rouen green-glazed jug was discovered within Fill 146 of Pit 144 (Fig. 13:1). The jug

was decorated with vertical applied strips, had a pinched base and has a probable date around the mid-13th century. Many sherds of a large F1C cooking pot were also recovered with sherds of 13th-century Rye ware and several F3B sherds. The layer (154) below 146 also provided 13th-century sherds, but the lower levels contained no ceramics.

Cesspit 168, adjacent to 144, provided the best evidence. The lower layers of this feature contained pottery of a late-12th-/early-13th-century date including sherds of F1B and F2B cooking pots. The upper levels of this pit date to the mid-13th century with sherds of Rye ware being recovered with F1B and F2B sherds. The top fill of the pit probably comprised later material slumped into the top of the feature after the pit's use had ceased; it contained sherds of late-14th-century date. Sherds from the rear end of a Scarborough ware aquamanile were found just to the east of this pit (Fig. 13:2).

Pit 132 to the west of the undercroft contained several sherds of Rye ware, as well as a base sherd of a Siegburg stoneware beaker of the late 14th century (Fig. 13:3) and a

Saintonge beak-spout (see Platt & Coleman-Smith 1975, 135–44 for type) with exterior patchy polychrome glaze.

Three contexts near to the north door contained pottery. Context 138 included 13th-century F4B sherds. To the north of 138, two layers (149, 158) contained 15th- and 16th-century pottery, including both F3C and F3D sherds.

The land to the east of the undercroft probably lies within a contemporary building. Two large 13th-century F2 storage pots were set into the ground (2, 4) in the presumed building. Both the vessels had applied thumb decoration and are similar to the vessel found during Freke's excavations to the north in 1976 (Freke 1978, fig. 9:21).

2. Other features

Two pits (225 & 245) containing 16th-century F3C and F3D sherds were found to the east of the site. Pit 225 contained a F3D-type small handled cup of an early 16th-century date (Fig. 13:4). The lower layers of Pit 245 and the nearby Pit 257 contain 13th- or 14th-century F1C sherds. Several pits including Contexts 196, 207, 214 to the north of the site contained 13th- and 14th-century pottery with F1C, F3B, F3C, F4A and Rye sherds. A rubbish-pit (166) contained 13th-century F1B, F2, F3B and F4A sherds, including a complete base of a tall, narrow coil-built cooking pot (Fig. 13:5).

Two pits (Contexts 67 & 209) cut by Walls 77 and 48 contained late-14th-century F3C and F1C sherds. The sherd of *céramique onctueuse* came from Pit 209, supporting the date of 14th century. Several features from the raised spit remaining between the two cellars contained 13th-century F1B and F1C fabrics which suggest that activity of this period continued throughout the site. Feature 99, at the northern end of the site contained a small coil-built vase or jug in a F3B-type fabric. The form of this vessel would seem to be post-medieval but the fabric appears to be of 13th- or early-14th-century date (Fig. 13:6). No parallels for this vessel have been found by the author and it may well be that this vessel represents a 'one-off' or experimental form. The Flemish brick hearth (Context 86) to the north of the site contained pottery of a late-14th-century type, including F3B and F3C sherds.

Conclusions

Thirteenth-century material was found across the whole site. Late-14th-century pottery is evident in several of the pits to the north, but otherwise seems to come from trample and deposits slumped into 13th-century features. The 16th-century pottery types appear in a small number of layers around the entrance of the undercroft and from the few post-medieval features. Although the quantity of pottery from the Seaford excavations is small, it is still possible to make use of the material to date and suggest possible uses for certain areas. The presence of a few rare imported sherds makes this site particularly interesting for its ceramics.

BUILDING MATERIALS

Brick

Brick was recovered from four contexts during the excavation. Some bricks were also noted in the north wall of the undercroft, in the roof of the socket of the sliding bar for the main doorway, in Window W2 and Cupboard C1. All the brick, except two fragments, was of Flemish type and measured 39–45 mm thick and 94–114 mm broad. No full lengths survived. The two fragments of different type were found in a rubbish-pit (163).

They had a distinctive red colour and had a greater thickness (51 mm, 55 mm), and may be of later date.

Brick was imported to Winchelsea in the early 14th century and may have been imported to Seaford at an earlier date, but apparently was available in limited quantities (Pelham 1929, 107; Holt 1970). Seaford is considerably further west than the other early findspots of brick.

Roofing tile

The quantity of tile recovered by excavation did not allow detailed analysis. Six fabrics were identified of which four were poorly made and tempered with quartz sand, flint sand and/or shell. These probably date to the medieval period. The other two fabrics were more highly fired and had no temper visible to the naked eye and were associated with 15th-century or later pottery.

Other tile

A single undecorated floor tile was recovered. The fabric suggests it dates from the 15th-century or later. Oven tiles were recovered from three contexts, but none of the pieces was *in situ*.

Geological material

By Luke Barber incorporating comments by John A. Cooper (Booth Museum of Natural History, Brighton)

A number of fragments of secondarily cemented hard ferruginous conglomerate from Tertiary deposits on Seaford Head were noted on site but not collected. A single sample was retained from Context 22 (fill of Cesspit 21); it had mortar adhering to it and had obviously once been incorporated into a wall. The stone is common in standing masonry in the town today. Wealden Ironstone, another relatively local rock type, was represented by a single fragment. It is possible this is the remains of the corner of a floor tile. The nature of the bedding and jointing in this type of stone can produce a similar 'corner' effect naturally. The remains of a roughly shaped building-block in a non-local limestone was also found. It is possible that this originally came to the port as ship's ballast.

A number of architectural fragments were among the assemblage. All of these were in Caen stone and appeared to belong to the 13th or 14th centuries. Most were small undiagnostic pieces weighing under 100 g although tooled surfaces and chamfers are visible on most examples. Only one large fragment is present (Fig. 14:7). This piece, weighing 1431 g, has two conjoining dressed faces at right angles with a chamfered edge between. It is not possible to ascertain from which part of the building this piece originated.

Twelve contexts produced slate. All the slate collected from the excavations is of West-Country origin and appears predominantly to date to the 13th and 14th centuries. Five variants are present, the most distinctive being the lilac type, although it is possible all originated in the same quarry (Holden 1965; 1989). With the possible exception of a small slate from Context 237 (fill of Pit 37) (Fig. 14:8) none of the retained slates had their full length surviving. The maximum surviving lengths were in the region of 190 mm. Widths vary considerably but tend to fall into two main groups; narrow examples between 60–67 mm and more commonly, wider examples between 93–130 mm. Fixing holes, where present, are usually circular or sub-circular and range from 7–10 mm in diameter although most fall within the 7–8 mm diameter range.

Thicknesses varied from 4–15 mm. Traces of mortar are present on a number of examples, though the survival is not adequate to establish the measurement of the lap. Remains of iron staining around the fixing hole to one of the slates (Context 148) shows that it was secured by a nail. A number of examples have evidence of more than one fixing-hole. Others show evidence of semicircular nicks along the long edges (Fig. 14:8, 9).

METALWORK By Luke Barber

The excavations produced small quantities of metalwork, most of which consists of iron. Much of this material is in a very poor state of preservation. A selection of the iron was X-rayed and the plates together with a full listing of objects form part of the site archive.

Iron artefacts

The greater number of the excavated iron artefacts were nails (29 examples from 16 contexts). Virtually all had low domed heads with square-sectioned shanks. These were mostly found in 13th- and 14th-century contexts (Fig. 15:11, 13), although some were also present in the 16th-century deposits. (Fig. 15:10). Complete lengths, where ascertainable, were mostly in the range 40 to 70 mm although a few examples were considerably larger, up to 152 mm (Fig. 15:11).

Twelve pieces of other ironwork from six contexts were also present. Most were heavily corroded and some proved unidentifiable, even from the X-ray plates. Recognizable items included three knife-blade fragments, a staple and two clenched bolts, one of which has a lozenge-shaped rove (Fig. 15:12). A

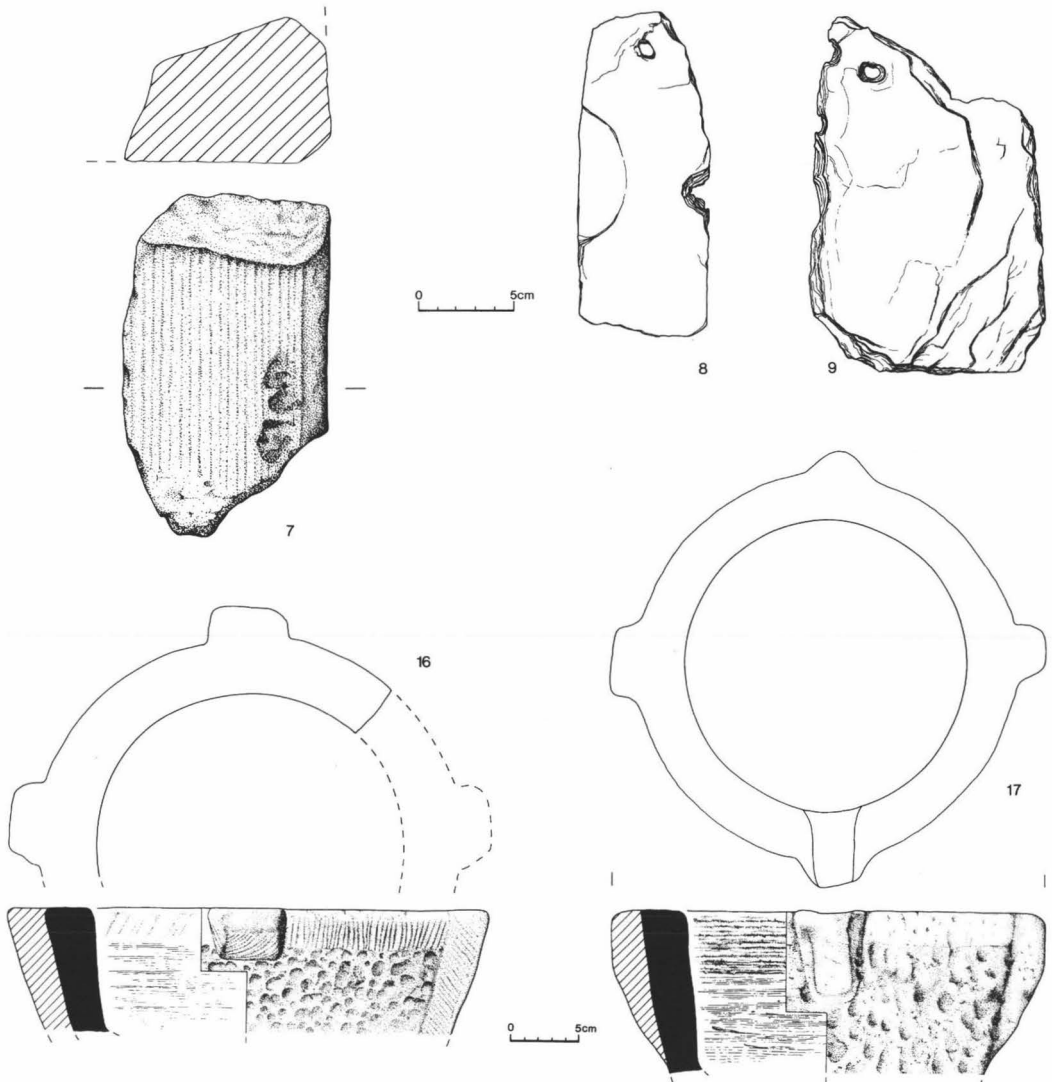


Fig. 14. Building and worked stone.

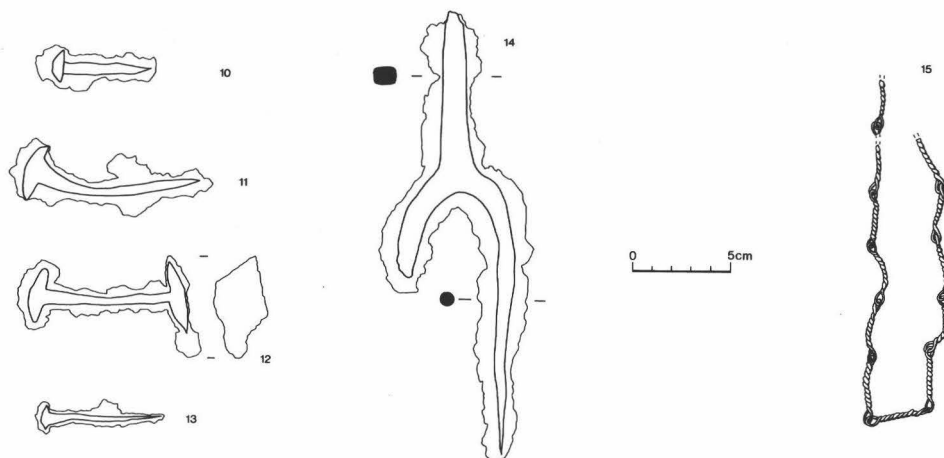


Fig. 15. Metal artefacts.

tanged pitchfork was also found from a 16th-century pit (Fig. 15:14). There are similar finds from post-medieval contexts in Colchester and Sandal Castle, Yorkshire (see Crummy 1988, fig. 90, no. 3247).

Non-ferrous artefacts

Only seven pieces of non-ferrous metalwork were recovered. All but one, which is of lead, are of copper alloy. The only diagnostic pieces present are a pin and a necklace. The latter is formed from links of twisted round-sectioned copper-alloy wire. A similar example has been found from Colchester (Crummy 1988, fig. 9, no. 1412). Though the Colchester piece was unstratified, the Seaford example was found in a 14th-century pit (209) (Fig. 15:15).

NUREMBERG JETON

By David Rudling
Unstratified brass jeton (or reckoning counter) of Hans Krauwinckel II: master 1586; died 1635. 'Rose/orb' type: 22 mm diameter Mitchiner 1988, 439, 1522.

Obverse: Three Crowns, alternately with three Lis, arranged radially around a central Rose with six heart-shaped petals: Marginal inscription: rosette HANNIS. KRAUWINCKEL. IN. NVR

Reverse: Imperial orb surmounted by a cross patty, within a tressure with three main arches: marginal inscription: rosette GOTT ALLEIN. DIE. EERE. SEI

Die axes: 12 o'clock.

STONE ARTEFACTS By Luke Barber
incorporating comments by John A. Cooper
(Booth Museum of Natural History, Brighton)

Whetstone

One small fragment of a fine micaceous sandstone of non-local origin with the remains of a smoothed/polished face was found in a context tentatively dated to the 16th century (Pit 225). Too little of this object remains to ascertain its original form.

Mortars

Fragments of two mortars were found during the excavations. Both came from 13th-century rubbish-pit fills and are of a similar type. The example from Pit 166 has a complete reconstructable rim but, as with the other mortar, from Pit 206, is missing its base. Both mortars show signs of internal wear although unfortunately basal wear cannot be assessed. It seems likely, however, the bases on both examples broke away along lines of weakness caused by grinding wear at the junction of the base and side wall.

Purbeck marble mortar

(Fig. 14:16)
Two conjoining fragments making up approximately one-third of the rim and adjoining body together with one small lug and the remains of another extended lug/rib remain. The rim, which has a diameter of approximately 320 mm, is plain. The lug and rib are chisel-dressed as is a band around the external rim. The remainder of the exterior is pecked. The 13th-century date of Context 207 in Pit 206 fits well within the main period of production at the Purbeck quarries (Dunning 1977, 324).

Fossiliferous limestone mortar

(Fig. 14:17)
Five conjoining fragments make up the complete rim and adjoining body together with two small and two extended tapering lugs/ribs set at the opposing angles. The rim which has a diameter of approximately 275 mm is plain. One of the lugs has a shallow crudely cut runnel. The lugs and ribs are chisel-dressed as is a band around the external rim. The remainder of the exterior is pecked. It is likely this is also a product of the Purbeck area. Context 167 from Pit 166. 13th century.

CLAY PIPES

By David Atkinson & Luke Barber
The excavations produced four stem fragments and two bowls from three contexts (18, 149, 160). All of these are of typical unmarked Sussex types and date to the later 17th century. A conjoining stem fragment and bowl were found dating to between c. 1640–50 (Context 18). This type is illustrated elsewhere (Atkinson undated, fig. 1, nos. 8–11). A full list of clay pipes forms part of the archive.

THE FAUNAL ASSEMBLAGE By Wendy Wood

A total of 1037 bone fragments were recovered from archaeological deposits. Of these, 188 fragments were primarily identified as avian (see below). Of the remaining mammalian bone, 773 fragments could be identified according to bone-type and species.

Table 1. Mammalian species as number of fragments (N), and percentage of sample.

Species	No.	%
<i>Bos taurus</i>	235	22.66
<i>Ovis aries/Capra hircus</i>	442	42.62
<i>Sus domesticus</i>	82	7.91
<i>Canis familiaris</i>	1	0.1
<i>Felis</i> sp.	2	0.19
<i>Oryctolagus cuniculus</i>	11	1.06
Bird sp.	188	8.13

All bones were recovered by hand, and fragments come largely from pit fills of medieval date.

The stock food resources, cow (*Bos taurus*), sheep/goat (*Ovis aries/Capra hircus*) and pig (*Sus domesticus*) were all represented, with sheep/goat dominating the assemblage. Cow was also recovered in relatively large numbers; pig was less well represented with only 82 fragments being identified. Only one bone of dog (*Canis familiaris*) was identified, and only two of cat (*Felis* sp.). A small number of bones of rabbit (*Oryctolagus cuniculus*) were also recovered.

Mammalian remains*Sheep/Goat*

The domination of this assemblage (442 fragments out of a total of 1037) by sheep/goat suggests that this may have been considered the most important food resource. Bones from all parts of the skeleton are represented, although the majority of bones are of the limbs, ribs and vertebrae: these presumably represent domestic refuse. However, the fact that the extremities of the limbs were represented, as too were the vertebrae, and that these were often found associated with the long bones indicates that meat was probably being jointed on-site. The data could indicate that the majority of meat was bought on the bone and processed at home for cooking purposes.

Ovis/Capra was probably exploited as a source of meat. The distinction between adult and immature bones is comparatively small: it seems that slightly more adults than juveniles were slaughtered. This may suggest animals were kept for their wool and slaughtered towards the end of their useful lives.

Cow

Bos was well represented in the sample. As with sheep/goat, bones representing the entire skeleton were present. Most bones were of mature individuals, although some juvenile specimens were also recovered. These latter showed an age range of 21 days to 30 months.

The sample suggests that the majority of cattle reached maturity, that is about 3½ years, before being slaughtered. This would indicate that cattle were more important for their milk yields (assuming they were female), with only the older individuals or young males being viewed as a meat resource.

Pig

Pig formed a clear minority in the sample. Only 82 fragments of *Sus domesticus* were recovered on the site. The limbs, vertebrae, ribs and skull were all represented in roughly equal proportions. The majority of bones were of mature adults. The bones represent domestic food refuse, although the low proportion of bones could indicate that pig was not as important as either *Bos* or *Ovis* as a food-resource.

Some bones show signs of butchery. It has been noted from earlier excavations in Church Street that pig-bones showed 'a significant lack' of butchery marks (Brothwell 1977). The number of butchered pig-bones in this sample is low, but this is in keeping with the low number of pig-bones generally. In comparison with other species, the incidence of butchered bones is similar, c. 14–23% of identified specimens.

Butchery

The butchered fragments formed 14%, 16% and 23% for *Sus*, *Ovis/Capra* and *Bos* respectively. On the whole, these marks are consistent with the general practices of processing carcasses and preparing them for consumption. For example, knife marks to an acetabulum of *Bos* from Layer 149 illustrate the initial process of severing the hind limb from the hip. Similarly, the distal humerus of *Ovis* from Pit fill 154 displays knife-marks to the shaft, the result of cutting meat from the bone. A marked feature of the assemblage, however, is the large number of vertebrae present of both cow, sheep/goat and pig, which have been chopped vertically along their dorso-ventral axis, indicating that carcasses were separated into sides of meat. Elsewhere it has been found that this is a practice not usually in evidence until the 16th century (Maltby 1979). Since some of these specimens are from deposits dated to the 13th and 14th centuries, it is assumed that this was a common strategy used in Seaford meat production at a much earlier date.

Carnivores

Dog was directly represented only by an immature mandible indicating an animal of about one to two months old. Indirect evidence is provided by signs of gnawing on a total of ten bone fragments, largely long bones, of *Sus*, *Ovis*, and *Bos*. Tooth marks are concentrated around one end of the bone, with some to shafts. These gnawing patterns would appear to be consistent with those made by adult *Canis*. Two immature bones of *Felis* (cat) were also recovered, both from Context 149, a layer. These species probably occur as domestic pets: although the role of the dog as a herder and hunter is well known, it is unlikely to be present in an urban assemblage in this capacity.

Small mammals

Rabbit (*Oryctolagus cuniculus*) was represented by 11 bones, from a layer (149), a pit fill of 16th-century date (210, fill of 209), and footings of a post-medieval wall. The inclusion of this latter specimen may be accidental, but a butchery mark to one mature femur from (210) indicates that at least one individual became incorporated into archaeological deposits as food refuse.

The inclusion of rabbit as an exploited food resource in the Seaford assemblage is fairly significant. During the medieval period the rabbit was considered a rare and fairly expensive delicacy, 'not easily attainable everywhere', and was also valued for its skin. Poaching of these animals was an offence. By the 16th century rabbits were more plentiful and their skins were

exported (Veale 1957). Thus the presence at Church Street of this animal would perhaps suggest some degree of wealth of the inhabitants.

The bird assemblage

A total of 188 bird bone fragments belonging to a minimum of six species were recovered from deposits, forming 18.18% of the overall bone assemblage. Of these, 71 bone fragments could be positively identified according to species.

Table 2. Bird species present.

Land fowl	Domestic fowl	
Geese and ducks	Domestic goose	<i>Anser anser</i>
	Mallard	<i>Anas platyrhynchos</i>
	Domestic duck	
Seabirds	Herring gull	<i>Larus argentatus</i>
	Black-headed gull	<i>Larus ridibundus</i>
	Common gull	<i>Larus canus</i>
Crow family	Crow	<i>Corvus corone corone</i>

Domestic fowl formed the larger part of the bird assemblage (42 identified fragments). Goose and duck also appeared, although in smaller numbers. These species are likely to represent a fairly important food resource of Seaford. Over half of the bones recovered were immature, and the majority were the bones of the wing and leg, although the pelvis and breastbone were also represented. These bones probably represent food refuse.

Few bones of indigenous species were represented: only a single bone of *Corvus* was recovered. This probably became incorporated into a deposit accidentally. Gull was only slightly better represented with the bones of the common Black-headed gull, Common and Herring gull identified from Context 224,

a fill from Cesspit 21. This latter was an ulna showing some butchery to the proximal epiphysis. This implies that although primarily, domestic birds were exploited for food, this was supplemented with wild species.

Discussion

The bone assemblage from Church Street largely represents waste from food preparation and consumption, incorporated into archaeological contexts as rubbish deposits, some of which have in turn become incorporated into build-up across the site. Despite the number of butchered fragments, which alone do not necessarily suggest that meat was being processed on site, there were also fragments of the skull and extremities present, in some cases in association with these butchered fragments. This indicates that at the very least meat was brought into the site in bulk, there to be further processed. Whether this could indicate the site as an area of commercial activity, for meat production and distribution, is not easy to say. Additional evidence of rabbit exploited as a meat source as well as the fairly considerable numbers of bird remains indicates that certainly there was some domestic activity on the site.

It must also be remembered that the excavated area does not necessarily represent a single unit of occupation: thus bones could well represent rubbish accumulated from several households. However some degree of wealth would seem to be indicated by the rabbit remains, and possibly by the variety of exploited avian species.

The sample appears to indicate exploitation of certain resources in which particular species and methods are favoured. However, the assemblage represents only a small part of the medieval town, and may not signify specific trends in animal exploitation at that time.

ARCHIVE CONTENTS

The archive includes fuller reports on the upstanding remains, geological remains, brick, roofing, floor and oven tile, and record sheets for the pottery and bone.

PART 3: THE DEVELOPMENT OF SEAFORD

The report above describes the second major excavation to be undertaken in Seaford. Smaller excavations have been carried out along Steyne Road and at Broad Street (Freke 1979; Freke & Rudling 1983). The results of the work have suggested that archaeological remains are not deeply stratified anywhere within the town and that later building activity is likely to have disturbed or removed much of the earlier remains. Above-ground remains have fared little better. In addition to 'The Crypt' and the church, some medieval fabric, including a chimney of c. 1300, did survive in The Plough Inn on Church Street until at least the mid-19th century (Lower 1854, 127; Nairn & Pevsner 1965, 602–3). A wine-cellar near the churchyard, which might have been a further medieval undercroft, is mentioned in 1796.²⁵

The plan of medieval Seaford cannot readily be

reconstructed, although the 1563 survey provides a basis for understanding the topography of part of the town. There is, however, a considerable contrast in the density of the occupation indicated by the excavated evidence from Church Street and the 1563 survey. The undercroft, and perhaps the chalk footings at the rear of Tenement 2B (Fig. 22:273), although undated, suggest that the buildings extended backwards for a considerable distance behind the frontage. By the 16th century some plots were not built upon and all, except the smallest, had gardens at the rear.

Church Street, which linked the church and the quay and passed close to the court house, must have been an important thoroughfare. The medieval fireplace recorded in The Old Plough indicates the presence of another substantial medieval building on the east side of Church Street. The undercroft described above was well situated for goods brought

to the harbour and its position at the rear of the tenement indicates that the street frontage was completely built up. Access to the undercroft must have been from the rear and it is possible that there was a large open space behind the buildings on the street front. Such a pattern may be suggested by the 'yards' still present in the 19th century. One such yard indeed still survives with an entrance almost opposite the site of the excavation. A second, Pindor Square, is shown on the title map.²⁶

The excavations at Seaford have shown little evidence of the port's foreign and regional trade. Trade with France, the Low Countries and the Rhineland is suggested by the presence of *c eramique onctueuse* (from southern Brittany), Saintonge, Rouen and Siegburg pottery vessels, and from the Flemish bricks. Coastal trade may be indicated by the sherds of Rye and Scarborough ware. But it is notable that the medieval foreign imported sherds from the present excavations form a total of only 1.3% by sherd-number of the total assemblage. That figure may perhaps be compared to the 1.5% measured by 'minimum number of vessels' from the major features in the 1976 Church Street excavations (calculated from Freke 1978, 212), but contrasts with the 28.2% measured by estimated vessel equivalent at the larger port of Winchelsea (Orton, in Rudling in prep.). Obviously, some caution is necessary in using these figures, because they have been calculated using different measures, but the general pattern is clear.

The excavations and research described here and

the earlier work have revealed the outlines of the history of medieval Seaford. Analysis of the descent of tenements may allow more detailed identification of the post-medieval topography than has been possible here, but further understanding of the medieval town plan will have to rely upon the results of future excavation. The work already undertaken has shown that the survival of below-ground remains is not particularly good, because of the shallowness of stratigraphy and the extent of later disturbance. It is salutary to consider that without the presence of the medieval undercroft at Church Street it would have been difficult to interpret the plan of the excavated tenements described above.

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²⁰ ACM, A1847; A425; A426.

²¹ ACM, A476.

²² ACM, A476; PRO, DL42/112; P. F. Brandon, 'The origin of Newhaven and Drainage of the Lewes and Laughton Levels', *Sussex Archaeol. Collect.* **109** (1971), 99.

²³ ESRO, TD/E37, parcels 55, 56.

²⁴ ESRO, DL/D31/3; C/A2/10B; C/C69/216; C/A5/70.

²⁵ ESRO, AMS 6004/1.

²⁶ ESRO, TD/E37, parcel 293.

Hastings, Haestingaceaster and Haestingaport

A QUESTION OF IDENTITY

by Pamela Combes & Malcolm Lyne

Three places named in early documentary sources, the burh of Haestingaceaster, Haestingaport where Duke William constructed a castle before the battle of Hastings, and the town of Hastings have been assumed to be synonymous. There is, however, little or no tangible evidence for any significant pre-Conquest settlement at Hastings. Newly documented archaeological evidence from Pevensey Castle suggests that there was substantial settlement within the Roman walls throughout the middle and late Saxon period while topographical evidence suggests that Hastings was an unlikely site for an Alfredian burh. It is proposed that the burh of Haestingaceaster was situated within the Roman walls of Pevensey Castle and that the borough of Hastings was a mid-11th century or a post-Conquest creation. The name of Haestingaport could apply to either of these settlements.

INTRODUCTION

The modern town of Hastings with its Norman castle, the administrative centre of the Sussex rape of Hastings, is usually considered to be the successor to the Saxon burh of Haestingaceaster. The burhs were fortifications established by King Alfred and his successors in the late 9th to early 10th century. They were designed to strengthen the defences of the kingdom of Wessex against renewed threats of Danish invasion from the continent and against the support given to the raiders by the Danes of Northumbria and East Anglia. The system of fortifications defended both the sea frontier and the inland borders of Wessex, augmenting the land forces which, up to then, had been provided by local levies within the shires. Most if not all of the population of Wessex lived within twenty miles of one of these fortresses and many of the burhs were established within the walls of former Roman forts and towns.¹

The attributes that made these sites desirable defensive posts and their situation in the most densely populated areas with good road or water communications, also made them potential market centres: many of them eventually developed into substantial towns.² Haestingaceaster is recorded as having a mint in Athelstan's laws (c. 926–930). This

suggests that some trading was either already taking place, or more probably, was expected to take place, since the earliest coins known with the Hastings mint signature date from the end of the 10th century. Some coins of the mid-11th century record another version of the place-name, *Hestīnpor*, and one recension of the Anglo-Saxon Chronicle records that William constructed a castle at Haestingaport following his landing at Pevensey. The changed suffix may reflect a perception that the role of the settlement was changing from defence to trade; the place-names 'port' and 'borough' appear to be interchangeable when they are utilized in contemporary sources. But equally the change could suggest the development of another settlement elsewhere. Both these names, Haestingaceaster and Haestingaport were associated with a burh or borough and undoubtedly refer to settlements.³

It has generally been assumed that the three names recorded in the documentary sources relate to the same place. But there is a possibility that they do not. There is no unequivocal evidence for a significant settlement at Hastings before the Conquest. When the name was first recorded in 1011 it was associated with a region, a region that gave its name to what is arguably the most memorable battle in English history. No borough at Hastings is recorded in Domesday Book. As yet no

evidence has been found within the town either for a major Roman site, which would account for the 'ceaster' suffix in the place-name, or for early- to mid-Saxon settlement. In addition, no earthworks delineating the burh have been identified within the modern town. Negative evidence is a dangerous tool, but so little positive evidence for a settlement must create some doubt about the identification. If Hastings was not Haestingaceaster is there an alternative site for the burh? An analysis of the place-name, topographical, and documentary evidence undertaken with this problem in mind, in addition to new archaeological evidence from Pevensey, suggests that there may be.

PLACE-NAME AND DOCUMENTARY EVIDENCE

The importance of the different forms of the place-names in early documents requires the use of various styles of presentation in this paper. Where names are quoted from documentary sources italics have been used and the original spelling has been retained; where the names are used in discussion a modernized form has been used.

The earliest recorded form of the name Hastings is in the Burghal Hidage, a record of the burhs established by Alfred king of Wessex and his son Edward. The main text of the Burghal Hidage is thought to date from the 880s but later editions were made in the early 10th century. A compilation of the various surviving texts allows a reconstruction of the list of Sussex burhs and their related hidage to be made. The names and hidage values are taken from the Nowell transcript, with one exception. The Nowell manuscript ascribed the unlikely figure of only twelve hides to Lewes so the figure of 1300 hides, which is common to the Rylands manuscript and all the other sources, has been used.

324 hides to *Eorpeburnan* [not certainly identified, possibly Newenden in Kent or Rye]

500 hides to *Haestingaceastre* [Usually identified as Hastings]

1300 hides to *Loewe* [Lewes]

700 hides and twenty hides to *Burham* [probably Burpham]

1500 hides to *Cisseceastre* [Chichester]⁴

Apart from Haestingaceaster and Chichester there are three other places recorded in the Burghal Hidage that contain the place-name element ceaster: the former Saxon shore fort of Portchester and the Roman towns of Winchester and Exeter. Chichester,

Portchester and Exeter have substantial Roman walls which still survive today. Although they are not visible now, the Roman walls of Winchester remained in use as the Saxon town developed. The Roman gatehouse became ruinous and collapsed during the 5th century and the ensuing rubble was incorporated in successive road surfaces. The need for remetalling indicates continued occupation within the city, and in the late Saxon period the former gateway was blocked with a new section of wall.⁵

The ceaster element in these names is particularly significant. In place-names it is, almost without exception, associated with former Roman towns or forts.⁶ Although some stray finds of Roman pottery have been identified in Hastings, no major Roman site is known there. Hastings is unlikely to have been recognized by the Saxons as a 'ceaster'. Total reliance cannot be placed on negative evidence, but it should not be completely ignored. Whereas development at other, apparently less important towns, Eastbourne and Brighton for example, discovered Roman villas and Saxon burial sites, no significant Roman, or early to mid-Saxon site has been noted during the development of the modern town at Hastings. This lack of evidence for Roman occupation at the supposed site of the Saxon burh has caused scholars to hypothesize about the possibility of a Roman fort or settlement lost to the sea. Because there has been coastal erosion at Hastings such a theory cannot be disproved, but positive evidence is still lacking.

A major Roman site lies less than twenty kilometres along the coast at Pevensey. The modern name does not preserve any memory of the Roman past but it is undoubtedly what the Anglo-Saxons would have termed a 'ceaster'.⁷ The substantial surviving walls of the Saxon shore fort, probably Anderitum, form the outer bailey walls of the Norman castle.⁸ There is a close analogy with Portchester, another Saxon shore fort utilized as a burh, which also lies on a spur within a natural coastal inlet. Such coastal inlets were the target of Viking raiders since they offered safe harbourage for their ships. It would have been strange if this vulnerable area had been omitted from the burh defences of the Sussex coast in favour of a site which offered little if any protected harbourage, and lay in one of the poorer and less populated areas of Sussex.

The name Hastings first appears in 1011 when the compiler of the Anglo-Saxon chronicle identified a district *Haestingas* perceived as distinct from both

Sussex and Kent. The chronicler appears to have considered this area to have been the equivalent of a shire.⁹ The region took its name from a people, the *Hastingas* [*Hestingorum gentem*], who were subdued by Offa of Mercia in 771: the Norman rape of Hastings is thought to represent at least part of their landholding.¹⁰ The region of *Haestingas* would undoubtedly have included the burh of Haestingaceaster and may have extended to the north-west as far as Hastingford near Crowborough. Hastingleigh in Kent lies well away from their Sussex land. The name suggests it was a wood pasture outlier of their central landholding.¹¹ The use of the name Hastings to describe a region raises questions about the interpretation of later entries in the Chronicle. The evidence is ambiguous. References to the shipmen of *Haestingum* may refer to people living within the region of Hastings and the men of *Haestinga ceastre* may be associated with the administrative area of the burh, but equally they could be describing the residents of towns.¹² The dates and forms of the place-names Hastings and Pevensey in several sources are shown in Table 1.

Only after the creation of the Norman castleries or rapes can the name Hastings be associated confidently with a settlement. Even then the

different applications remain difficult to distinguish because the name of the older land area was perpetuated in the name of the Rape of Hastings. The town of Hastings which emerges after the Conquest fits convincingly into the context of urban growth occasioned both by the importance of the castle as the administrative centre of the rape, and vigorous exploitation of their estates by two Norman lords, the Count of Eu and the Abbot of Fécamp.

The appearance of the name Pevensey in the documentary sources alongside that of Hastings also suggests to us the existence of two separate settlements. But the name Pevensey did not originally describe a settlement. The earliest forms of the name suggest that it was a river name, old English ‘ea’, a river, combined with a personal name.¹³ It may still have had the same meaning for the compilers of the Chronicle. Where the name Pevensey was recorded in the mid-11th century it was invariably associated with a description of ships taking shelter in a harbour. In that context it is likely that the name was being used to describe a waterway and not a settlement.¹⁴ The illustration under the text in the Bayeux Tapestry that describes William’s fleet arriving at Pevensey shows ships sailing and then being beached, no buildings are depicted.¹⁵

Table 1. Dates and early forms of the place-names Hastings and Pevensey.

Date	Burghal hidage and Athelstan’s laws	Charter	Anglo-Saxon Chronicle C or E recension	Anglo-Saxon Chronicle D recension	Coins (variation only)	Bayeux Tapestry
c. 880–910	Haestingaceastre					
c. 930	Haestingaceastre					
c. 940		pefenes ea				
1011			E. Haestingas			
1049			C. Pefenesae	Peuenesea [Men of] Haestinga ceastre		
1052			E. Pefenesea C. [shipmen of] Haestingan	[shipmen of] Haestingum	c. 1050–52 Hestinpōr Hestinpō	
1066			E. Hestingan	Pefnes ea [castle at] Haestinga port after battle [returned to] Haestingan		Pevenesae [soldiers to] Hestinga [fortification at] Hestenga[ceastra] [soldiers went out of] Hestenga

Although some allowance has to be made for artistic licence and the tapestry cannot be interpreted as depicting places with perfect accuracy, the coincidence of the views of the compilers of the Chronicle and the designers of the Tapestry regarding the status of pre-Conquest Pevensey is notable. Exactly when the name was first applied to a settlement is uncertain, but the first indisputable reference to a borough called Pevensey is in Domesday Book.¹⁶

The problems of interpretation associated with the characteristics and relative importance of Hastings, Haestingaceaster, Haestingaport and Pevensey in the years before the Conquest have been discussed above. Similar problems relate to the record of the events which occurred in 1066 just before the battle of Hastings. Most seriously, the sources differ in the description of the actions taken by Duke William after his invasion force landed. Since the assumption has always been made that Hastings, Haestingaceaster and Haestingaport were synonymous, the texts have been interpreted to support that view. Some issues can be raised if that assumption is not made.

Only near contemporary 11th-century documents have been selected for discussion. The 'D' recension of the Anglo-Saxon Chronicle is the only chronicle to record the events following William's landing at Pevensey but the names recorded in the 'E' and 'C' recensions of the chronicle have been included for comparative purposes. The variations in form they demonstrate, even within what could be described as one source, make clear the difficulty of establishing not only an indisputable narrative, but also a certain location for events in the 11th century (see Table 1).

William of Jumièges, whose work is considered to have been written in or before 1070 records that Duke William had two castles constructed, one at Pevensey and one at Hastings.¹⁷ If his description of events is accepted as correct it suggests that the name Pevensey had become associated with a settlement by 1066.

But significantly, neither of the English sources record a castle being constructed at Pevensey; both associate Pevensey with ships. The Anglo-Saxon Chronicle records the construction of only one castle, but where that castle was built is open to debate. The Chronicle names Haestingaport, this could refer to the settlement which later became medieval Hastings or, on the other hand, it might reflect a change of use from a defended site to a trading centre (which would be compatible with the

burgh being situated at Pevensey).¹⁸ The reference in the Bayeux Tapestry is also ambiguous. The name of Hastings is used three times in the text, and could apply to a land area rather than a settlement. Where it is used in association with the illustration of the construction of the castle, the word 'ceastra' can be read either as part of the place-name to form 'Haestingaceastra' or, alternatively, as a descriptive label for the illustration.¹⁹

Alternative interpretations of these sources and the possible reasons for their differences are too numerous to discuss in detail here and the discussion would serve little purpose since the sources themselves differ. The problems, therefore, are impossible to resolve. We do not know for certain where William constructed his castle, or castles, before the battle of Hastings.

One aspect of the judicial administration of the Norman rapes also suggests that Hastings was not an established administrative centre before the Conquest. There is evidence that courts held in early Saxon burhs or boroughs had jurisdiction over a district wider than just the town.²⁰ After the Conquest the Rape Court for Lewes, and the court for what was described as the 'lowey' of Pevensey, which was probably the equivalent court within that rape, were held every three weeks within their respective pre-Conquest boroughs.²¹ These courts appear to have replaced the hundred courts within the rapes. A similar but not quite identical court was held within the Rape of Hastings.²² Here the hundredal jurisdiction within the Rape of Hastings was undertaken by the Lathe court, which met every three weeks at Derfold and Seddlescombe and only occasionally at Hastings Castle.²³ The infrequent use of Hastings as the meeting place of the principal court of the rape may indicate that the town had little or no place in the pre-Conquest administration of the area.

TOPOGRAPHICAL AND ECONOMIC EVIDENCE

Doubts about the topographical and economic viability of Hastings as a burh and as a 10th- or 11th-century trading site also suggest that Haestingaceaster lay elsewhere. In the absence of clear documentary evidence the economic and topographical evidence is crucial.

The coastal burhs were established at or adjacent to vulnerable areas of coastline, river valleys and

coastal inlets which would have afforded safe harbourage for the Viking raiders. They were also central places immediately accessible to the majority of the population so that shelter could be provided within the walls in the event of attack. These conditions favoured the establishment of trading centres and the association of Haestingaceaster with a mint in the reign of Athelstan suggests that trading was by then one of the functions of the burh, although coins associated with the mint do not appear before c. 1000.

The obvious poverty of the Wealden area surrounding Hastings recorded in the Domesday survey suggests that the area was not highly developed economically. Consequently, it was unlikely to have sustained a significant trading borough with which a mint could have been associated over 100 years earlier (see Table 2). The other Sussex burhs were more favourably situated, lying adjacent to major manorial centres where the greater part of the population would have been living.

Six features can be identified as significant factors in the development of early boroughs in Sussex:

1. access to the sea coast;
2. river transport to the Wealden interior;
3. road transport;
4. various land resources close by;
5. other special resources, e.g. salt works, fisheries (especially in the poor Wealden area);

Table 2. Pre-Conquest values of manorial holdings and boroughs in the Norman Rapes of Sussex. (Values to the nearest £1.)

Chichester	£1375	<i>Notes:</i> Variations in the form of entry for boroughs makes exact calculation of pre-Conquest values impossible. The values have been calculated as noted here.
Bramber	£537	Chichester £15 TRE Arundel TRE £2 mill, £1 banquets, £1 entertainmnet: Total £4
Lewes	£673	Steyning Included in manor Lewes £26 TRE Pevensey TRE 14s. 6d. tribute, £1 tolls, £1 15s. port dues, 7s. 3d. pasture: Total £3 16s. 9d.
Pevensey	£574	Rye(?) Included in manor of Rameslie
Hastings	£302	All ecclesiastical liberties are included. Value of 'one night's rent' given as 'when acquired'. ²⁴

6. wealthy manorial centres (both creating a demand and supplying excess goods).

Ease of access was crucial to the establishment of early trading centres. In the difficult terrain of the Sussex Weald at a time when the Roman road system had declined, the rivers and waterways were links rather than barriers. The coastal ports were cut off from easy access to the north by the dense woodland and wet clay soils of the Weald; access inland to and across the area would have depended to a large extent on the navigable rivers and sea inlets. Wealthy manorial centres which not only produced an excess of goods to trade but also demanded other goods were a further prerequisite for the development of a trading centre. In addition, the relatively small scale of early trading and the difficulty and subsequent cost of transport would lead to the development of markets lying close to the borders of areas with differing resources.²⁵

With the exception of Hastings these features are discernible at all the clearly identifiable Domesday boroughs in Sussex (see Table 3 & Fig. 1).

Chichester and Lewes, the two other Saxon burhs which emerge first as mints in the 10th century and then as urban centres in Domesday Book clearly conform with the model. Chichester, despite having no access to a navigable river, was well served by the Roman road system which survived there and is still reflected in the roads serving the town. The wealth of the royal manor of Bosham, the greater part of which was held by the Bishop of Exeter, clearly reflects the rich agricultural soils of the coastal plain which surrounds the town, but Wealden woodland resources lie only a short distance away to the north. The creeks of Chichester harbour, although lying some distance away, were obviously, as their surviving name suggests, eventually administered from the former burh. At Lewes a similar pattern emerges, both downland and Wealden resources lay close to the borough. In addition, there were major fisheries associated with the substantial manorial centres of the Ouse valley and the river provided both inland and coastal transport links.

Hastings does not conform with the model. The few manorial centres in the vicinity of Hastings in 1086 were less valuable than any lying adjacent to the other boroughs. Filsham lay nearby but was valued at only £20 before the Conquest. Bexhill, the other major holding in the area was separated from Hastings by the small river at Bulverhythe and the

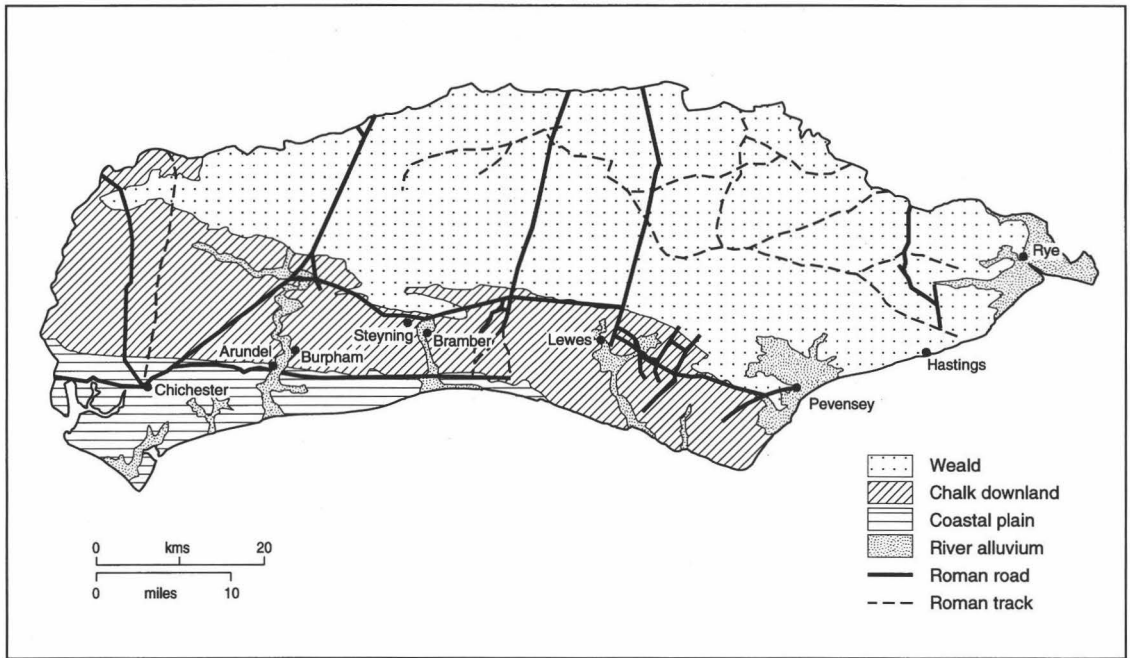


Fig. 1. Saxon burhs and Norman boroughs and castles in Sussex.

holder, the Bishop of Chichester, obviously had an interest in the borough at Pevensey since he held burgesses there. Water channels linked his land at Barnehome with the harbour of Pevensey.²⁶

Much of the inland area of the Rape of Hastings was still dependent on manorial centres in Pevensey Rape in 1086.²⁷ The holdings recorded there by the happy chance of their change of administration were mostly of small value. In addition, Hastings lies in a land area which is exclusively Wealden; there are no other significant resources recorded in the area (see Fig. 1).

The viability of the harbour at Hastings can also be questioned. The river there drains a catchment area of a mere nine to twelve square kilometres and flows only about three to four kilometres to the sea. Although there has clearly been coastal erosion at Hastings which would have diminished the length of the river, such a small flow of water is unlikely to have scoured out an estuary large enough to have created a significant harbour. All except one of the harbours recorded in the Anglo-Saxon Chronicle from the 9th to the 11th century lie on substantial river estuaries or sea inlets. Portland, the one exception, is protected by the promontory of the Chesil beach.²⁸

Despite the fact that ships could have been grounded on an open coast, in practice, when safe harborage was required for any length of time, they were not.

It is unlikely that a burh would have been constructed in an area of low population, with no manorial holdings of value, which was unlikely to attract seagoing raiders since there was little, if any, safe harborage for their vessels.

AN ALTERNATIVE INTERPRETATION

In contrast, the substantial sea inlets around Pevensey would have been an attractive landing place for both invaders and merchants. The harbour provided protected, offshore beaches attractive to Viking raiders while the more substantial inlets and river valleys assisted access to the interior. There were wealthy manorial holdings, one of them the royal manor of Eastbourne, lying adjacent to the harbour where a defensive and trading burh would clearly have served a useful purpose. The walls of the Roman fort, which lay adjacent to the harbour, survived in a form sufficient to provide the burh defences and such sites were utilized elsewhere. Two defensive sites, one centred on Pevensey and another at

Table 3. Domesday boroughs, their position, resources and the value of adjacent manorial centres.

Domesday Boroughs	Value of two major adjacent manors TRE	Safe sea harbour	River access inland	Road access	Border of agricultural resources	Other resources adjacent	Notes
Rye	£40	*	*		*	*	Abbot of Fécamp 100 salt works
Pevensey	£90	*	*	*	*	*	Value of Eastbourne on acquisition. Salt works
Lewes	£110	*	*	*	*	*	Fisheries
Steyning	£114 Two manors of Steyning	*	*	*	*		Abbot of Fécamp
Arundel	£46	*	*	*	*		Situated in poor area but harbour dues suggest good coastal link
Chichester	£340 Two manors of Bosham	*		*	*		Access by former Roman roads. Central point of resources not border
Hastings[?]	£34 Filsham and Bexhill, but Bexhill possibly linked with Pevensey	*[?]					

Eoreburnan, to the east of Hastings Rape, would have provided sufficient protection for the small population of the Wealden coastal area lying between them.

Evidence from excavations undertaken at Pevensey supports the proposition that what is now Pevensey Castle could have been Haestingaceaster. The former Roman fort continued to be occupied during most of the Saxon period and the walls enclosed a substantial settlement in the late Saxon period. An early- to mid-5th-century *schalenuerne*, a distinctive ceramic form also found in the Germanic homelands of Saxon settlers, a copper alloy backing plate from an Alamannic type horse-harness strap distributor, as well as other early Saxon pottery sherds suggest that there could have been a Germanic presence there before the main wave of Saxon immigration. The presence of other exotic artefacts indicate that the fort was not isolated following the Roman withdrawal. Palaeochristian wares from Southern Gaul, a Macedonian grey-ware bowl sherd from Stobi in the Balkans and glassware from Antioch demonstrate that trade links were maintained with the Mediterranean world.

As at Winchester and Richborough, the gatehouse of the west gate was probably destroyed during the

5th century, only here the destruction was deliberate, the stone plinth blocks were used to construct a causeway across the defensive ditch in place of the earlier bridge. On the surface of the causeway was a compacted area containing not only iron boot studs and coins but also segmented beads of the 4th–5th century, indicating that the causeway was in use for some time. It is possible that the site was abandoned during part of the 6th century, but by the mid-7th century at the latest, occupation had been re-established within the walls. The luxury items associated with this middle Saxon phase, a Valsgade glass bowl (one of only seven known from England),²⁹ and a fragment from a Kempston cone beaker, similar to others found in a Saxon cemetery at Alfriston, suggest that the former Anderitum was a middle Saxon centre of some substance; possibly a royal centre as was Winchester during the same period, but for a sub-king of the South Saxons.³⁰

The gap left by the destruction of the Roman gatehouse was bridged during the later Saxon period by the insertion of a mortared rubble wall, similar in construction to that at Winchester, but with a narrow sinuous entrance copying the Roman north postern. Evidence for a middle/late Saxon refurbishment of the East Gate at Pevensey was also

found. Photographs taken at the time of the excavation show clear evidence for internal megalithic quoining with large, rough greensand blocks and slabs laid in the long and short style so typical of Saxon work, although the stone was so shattered that it has now been largely replaced by mortared rubble. Coins of Egbert (9th century) and Cnut (11th century) were found and, most significantly, substantial numbers of cesspits and rubbish pits, typical of town settlement, attest to the continued occupation of the site inside the walls during the late Saxon–early Norman period.³¹

There was no marked decrease in occupational debris within the walls until the late 12th–early 13th century. In 1254 the castle moat was dug and soil was spread over the outer bailey, by then largely empty.³² This accords well with evidence from excavations undertaken by Dulley between 1962 and 1966 outside the walls of the castle within the present town of Pevensey. In a series of excavations quays and sea walls were located which Dulley concluded must have been peripheral to the original nucleus of the town since none of the finds could be dated earlier than the 12th century.³³ More recent excavations in the centre of Pevensey village at the Old Farmhouse site also produced no evidence for pre-Norman occupation other than a couple of sherds of Roman pottery.³⁴ This would be consistent with the evidence which suggests that the major part of the late Saxon and early Norman town lay within the castle bailey.

If Pevensey was originally called Haestingaceaster when, and under what circumstances would a change of name have taken place? Possibly by the mid-11th century the use of the old name was declining, the documentary evidence could be interpreted as supporting that view, and eventually the name of the harbour was applied to the settlement. But the hiatus associated with administrative changes following the Conquest could have occasioned a deliberate change of name.

The district of Hastings appears to have been a power centre for the Godwine family in the mid-11th century. The Anglo-Saxon Chronicle records the use of the harbour at Pevensey by members of the Godwine family and on Earl Godwine's return from exile in 1052 the men of Hastings initially deserted the crown and supported him³⁵ (see also note 13). This same area was the bridgehead of William's invasion and, while members of the Godwine family and other claimants to the English

crown still survived, was probably vulnerable to counter attack. Castleries were established all along the Sussex and Kent coast, and eventually masonry castles were built to defend and administer an area which provided crucial links with Normandy. The administrative divisions allotted to the new Norman lords of the Sussex castleries obscure our understanding of any earlier administrative areas within the county.

Clearly if Pevensey was Haestingaceaster, a Saxon district of Hastings based on the burh would have included land in the Norman rapes of Pevensey and Hastings (see note 25). The major royal demesne manor of Eastbourne, which lies in what became Pevensey Rape, was one of many manors which had outlying holdings in Hastings Rape before the Conquest and probably the borough of Pevensey also had links with both rapes.³⁶

There are no obvious associations between adjoining manors and the borough of Pevensey as there are at Lewes and Chichester, but some suggestions can be made about possible links with the lords of manors in Hastings Rape and the borough. Edmer the priest, who held fifteen burgesses in Pevensey before 1066, is likely to be the same Edmer the priest who held Herstmonceux. The Bishop of Chichester who had five burgesses, held the manor of Bexhill in Hastings Rape before the Conquest. Other land associated with the royal manor of Eastbourne was situated at Hankham which lies almost immediately adjacent to the borough. The adjoining marshes owned by manors in both Hastings and Pevensey Rapes abounded in saltworks producing one of the most important trading commodities of the medieval period.³⁷ This evidence points to a trading area based on the watershed draining into the marshland at Pevensey. If there was a settlement at Hastings, that would seem to be associated in Domesday with the borough (possibly Rye) within the Abbot of Fécamp's manor of Rameslie (see Fig. 2).

The division of the Saxon district of Hastings into two rapes would have required a change of name for part of the holding. The name of Pevensey, formerly applied to the waterway but conceivably by the mid-11th century already associated with the old burh of Haestingaceaster then became identified with the borough and rape administered from the new Norman castle. The older name was retained by the new Rape of Hastings which was to be governed from the new castle established in the centre of its coastline.

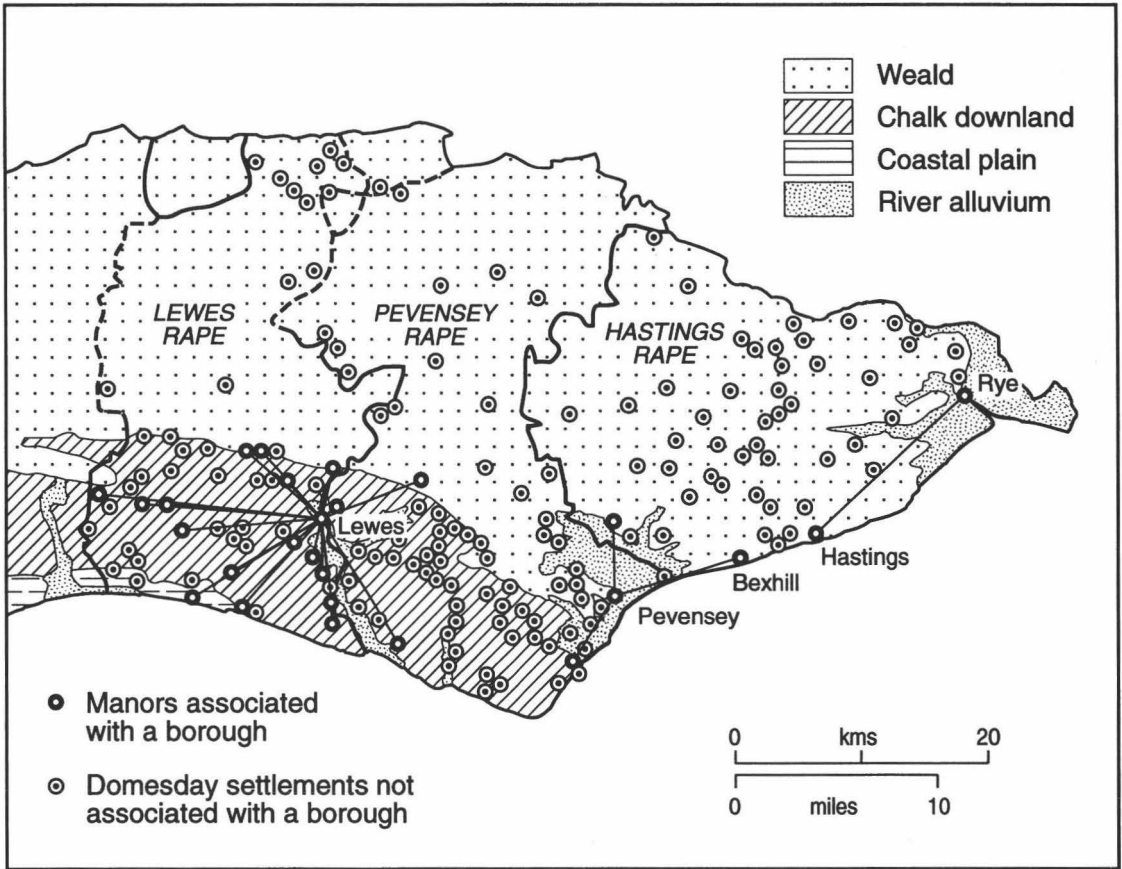


Fig. 2. Manors associated with the borough of Lewes and possible pre-Conquest manorial associations of Pevensey and Rye recorded in Domesday Book.

Possibly the seeds of a new borough at Hastings can be seen not only in the Abbot of Fécamp's burgesses in Hastings but also in the twenty burgesses in Bullington, a holding retained in demesne by the Count of Eu. Unlike the burgesses associated with Lewes and Chichester, they are not associated with a named borough in the entry. Bullington is a lost settlement, but a Bullington field in Pebsham farm on the eastern outskirts of modern Bexhill may suggest the position of its manorial centre.³⁸ The only other substantial manor in this central part of the coastal area of Hastings Rape, and the only manor in the rape held in demesne by King Edward before the Conquest was Filsham, of which the Count of Eu also retained over eight hides in demesne. The modern Filsham Farm lies on the edge of the western suburbs of Hastings and, if the identification of Bullington is correct, the two

holdings lay one on either side of the only significant river valley in the central part of the rape. On this small river lies the settlement of Bulverhythe which is not recorded in Domesday Book. The name is of significance suggesting as it does the association of 'burhware', the citizens of the burh, and harbourage.³⁹ The name suggests that this was an outlying harbour of Haestingaceaster before the Conquest. The burgesses recorded at Bullington could represent a nascent borough organization being developed by the lord of the rape adjacent to the best harbourage in the vicinity of his castle.

CONCLUSION

The apparent omission of Hastings from Domesday Book has occasioned remarkably little debate since Round proposed that a description of the borough,

similar to the description of Dover, should have prefaced the Sussex survey.⁴⁰ Round's suggestion has been generally accepted and has influenced all discussion since then, but it is possible that knowledge of the later importance of Hastings as the head of the Cinque ports in Sussex has distorted perception of the settlement there in the 11th century. No one has ever proposed that the Domesday survey faithfully records the status of the settlement at Hastings in 1086. Consideration should be given to the possibility that it did.

The Sussex Cinque Ports never claimed to have enjoyed their liberties before the Conquest. Any importance Hastings could claim as head of the Sussex ports was clearly a post-Conquest creation.⁴¹ The area surrounding Hastings was one of the poorest on the Sussex coast in 1086. Whether such an area could have provided the resources to support a borough with a mint over 100 years earlier must be open to question. Wealthier manorial centres, Eastbourne and Willingdon, lay in the Rape of Pevensey adjacent to Pevensey harbour. In addition the harbour would have been vulnerable to Viking raiders. Despite its vulnerability this area was apparently omitted from the system of Sussex burhs.

There are three possible interpretations of the evidence. First, the presently accepted view that Hastings, Haestingaceaster and Haestingaport were the same place. Although the most straightforward interpretation of the documentary evidence supports this view, the lack of substantial evidence for early settlement at Hastings and its unlikely position must create doubts. Round's view that Hastings was a substantial pre-Conquest settlement has been generally accepted and, following the development of place-name studies, the existence of a significant Roman site at Haestingaceaster has been assumed, but there is no evidence for such a site at Hastings.⁴²

An alternative interpretation is that Pevensey Castle was Haestingaceaster, but that by the mid-11th century another settlement, Haestingaport, was developing at what is now Hastings. The possible reasons for such a development are uncertain, but there is evidence for a Saxo-Norman marine regression affecting the east coast of Britain and a similar decline in sea level would have caused problems at a harbour like Pevensey.⁴³ The emergence of a major shingle bar would have caused a shift away from the harbour immediately adjacent to

Haestingaceaster towards the eastern side of the estuary. This reduction in harbourage could in turn have encouraged the use of minor harbours like Bulverhythe and Hastings. The name of Bulverhythe itself may support this hypothesis. However, an explanation needs to be found for the use of the harbour at Pevensey by a major invasion fleet in 1066 and the post-Conquest improvement in the borough. The number of burgesses rose from just 27 to 110 in 1086, following its acquisition by the Count of Mortain.⁴⁴

The third and final interpretation is that Pevensey Castle was Haestingaceaster/Haestingaport, and that the change in the suffix reflects the changing perception of the settlement following its development as a borough. Possibly by the mid-11th century the use of the old name was declining and the name of the harbour serving the burh, Pevensey, came to be applied to the town itself (*see* Table 1). This substitution would have been a natural process if development was already taking place on a beach for shipping outside the walls of the former burh. Alternatively, a deliberate name change might have been necessary following the reorganization of the Sussex rapes following the Conquest.

The evidence is ambiguous and it is impossible to draw any certain conclusions. The purpose of this paper is to raise questions and open up a debate about what will undoubtedly be a contentious issue. Further archaeological field work and excavation at both Pevensey and Hastings may help to answer some of the questions about the status of both settlements pre-Conquest and the sequence of events following William's landing. Detailed analysis of the place-names in both Pevensey and Hastings Rape may also clarify the sequence of settlement in the area. Above all, a detailed study of coastal change in this area of Sussex would make an important contribution to the debate.

The subject is of some importance, if this hypothesis were generally accepted it would contribute to the debate about the origins of the Norman rapes of Sussex and possibly lead to a reappraisal of the power and influence of a people whose land lay adjacent to the boundaries of both the South Saxon kingdom and the kingdom of Kent.

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NOTES

- ¹ F. M. Stenton, *Anglo-Saxon England* (3rd edition, Oxford, 1971; repr. 1987), 264–6.
- ² H. R. Loyn, *Anglo-Saxon England and the Norman Conquest* (London, 1962; repr. 1991), 142.
- ³ I. Stewart, 'The Sussex mints and their moneyers', in P. Brandon (ed.), *The South Saxons* (Chichester, 1978), 100.
- ⁴ D. Hill, 'The Burghal Hidage: the establishment of a text', *Medieval Archaeology* **XIII** (1969), 85–90.
- ⁵ J. Wachter, *The Towns of Roman Britain* (London, 1988), 249–50, 330–31, 278–9. M. Biddle, 'Excavations at Winchester, 1971, tenth and final interim report', *Antiquaries Journal* **55**(2) (1975), 96–337.
- ⁶ A. H. Smith (ed.), *English Place-name Elements* 1 (English Place-name Society, 1956), 85. 'Ceaster was clearly used to describe important Roman towns and cities, being often added in OE as a suffix to the Romano-British names.' In the North and in Scotland 'there are cases where the word was used of any ancient fortifications or remains of them but it is rarely used in this context in Southern England. Woodchester [there was a Roman villa there] being one of the few examples'.
- ⁷ M. Gelling, *Signposts to the Past* (London, 1978), 51–3.
- ⁸ D. Hill, 'The origins of Saxon towns', in *The South Saxons* (Chichester, 1978), 177.
- ⁹ C. Plummer, *Two of the Saxon Chronicles Parallel* 1 (Oxford, 1892; rev. edn. 1972), 199, 141.
- ¹⁰ T. Arnold, *Historia Regum of Simeon of Durham* (Rolls Series, 1885; repr. Kraus, 1965), 44.
- ¹¹ E. Ekwall, *The Concise Oxford Dictionary of English Place-Names*. 4th ed. (Oxford, 1960; repr. 1991), 292. The place-name element 'leah' can be interpreted as 'open place in a wood', therefore 'Hastingleigh' a woodland clearing belonging to the Hastings.
- ¹² Plummer, *Two of the Saxon Chronicles Parallel*, 170, 178.
- ¹³ Ekwall, *English Place-Names*, 365. Expert opinion differs regarding the meaning of the place-name Pevensey. Mawer and Stenton and Dodgson consider that the suffix is 'eg', island, a description that applies to the promontory on which Pevensey lies. Ekwall, Cameron and Gelling consider the name to be a river name and the early recorded forms with the suffix 'ea' all confirm this as the more likely interpretation.

The earliest reference to the name in an authentic

charter, is dated 947. The charter records a gift of land and a saltpan at Hankham. The phrase '*and an sealtearm with pefenes ea*' is translated by Barker, *Sussex Archaeological Collections* (hereafter SAC) **88**, 61, as 'and one saltpan opposite to Pevensey . . .'. This phrase could not be applied to a waterway. However Peter Kitson in 'Geographical variation in Old English prepositions and the location of Aelfric's and other literary dialects', *English Studies* **74** (1993), 5, defines the meaning of 'with' somewhat differently. 'With in charter boundaries typically defines a point on a boundary by reference to a landscape feature not actually on the boundary. The most convenient single translation of it is "level with", "towards, against" . . .'. This interpretation of the word 'with' does not disallow the interpretation of '*pefenes ea*' as a river name.

- The correct reading of the name Pevensey in the Hankham charter and the reference given above were kindly provided by Professor Richard Coates.
- ¹⁴ G. N. Garmonsway, *The Anglo-Saxon Chronicle* (London, 1972; repr. 1986), 168. 'E' 1046 'Then Harold [recte Beorn] took over the king's ship . . . and they sailed west to Pevensey and lay there weather bound' and 'D' 1050 [1049] 'earl Godwine also with forty-two ships sailed from Sandwich to Pevensey'. 177 'E' 1048 [1051] 'Meanwhile earl Godwine was warned and sailed into Pevensey; the weather became so very stormy that the earls could not find out what had happened to earl Godwine'. 178 'E' 1052 Harold was sailing from Ireland with nine ships, met his father and sailed to the isle of Wight 'and went thence to Pevensey'. 199 'D' 1066 'Then duke William sailed from Normandy into Pevensey, on the eve of Michaelmas'.
 - ¹⁵ D. M. Wilson, *The Bayeux Tapestry* (London, 1985), 41–4.
 - ¹⁶ J. Morris (ed.), *Domesday Book, Sussex* (Chichester, 1976), [references numbered as in the volume] 10, 1.
 - ¹⁷ E. M. C. Van Houts (ed.), *The Gesta Normannorum Ducum of William of Jumièges* (Oxford, 1992). Dr Van Houts kindly made available to me part of her transcription of the earliest manuscript of redaction 'C' of William of Jumièges prior to publication. The manuscript is Oxford Bodl. Lib. Bodley 517.
 - ¹⁸ Plummer, *Two of the Saxon Chronicles Parallel*, 199.
 - ¹⁹ Wilson, *The Bayeux Tapestry*, 12–18.
 - ²⁰ J. Tait, *The Medieval English Borough* (Manchester, 1936), 6.

- ²¹ L. B. Larking, 'The custumal of Pevensey', *SAC* **4** (1851), 212. The custumal deals primarily with the courts of the liberty of the Cinque Port of Pevensey but one section mentions the court held on behalf of the Queen by her steward in Pevensey. This is probably the court of the honor of Aquila (part of the Domesday Rape of Pevensey).
- ²² E. J. Courthope & B. E. R. Formoy (eds.), *Lathe Court Rolls and Views of Frankpledge in the Rape of Hastings* (Sussex Record Society, 1931), XXII. L. F. Salzman (ed.), *Victoria County History, Sussex* (hereafter *VCH*) **VII** (1940), 29.
- ²³ The use of the Kent term 'lathe' for an administrative area suggests that at least part of the Rape of Hastings was associated with manorial centres in Kent, possibly until the creation of the rapes following the Conquest.
- ²⁴ The total pre-Conquest values of the boroughs of Chichester and Lewes were recorded in Domesday Book. No total pre- or post-Conquest valuation was recorded for Pevensey. The values given are those listed as paid by the King's burgesses.
- It is not clear when the boroughs at Rameslie and Arundel Castle were created, but the Domesday record suggests they were both post-Conquest creations. The increased value of the Abbot's manor of Rameslie may be due to the development of the borough, possibly Rye. Before the Conquest Arundel Castle was valued for payment for a mill and for dues on three banquets and one entertainment. These appear to be similar in form to the 'one night's rent' due to the Crown from other major manorial holdings.
- ²⁵ S. Reynolds, *English Medieval Towns* (Oxford, 1977), 16–45.
- ²⁶ E. Barker, *Sussex Anglo-Saxon charters*, *SAC* **86** (1947), 93.
- ²⁷ Morris, *Domesday Book, Sussex* **9**, 1–131. Of the 131 holdings recorded in Hastings Rape no fewer than 65 were named as outliers of manors in Pevensey Rape. They lay in five of the twelve hundreds in Hastings Rape, Shoyswell, Henhurst, Hawksborough, Netherfield and Baldslow. Of these holdings two were valued at £4, one at £3, ten at between £1 and £2 and the remaining 52 were valued between 1s. and 14s.
- ²⁸ Garmonsway, *The Anglo-Saxon Chronicle*, 58–201.
- ²⁹ Vera Evison, pers. comm.
- ³⁰ M. Lyne, *Excavations at Pevensey, 1936–69* (forthcoming). Typescript in Sussex Archaeological Society library, Barbican House, Lewes.
- ³¹ Lyne, *Excavations at Pevensey*.
- ³² Lyne, *Excavations at Pevensey*.
- ³³ A. J. F. Dulley, *Excavations at Pevensey, Sussex, 1962–66*, *Medieval Archaeology* **XI** (1967), 218–19.
- ³⁴ Mark Gardiner, pers. comm.
- ³⁵ Garmonsway, *The Anglo-Saxon Chronicle* 168, 177–9.
- ³⁶ Morris, *Domesday Book, Sussex* **10**, 2; **10**, 81–2; **10**, 84; **9**, 88; **9**, 90.
- ³⁷ Morris, *Domesday Book, Sussex* **9**, 1; **10**, 2, and others.
- ³⁸ A. Mawer & F. M. Stenton, *The Place-Names of Sussex* (Cambridge, 1930), 491.
- ³⁹ Mawer & Stenton, *The Place-Names of Sussex*, 535.
- ⁴⁰ Salzman *VCH, Sussex* **IX** (1937), 9, referring to Round, Feudal England, 568.
- ⁴¹ Salzman, *VCH, Sussex* **IX**, 35.
- ⁴² Salzman, *VCH, Sussex* **IX**, 9. Hill, 'The origins of Saxon Towns', in *The South Saxons*, 177.
- ⁴³ C. Green, 'Changes in East Anglian coastline levels since Roman times', *Antiquity* **35** (1961), 21–7.
- ⁴⁴ Morris, *Domesday Book, Sussex*, **10**, 1.

The Loseley list of ‘Sussex Martyrs’

A COMMISSION OF ENQUIRY INTO THE FATE OF THEIR ASSETS AND THE DEVELOPMENT OF THE SUSSEX PROTESTANT MARTYROLOGY

by A. S. Gratwick &
Christopher Whittick

A contemporary list of 30 people burnt as heretics in Surrey and Sussex in the time of Queen Mary (now Folger Shakespeare Library MS L.b.246) was a powerful force in the creation of the cult of the Sussex Martyrs by Mark Anthony Lower in 1851. This article identifies an unenrolled commission of enquiry into the assets of those persecuted or burnt for heresy in Surrey and Sussex during the reign of Mary, and also a petition to the same commission, and establishes an explanation for the presence of all three documents in the Loseley archive. Texts of the documents appear as appendixes. The relationship of the list to other contemporary lists of martyrs, including that of Foxe, is discussed.

THE ‘SUSSEX MARTYRS’ IN THE 19TH CENTURY

A document from the archive of the More family of Loseley in Surrey, listing the names of 30 people burnt for heresy during the second, third and fourth years of Mary’s reign, was first published by A. J. Kempe in 1836.¹ It was to have a lasting bearing on religious controversy in Victorian times and the emergence of a locally powerful cult of the Sussex Martyrs. Catholic Emancipation in 1829 was followed by the Marriage Act in 1836, the Tractarian movement within the Anglican Church, the conversion of Newman to Catholicism in 1845, the immigration of the Irish, and in 1850 the apostolic brief of Pius IX re-establishing territorial Catholic sees in England. This initiative of the Holy See was not surprisingly the occasion of controversy, and widely taken in England as an impertinent threat to the established church; and, for Sussex people, there was in 1851 the defection of Henry Edward Manning, archdeacon of Chichester since 1840, to the Roman church. It is scarcely necessary to mention the leading role which was his in the subsequent revival of English Catholicism in the later 19th century.

It was of course immediately obvious in 1836 that the names listed in the Loseley document and the way in which they are cited correspond closely to various entries in Foxe’s *Actes and Monuments*.² The noted Sussex antiquarian M. A. Lower (1813–76), a schoolmaster and scholar already locally

distinguished by his promotion of the Sussex Archaeological Society and this its journal, published the relevant sections of Foxe’s first edition in a book entitled *The Sussex Martyrs* in 1851, without discussing the question of the relationship between Foxe’s book and the list, to which indeed he alluded only once.³

Both Foxe and Lower were particularly impressed by the case of Richard Woodman of Warbleton, an ironmaster, and devoted much space to Woodman’s own accounts of his troubles, which began early in Mary’s reign, and of the various hearings which led to his excommunication and finally to his being burnt in June 1557 at Lewes with nine others; this proved to be both the latest and the most notorious of these grisly occasions in Sussex. Woodman is one of the few ‘martyrs’ of middling status to be included in that roll-call of Victorian retrospective respectability, the *Dictionary of National Biography*. Woodman’s writings are indeed remarkable monuments to a steadfast, honest man who evidently impressed his persecutors as well as his fellow-protestants.

As Lower explains in his preface, his motive for publishing *The Sussex Martyrs* was more confessional than antiquarian.⁴ He was protesting against the contemporary Oxford Movement and asserting his belief that the Reformation, so far from being a mistake, had been ‘the greatest blessing ever experienced by our beloved country’. Though Lower does not make it explicit, his book was most of all a reaction to the ‘Manning scandal’; he was affirming

Foxe's own message, particularly for Lower's own county, and clearly had the archdeacon of Chichester particularly in mind when he lamented the revisionism of 'many men who hold lucrative benefices in that very establishment of which the heroes of the Marian persecution must be regarded as the virtual founders'. Unlike the Pope's brief, this was naturally well received in evangelical circles then and later. Indeed, Lower's pious local patriotism inaugurated and provided a focus for something of a low-church cult of 'The Sussex Martyrs' which has survived quite strongly into the 20th century. The dedication of the martyrs memorial on Cuilfail Hill, overlooking the town of Lewes, in 1901 is symbolic of the continued power of the movement; *Martyrs of Jesus*, published in 1952 under the auspices of the Sussex Martyrs Commemoration Council, is typical of the literature which it produced. The Lewes celebrations on 5th November contain a large element of commemoration of those burnt, which may indeed precede that of the discovery of the gunpowder plot itself.⁵

The label is convenient but we adopt it only with reservations. For though the 'Sussex Martyrs' amount to about a tenth of all those known from Foxe, and though there were certainly close social and personal links between some of them, it should not for a moment be supposed that they constituted a special sect, somehow distinct from or purer or more numerous than their brethren in London or in other southern and eastern counties.⁶ In fact the only ground for treating the 'Sussex Martyrs' as a group at all as opposed to, say, the Kentish martyrs,⁷ is the Loseley list, and it omits one who should qualify on any criterion other than the point of jurisdiction which defines the source.⁸ The men and women listed are indeed representative both of a small, dedicated inner circle of preachers and teachers who underwent the harrowing 'higher education' of lengthy imprisonment in the London gaols, and of their larger and outer circle of followers. But they were not all Sussex born and bred. One of them, the protomartyr of the whole group, was a Flemish immigrant, two were from Surrey, one at least was originally from Kent.

On the other hand they are notably concentrated in certain parts of the county, not in others. Most came from a ring of parishes in the north and central part of the archdeaconry of Lewes in eastern Sussex (Ardingly, West Hoathly, East Grinstead, Withyham, Rotherfield, Buxted, Heathfield, Warbleton,

Hellingly), a few from the coast (Brighton, Eastbourne, Rye) or nearby (Alfriston). In the western part of the county, two were from Woodmancote, also in the archdeaconry of Lewes. Some earlier burnings were carried out in the archdeaconry of Chichester at Steyning and at Chichester itself, this perhaps *pour encourager les autres*, but none of the martyrs seems to have come from the parishes of the western archdeaconry. The 'Sussex Martyrs', then, came from particular parts of Sussex, yet ought not to be differentiated too sharply from those of Kent or Essex, who were actually more numerous, but who never acquired the local cult-status which the Sussex group owes ultimately to Lower's book and behind it to the Loseley manuscript.

THE PROVENANCE OF THE DOCUMENTS

The archive of the More-Molyneux family of Loseley Park near Guildford in Surrey was worked on extensively and arranged by the antiquary William Bray (1736–1832).⁹ Bray selected what he regarded as the more interesting material, which he arranged in volumes; in doing so he unwittingly paved the way for the dispersal of the archive.

The archive was reported upon for the Historical Manuscripts Commission in 1879,¹⁰ but its present arrangement and numbering was carried out by Theodore Craib before 1910. The documents themselves remained at Loseley, and at various dates between 1910 and 1938 several hundred were sold to dealers by the More-Molyneux family; most of those ended up at the Folger Shakespeare Library in Washington, which had originally become interested in the Loseley manuscripts because of the material relating to Tudor drama which is contained in the Revels papers. In 1950 the remainder of the archive, far greater in bulk, was deposited at the Guildford Muniment Room, now a branch of the Surrey Record Office.¹¹

The archive, like any similar accumulation, contains many sub-groups. Of these, it is undoubtedly the papers of Thomas Cawarden which have attracted the most attention.

Cawarden, an intimate of Henry VIII from at least 1540 when he was made a gentleman of the privy chamber, was appointed master of the revels and keeper of the king's tents in 1544. As keeper of the royal manor of Bletchingley, which he made his residence, and of the palace of Nonsuch, he was inevitably a major figure in the political and

administrative life of Surrey. Cawarden was Sir William More's political ally and patron, and appointed him his executor in 1559. With the exception of deeds, it is Sir Thomas Cawarden's papers which form the bulk of the material for the period 1540–1560 in the Loseley archive.¹²

The papers remaining at Guildford include the text of a commission of enquiry, addressed to a Surrey knight, a Sussex knight and six other men of the same two counties, to investigate and determine several petitions which the crown had received complaining of abuses in Surrey and Sussex during the reign of Mary. The date — 23 February 1559 — was a month into Elizabeth's first parliament, at which some of the petitions had perhaps been received. The complaints concerned the fate of the lands, leases and goods of people of the two counties who had either fled overseas on account of persecution for heresy, or who had been burnt; they were submitted by the survivors, or by their next-of-kin. The reason for the presence of the document in the Loseley archive is not far to seek: Sir Thomas Cawarden was the first-named commissioner, and William More of Loseley, who had taken office as sheriff of Surrey and Sussex three months earlier, was one of the three other Surrey men named.¹³

Although the commission was issued in the form of letters patent it was not enrolled; the Loseley text, which is in English, must represent a translation. As a result, the document has remained unknown, and its text is printed in full as Appendix 2, with notes which seek to identify the commissioners.

There can be little doubt that the list was either compiled or obtained in connection with the execution of the commission; as well as the clear necessity of such a list to any investigation, what is almost certainly the handwriting of Thomas Cawarden can be identified in the two contemporary endorsements. Cawarden died on 29 August 1559, but the papers would have been of continuing importance to his executor William More as sheriff of the two counties, whose responsibility it was, as we shall see, to empanel a jury to investigate the suggestion of concealed lands. However, the fact that the endorsement relates to sheriff's accounts — perhaps those of Cawarden himself for 1547–1548 — may suggest that the list had already ceased to be of any importance in Cawarden's lifetime and had been used for rough notes, or regarded as an interesting memento of the shrievalty; unless, that is, the sum concerned was the substance of one of the complaints.¹⁴

Cawarden was himself no stranger to the unwelcome attention of Catholic officers. At the end of January 1554 Sir Thomas, whose loyalty during Wyatt's rebellion was doubted, was placed under arrest and his private arsenal of artillery and weapons, together with eight war-horses, was carried off in 17 carts by Sir Thomas Saunders, the then sheriff. Cawarden petitioned the council for their return in May 1559.¹⁵

The complaints recited are so specific that it seems likely that the text of the commission was closely based upon the petitions to which it refers.

One group of petitions had clearly been submitted by victims of what they termed wrongful persecution for heresy, who had fled abroad, survived and returned to England on Elizabeth's accession. Some complained of assets simply taken; others that those who had searched their houses had wrongfully removed money, goods and title deeds. Others had made gifts of goods and leases in trust for themselves on their return, or for their wives and children if they failed to do so, and complained that the trustees had converted the goods for their own benefit, or had had them wrongfully taken from them by others. Another group consisted of the wives, children and relatives of those who had been burnt. They too had been cheated, either by the trustees themselves or by those who had taken the assets from them.

Some of these actions were said to be *contrary to our laws*, others *contrary to equity and good conscience*; the complaints are referred to as *bills and petitions*. This terminology perhaps suggests that some of the complaints had been in the form of petitions to the queen in parliament — it is clearly significant that the commissioners include the two Surrey members — others as bills in Chancery or perhaps the Court of Requests.

Almost as an afterthought, the commissioners were required to investigate the potential for a claim by the crown to any of the assets to which those who had been burnt had remained entitled at their deaths. Such an investigation into what were called concealed lands, usually the province of the escheator, was to be undertaken with the aid of a jury of investigation which was to be empanelled by the sheriff — William More, himself a commissioner. His fellow-commissioner, John Stapley of Framfield, was probably a former escheator, and would have been a useful guide.

The narrative of Richard Woodman provides a

good example of the practical difficulties which could be encountered, even within families, as a result of persecution, and which must have formed the substance of many of the complaints. Probably before he fled to Flanders in 1556, he had entrusted his father and brother with assets worth £56 a year, along with the written evidence, in trust to pay his debts; any surplus was to be held for the benefit of his wife and children. The father and brother claimed that the assets were insufficient to clear the debts, and the planned meeting between the three of them to return the property to Richard Woodman proved to be the occasion of his arrest — 'my brother, supposing that I should have put him out of most of all his occupying . . . for it was all mine in a manner that he occupied, as all the country can, and do well know'.¹⁶

The commission was authorized by Edmund Marten, the clerk of the crown in chancery — the officer responsible for the issuing of assize and gaol delivery commissions. Although as a product of the crown office the commission has the flavour of a criminal investigation, it also bears strong signs of the influence of the equity side of the court. Chancery's process of *sub pena* and attachment was made available to enforce the appearance of both witnesses and suspects; the court's two chief officers — the Lord Chancellor and the Keeper of the Privy Seal — were to be responsible for the 'condign punishment' of the disobedient; and the completed investigation was to be returned into chancery. Perhaps as might befit the nature of the complaints, the commission can be seen as an interesting hybrid, which combined the powers enjoyed by the court as the bureaucracy of criminal justice with the effective process of its equitable jurisdiction.¹⁷

There is very little to indicate the level of activity which the commission generated. The presence of a date and the name of an authorizing chancery clerk counter any suggestion that the Loseley text is merely a draft submitted to the Council for approval. On 22 June 1559 Thomas Cawarden wrote to William More from Bletchingley, forwarding a commission to raise a subsidy and another 'for the hearing and determining of causes therein contained', which must relate to the commission of 23 February. Cawarden had broken both his legs, and assigned the work to More, 'praying you to make or cause to be made precepts for the warning of the country. Concerning these commissions if it be possible I will be with you . . .'. Cawarden never returned to his

duties at the Tents and Revels, and it seems unlikely that he had any further involvement in local government; he died on 29 August. His funeral ode draws particular attention to his qualities as an impartial judge and ability to resist pressure 'in causes that he heard by bill or plaint'.¹⁸

Although no trace of the returned commission has been found in official records, it is clear that More did follow Cawarden's instructions and set to work.¹⁹ Among the Loseley manuscripts at the Folger Library is a petition to the commissioners by John Trewe of Hellingly, the text of which is reproduced as Appendix 3.²⁰

Trewe's petition allows us a fascinating insight into the problems faced, not only by the commissioners, but also by the council. Ostensibly, the complaint is the grievance of a simple, law-abiding Hellingly man whose religious convictions had made him the victim of the Marian authorities. He had been pilloried at Hailsham and Lewes by Sir Edward Gage, 'then an extreme persecutor of the gospel', and his ears had been cut off 'to his great shame and reproach then, and to his continual discomfort forever'. The petition called for Gage to appear and answer, and to pay Trewe whatever compensation was awarded by the commissioners.

But John Trewe of Hellingly can be none other than 'John Trewe, the unworthy marked servant of the Lord, being in bonds for the testimony of Jesu', who on 30 January 1556 issued a statement from the King's Bench prison, and who was addressed by his fellow-prisoner John Bradford by letters of the same day. The exchange illustrates the bitter dispute between Trewe's sect, the 'freewillers', and the predestinarians led by Bradford; Trewe's statement sets out the beliefs of the freewillers, and provides a history of their contention with the predestinarians.²¹ Eleven other names are appended to the statement, including those of Thomas Abington and Thomas a Rede, both of whom were to burn at Lewes the following June. Indeed, Trewe would most likely have burnt with them, had he not escaped from prison; Robert Crowhurst, who is said to have allowed him to escape, was himself recaptured and returned to the King's Bench on 29 July 1556.²² A work printed more than 20 years after the events of 1556 refers to what must be the same individual as 'one Trewe of Kent, who albeit before for the truth's sake he lost his ears (for persuading the people from going to mass), yet afterwards, happening into the company of Pelagians, he became deadly enemy to

good John Careless'; clearly in retrospect at least an embarrassment to the Protestant cause. Because Foxe had a vested interest in concealing such theological aberrations and homogenising his martyrs, we may have failed to appreciate how important it was to the survivors, the early Elizabethans, to establish just what kind of heretics the victims were. The words of the commission, *burdened as they allege with heresy*, is an illustration of that concern.²³

The three documents presented in this article, as well as providing further evidence for the compilation of Foxe's *Actes and Monuments*, also shed light on the political situation, both nationally and in Sussex, in the opening months of Elizabeth's reign.

The decision to determine locally the complaints of those who had been persecuted for their beliefs was not unusual; the court of chancery was used to the collection of evidence in the country by commissioners. But the powers given to Cawarden and his fellows, particularly the power to settle the cases without further reference to either the Council or to any of the central courts, are extensive and extraordinary. In February 1559 the church was still ruled by the Catholic bishops appointed during Mary's reign, and on the 28th of that month convocation endorsed an entirely Catholic statement of doctrine. Although a religious settlement would have to be made, the extent to which it would be influenced by the ideas of the radical groups to which the 'Sussex Martyrs' belonged was at best unclear.²⁴

What was certain however was that, at least in its early years, among the many local magnates, gentry and justices upon whom the regime would have to rely were some whose behaviour during the previous reign would give rise to censure. The last thing which the Council wanted was an airing of the sorry history of the last five years in the very public forum of Westminster Hall, which would have been the inevitable result of a formal investigation of these complaints by parliament or one of the courts of law. And yet the succession of the hoped-for Protestant monarch and the apparent end of the persecution of heretics inevitably encouraged the emergence of people hoping for redress.

The investigation *and determination* of the complaints in the country, without any further reference to parliament or the courts, can be seen as a skilful kick into the long grass on the part of

the Council of a potentially embarrassing issue. Because of the failure of the Crown Office to enrol judicial commissions of this sort, it is impossible to say whether the investigation in Surrey and Sussex was unique (suggesting that the situation there was particularly tense), or whether similar groups of MPs and JPs heard similar complaints elsewhere. But the archives of governing families in other counties may yield evidence of similar investigations elsewhere.²⁵

It was far from clear how those Justices of the Peace and other officials who had collaborated most obviously and actively during Mary's reign in seeking out and arresting persons wanted for examination by the Commissioners or the ecclesiastical authorities, and in seeing to the executions of those eventually found incorrigible by the church courts, would be treated in their counties. Sheriffs had a certain discretion in the prior matter, for it was to some extent up to them how zealously they actually sought out persons wanted for investigation in the first place; but they had none in the latter, and since many or most cases were very protracted, generally taking much longer than ordinary criminal proceedings, it rarely fell out that the same sheriff was responsible both for initiating proceedings against a particular person and for overseeing his or her execution. That John Ashburnham did not have to burn anyone in Sussex in the last year of Mary's reign was more a matter of luck than of clemency on his part.

In fact, for various reasons astutely pragmatic and political rather than disinterestedly magnanimous, Elizabeth's government refrained from taking systematic reprisals against the Marian justices. That policy was subtly propagated in Foxe's book, where, with a few particular exceptions, the Catholic gentry are not, like the discredited clergy, censured by name, but more indirectly with a generalized minatory rhetoric about the sleeping laws of man and of God's slow but sure-footed justice, tempered with exhortations to repentance. Foxe moralizes in connection with the notorious burning of ten at Lewes: 'Wherefore what is to be said to such Justices or what reckoning they will make to God and to the laws of this realm, I refer that to them, that have to do in the matter . . . But concerning these matters, though man's law do wink, or rather sleep at them, yet they shall be sure God's law will find such murderers out at length'.²⁶ This, in the context particularly aimed at Sir Edward Gage, is curiously unspecific.

It is clear that the Gages had been particularly close to the Crown and had been zealous in its service in the matter of identifying and presenting recalcitrant elements in Sussex for examination; Sir Edward Gage most of all, for it was he who as a deputy sheriff had arrested among others Carver and Launder, the first of the 'Sussex Martyrs', at Brighton in October 1554, and who as sheriff in 1557–58 had had to oversee the executions of some thirteen more, in several of whose cases he had been directly involved meanwhile. The indirectness of the criticism which he receives from Foxe is in striking contrast with the explicit but grossly unjust blame meted out to John Christopherson, the Bishop of Chichester who succeeded Bishop Day.

If John Trewe was one of the two sons of that name mentioned in the will of John Trewe, the founder at Robertsbridge furnace in the early 1540s, then we can show another link between the Wealden iron industry and extreme Protestantism.²⁷ What is perhaps more significant is that the only surviving evidence of the activities of the commission of enquiry is a complaint made by a leading contemporary religious controversialist against a former sheriff. Trewe's bill suggests that the commission might have provoked petitions by the radical and the committed against former officials, rather than by the exploited and injured parties envisaged by its text. Trewe admitted that his complaint did not fall within the powers of the commissioners, whose remit extended only to the loss of lands and goods; indeed, it may survive with the Loseley archive precisely because it was dismissed, and not returned into chancery when the commissioners' work was done.

Trewe, who uses the partisan term 'innocents' in describing Sir Edward Gage — 'a tormentor of innocents' — which is also found in the list itself, did not seek reinstatement of his property; he wanted Gage to be humiliated and fined. One can imagine the sort of hearing to which an investigation of Trewe's complaint might have led. Just as we have inferred that the council had no wish to have the problems of the previous reign aired at Westminster, the Sussex bench (on which many of the commissioners sat) had no more desire to disgrace its most senior acting justice.

Gage had undoubtedly been enthusiastic in his prosecution of official policy during the Catholic years. From the perspective of John Trewe and his followers in Sussex, the euphoria which might have

greeted Elizabeth's succession must have been dampened at the end of March 1559 when the investigation and punishment of the ringleaders of 'a heinous disorder lately committed by the inhabitants of the town of Hailsham in spoiling the parish church' was committed by the Privy Council to Sir Nicholas Pelham and Sir Edward Gage.²⁸ It must have seemed to those of Trewe's way of thinking as if little would change, that the wrongs of the last five years would never be righted and the commission of investigation of the previous month was little more than window-dressing.

Things would change, but not with the speed which Trewe might have wished. Gage was eventually removed from the commission of the peace after Bishop Barlow's survey in 1564, but seems to have remained the head of the eastern bench until that time.²⁹ His survival, with honour, and the almost complete obscurity of the 1559 commission go a long way to illustrate the priorities of both national and county government in the opening year of Elizabeth's reign.

THE LOSELEY LIST AND FOXE

In order to assess the value of the list, we need to establish whether it was copied from one of the many lists of martyrs which circulated in the middle of the 16th century, or based on one or more primary sources such as trial records or writs of *significavit*.³⁰

It was assumed by Hyland that the compiler of the list had simply extracted the names of the martyrs from a copy of Foxe, therefore at some time in Elizabeth's long reign and certainly later than the English edition of 1563; since the office of sheriff ran from November to November, it would have been an easy task for anyone knowing the names of the Marian sheriffs (for Foxe names only one of them) to arrange the material as he did.³¹

But as Malden had realized in 1900, the spelling alone suggests that the compiler may not have relied upon Foxe.³² The list is still closer in substance to the relevant entries in four general lists, all printed in 1559, which were unknown to Hyland, Malden and Lower.

LISTS OF THE MARTYRS PRIOR TO FOXE'S ACTES OF 1563

The backbone of John Foxe's annalistic narrative was a register of those executed, arranged by date, place, name and occupation in so far as those details were known; information about precise dates within

months, Christian names or initials, and occupations was often sporadic.³³ Foxe was absent in Basel for most of Queen Mary's reign and returned to England only in October 1559, nearly a year after Elizabeth's accession. He can have had nothing to do with the compilation of the lists, which must have been the work of anonymous brethren in London between 1555 and 1558, and he did not in the event have much to add or change in the register. At least one of the lists directly represents the best state of Foxe's information in 1559, and all of them agree with the list in naming the first of the 'Sussex Martyrs' *Derick Harman*. But in the *Actes* of 1563, Foxe tacitly corrects this to 'Derick Carver', and quotes a good deal of specific detail about him, including that he was a prosperous immigrant 'borne in the village of Dilson by Stockome in the land of Luke' [Stokkum in the province of Lujk/Liège], a native Fleming.³⁴

The basic veracity and detail of the bald record is in general impressively confirmed by such scraps of evidence in sources inaccessible either to Foxe or the originators as survive for particular cases, the *Acts of the Privy Council* or Henry Machyn's diary, for example. The working versions which Foxe used before and after his return to England do not survive, but the close agreement in basic form and content of the four printed lists, both with each other and with Foxe's final account, and indeed their unity in error, clearly indicate a common source.³⁵

These printed versions are themselves independent witnesses of the same underlying sources of which the list is a fifth. If the handwriting of the contemporary endorsements has correctly been identified as that of Thomas Cawarden, then the list must postdate the death of Mary on 17 November 1558 and antedate that of Cawarden on 29 August 1559, a further argument against copying.

A John Knox, 'The Names of the Martyrs' (Geneva, January 1559).³⁶

There is a concluding note to the reader: 'Yf the examinations and uniuste Accusations of these our deare Brethren with the Names of their wicked Accusers, false Judges and cruel Tormentors had bene sent unto us as these few names were, we would most gladly have done our diligence that the wonderful constancy of the one and the great rage and cruelties of the other shoulde have bene witnessed unto the world; which thing nevertheless we mynde hereafter more largely to performe . . .'

Since this was the broad task which Foxe (not Knox) had already made his own, since he too was then still in Switzerland, and since the note is in English, not in Knox's Scots, it is likely that Foxe himself supplied or prepared this version for publication; and it is on the whole the best of the four.

B Robert Crowley, *An Epitome of cronicles conteyninge the whole discourse of the histories as well of this realme of England as all other countreys . . . gathered . . . firste by Thomas Lanquet . . . secondly . . . to the reigne of king Edward the sixt by Thomas Cooper . . . and thirdly to the reigne of our sovereign Ladye Quene Elizabeth by Robert Crowley* (London, 5 April 1559).³⁷

Crowley incorporates somewhat more information than Knox about the martyrs' occupations. The edition was in effect repudiated by Thomas Cooper in his next edition of 1564, where he cut the particular information about the Marian martyrs very drastically, referring only to the most famous by name and giving summary annual statistics for the rest.

C John Brice, *A compendious regester in metre conteining the names . . . of the Membres of Jesus Christ . . . cruelly burned within England . . .* (London, before July 1559).³⁸

This bizarre poetical production is in the form of a sort of 'litany' with the refrain 'we wished for our Elizabeth' separating dated entries; the entry for 12 July 1555, for example, reads:

When Dirick Harman lost his life
When Launder in their fume they fried
When they sent Everson from strife
With moody minds and puffed;
When Wade at Dartford died the death
We wished for our Elizabeth . . .

This is not surprisingly the least direct of the sources, but, stripped of the 'poetry', it too remains essentially very faithful to the substance, indeed remarkably so.

D John Foxe, 'Martyrum quorundam catalogus . . .', in *Rerum in Ecclesia Gestarum . . .* (Basel, August 1559).³⁹

This crudely Latinized listing of the English martyrs (151 of those burnt after Cranmer) is clearly based on the same sources as A, B and C, and differs in

some details (sometimes for the better) from what can be extrapolated from the text of the first edition of the *Actes and Monuments*. (The 'Kalender' prefacing the editions of 1583 and later is a very inferior source and is ignored here).

E Foxe's Register

The register to which Foxe refers at 8 250 is clearly his own working copy of the source common to A, B, C and D, and had evidently come from that source at an earlier stage when it contained only information about post-Cranmer martyrs. In the first part of E, Foxe's better information about the first three martyrs is taken from Bonner's records; but he is unusually confused about the fourth, Richard Hooke of Alfriston, who is referred to as 'of Chester'.⁴⁰ For those who died after Cranmer, he has little to add to A, B, C and D and his continuing reliance on the common source is plain; he finds parishes and trades for the first three, but nothing else that was not in the 'register', and he subtracts a Christian name ('one King'). The entries involving the Mayfield/Rotherfield group of Maynard, Hosmer, and Tamsin a Wood were clearly confused in all the versions. B, C and E agree in the interpretation 'Maynard, Maynard's servant Hosmer, and Maynard's maid Tamsin a Wood' against A and D and probably Loseley's source 'Maynard, H.'s anonymous servant, and Tamsin a Wood, virgin'; Loseley has lost Tamsin altogether.⁴¹

F Foxe's supplementary source

Foxe subsequently writes:⁴²

And now from Lichfield to come to Chichester, although we have but little report thereof for lack of certaine relation and records of that Countrey, yet it seemeth no little trouble and persecution there also to have raged as in other Countries. For what place was there almost in the realme, where the Pope's Ministers did not besturre them, murdering some or other . . .

In the number of whom were these:

He then gives a list of 17 people, which had evidently been made for Foxe's use by someone with a certain local knowledge and independently of the other lists; the parishes, for example, are all in the archdeaconry of Lewes. If we guess that 'Christian Grover' 'Thomas Athoth priest' and 'John Milles' (so also Loseley) are the same as 'Grove's wife',

'Thomas Whood minister' and 'Thomas Milles', then F adds only two otherwise unrecorded persons — John Warner of *Bourne* and John Ashdown of Rotherfield.⁴³ Warner and Ashdown, then, just might be the shoemaker and currier of the other lists. But F is curiously random in order and imperfect. It appears to follow D, starting only with the post-Cranmer martyrs, omitting as it does Carver/Harman, Launder, Everson/Iveson, Hooke; and Gratwick, Morant, and King presumably do not feature because they were burnt at Southwark. But it is strange that six of the ten burnt at Lewes (Woodman, Stevens, Maynard, Hosmer, Tamsin a Wood, Ashdown's wife), as well as the Thomas Read burnt there in 1556, are also missing.

The main value of F then is to confirm and supplement other sources for the parishes of origin of the martyrs.

To summarize: it appears that a tally of Protestants burnt was kept by anonymous sources in London as best they could during Mary's reign; that it was lacunose and provisional, but veracious as far as it went; that at least one pretty up-to-date copy had arrived in Switzerland by the autumn of 1558, the time of Mary's death; and that other copies were circulating in London and the Home Counties at about the same time. Versions A–D are independent witnesses; they broadly agree in the detail which they offer or fail to offer, but each, sometimes rightly or wrongly, adds something of its own — initials, Christian names, occupations — omitted by the others, and conversely omits or misrepresents something on which the others agree.

These lists are clearly closely related, but the spelling of the names and various minor substantive variations suggest that it is unlikely that they were copied either one from another, or all severally from a single manuscript source. If a single source is to be postulated, it soon spawned progeny with minor variations, and unchecked dictation was involved in the multiplication. But it should more likely be thought of rather as a list which was being gradually compiled and added to, going through several private 'editions' in London between c. 1555 and 1558, and that some older copies will have been updated later, so that there is no point in trying to elicit a definite stemma.

This was part of the remarkable clandestine 'journalism' of the time: the Marian authorities seem to have underestimated the importance as propaganda

of printing, of prisoners' own handwritten accounts of their various hearings, and of their 'godly letters' addressed to sympathizers. It is remarkable both that the London prisoners were not more rigorously denied the means and opportunity to write so prolifically, and that this samizdat material circulated within, between and outside the London gaols.⁴⁴

Foxe in E did not rely on the printed sources A–C and may not have studied them closely or even at all. The Loseley list was not taken from any of A–E, but from a MS source parallel in form and content

to their individual sources and probably before any of A–E were in circulation.

But in a paradoxical way the historical community's concentration on Foxe has diverted our attention away from all those aspects of the persecution which were real and uncompleted business after 1558, and in particular matters relating to property. We have not paid nearly enough attention to the reverberations, legal and otherwise, of the Marian persecution into the early years of Elizabeth.⁴⁵

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APPENDIX 1

FOLGER SHAKESPEARE LIBRARY MS L.b.246

(formerly Loseley MS vol. 5 number 69)

The unlettered style of the original has been retained with a minimum of editorial intervention. The capitalization of the original has been rendered according to modern usage; the punctuation, including the use of the colon as a means of division, has been retained. Line-ends are marked with obliques / and deletions are dealt with in the text in square brackets []. The divisions of the text, which are discussed below, are as follows: 1 is the original text, annotated in the hand of 4 with totals in Arabic numerals and the page number 69; 2 is a contemporary endorsement identifying the contents; 3 is a transverse note concerning sheriffs' accounts; 4 is a note in a late-17th-century hand and 5 an identification of c. 1800.

1

69

The names of the shyrefees of Surye and Sussex that / dyd borne the inosentes with the namis of suche whom thay / brent

[*Marginated*] 4

Imprimus (:in the second yere of the raygne of Quene Marye) Mr John / Coveart (being shyref) dyd borne Dyreke Harman: John Lander Thomas Everson / and Rychard Hooke.

[*Marginated*] 14

Item (the thyrd yere) Mr Wylliam S[a]nderes (being shyref) dyd borne: Thomas Harland / John Oswald:

Thomas a Rede: Thomas Haveington: Thomas Hoode mynyster: John a Myles / Thomas Donget: John Foreman: Mother Tree: John Hart: Thomas Ravendalle: Nycoles / Holden: with a showmaker and a [taylor *deleted*] coryar

[*Marginated*] 12

Item (the fowarthe yere) Sir Edward Gage (being shyref) dyd borne / Stevene Grotwyke: Wylliam Morant: Thomas King: Richard Wodman: Georg Stevenes / Margret Mores James Mores: Dyones Burges: Wyllyam Maynard Alexander Hosmars / servant: Thomas Ashedownes wyf and Groves wyf

2

The names / of shyryves / in Surre / and Sussex / in the tyme of / persecusyon

3

E Cavell demaundyth / x^{li} viij^s of Fuller / not accountyd for / in the shreves accompt of shrewewycke

4

Mr Covert of Hascombe

5

Names of those who / were sheriffs of Surrey / and Sussex when several / protestants were burnt in / the reign of Queen Mary

Notes on the document

The document is a single sheet of paper measuring 10¹/₄" by 14¹/₂" folded once to give four pages, each 7¹/₄" wide. The heading and text occupy only a small

part of the first page, as if to leave ample room for notes.

Pages 2 and 3 are blank. Page 4, forming an outer cover, is endorsed with a contemporary identification, a note concerning sheriff's accounts, a late-17th-century memorandum and another identification of c. 1800. Multiple creasing and the layout of the endorsements show that the document was formerly folded into a much smaller parcel.

Of the five elements of the text, Kempe and Jeaffreson mention only 1, while Hyland omits 2 and 5, was unable to read Covert and mangled the text of 3. *Shrevewycke* is a form of the rare word 'sheriffwick', meaning sheriffdom or shrievalty; for the formation, cf. 'bailiwick' from 'bailiff'.

The writer of 1, the substantive text, has not been identified, but its irregular form, cramped spacing and tendency to dialect forms such as *brent* suggests that it is not the hand of a professional clerk, as perhaps the use of the partisan term *innocents* (also used by John Trewe — see Appendix 3), argues against an official production.

The endorsements 2 and 3 (the latter of two distinct phases) closely resemble the hand of Thomas Cawarden. Guildford Muniment Room LM Cor 2/1, a holograph letter written by Cawarden in 1545, demonstrates the same letter-forms, a similar tendency to use *y* where *i* might be expected and a preference for a sigma-s, particularly at the ends of words. Cawarden served as sheriff in 1547–48. The text of John Trewe's petition (Folger MS L.b.508, reproduced below as Appendix 3) and of a parchment membrane used to wrap sheriff's papers (GMR LM 967) are both endorsed in the same hand. If, however, the attribution to Cawarden is incorrect, the endorsement may be associated with William More of Loseley, who himself took office as sheriff on 23 November 1558, and would have accounted at the exchequer in the first half of 1560; but it is not William More's hand. More acted as Cawarden's executor and the Loseley manuscripts are full of his papers. Fuller was probably deputy sheriff to Edward Gage in 1556–57: Woodman's account of his last hearing mentions in passing that 'Fuller the Deputy' rebuked him because he 'spoke so sharply' to the ecclesiastical judges (Foxye 8, 336). By the 19th century, deputy or undersheriffs held office continuously as sheriffs came and went, but when that practice developed is unclear. A Richard Fuller

was coroner for the Duchy of Lancaster in East Sussex 1568–77, and for Loxfield Camden half-hundred 1577–82 (Cockburn, 236–850). He also acted as an attorney at assizes in 1577 (Cockburn, 672) and kept courts for the manor of Peakdean for the Selwyn family from c. 1580 (ESRO AMS 5896/1). Perhaps Cavell was an attorney in the exchequer concerned with the passing of Cawarden's accounts, or even Cawarden's undersheriff; a Simon Cavell bought wood for Cawarden in 1550 (GMR LM 346/11), and a Humphrey Cavell, a benchler of the Middle Temple and MP who died in 1558 (Bindoff 1, 596–7), purchased the manor of West Putley in Sanderstead, firmly within Cawarden's sphere of influence, in 1554 (VCH Surrey 4, 240). The sum may have been the substance of one of the complaints.

Endorsement 4 is written in an ink which has burnt through the paper, rendering *Covert* most legible in mirror-image on page 3. It is written in the hand of Sir William More of Loseley (1643–84), probably towards the end of his life; Guildford Muniment Room LM Cor 6/34, a holograph letter written by More in 1670, demonstrates the same letter-forms. The Covert family of Sussex and Surrey regularly provided office-holders in the reigns of the Tudor monarchs; Richard Covert, sheriff in 1564, had succeeded his brother in the manor of Hascombe in 1556, and was a collateral relative of the John Covert of Slaugham, sheriff in 1554. The family seems to have remained at Hascombe until the end of the 17th century. Although William More was not intimate with the family — there are no Covert letters in the Loseley correspondence at GMR — he must have had an acquaintance with the family as fellow landowners and JPs. It seems most likely that William More came across the mention of the sheriff of 1554 and annotated the paper, perhaps intending to show it to his neighbour out of antiquarian interest.

Endorsement 5 is in the hand of William Bray (1756–1832), the historian of Surrey and, with Owen Manning, the author of *History & Antiquities of the County of Surrey* (3 vols., 1804–14). He was a friend of the More family and probably the first person to realize the historical value of their papers. The number 69 at the head of the paper represents the page number of the volume into which he bound it; the totals placed against the three years are also in his hand.

APPENDIX 2

**GUILDFORD MUNIMENT ROOM SURREY RECORD
OFFICE LM 1075**

The text has been rendered in modern spelling with the punctuation and capitalization in modern form. Several corrections, none significant, have been ignored.

Elizabeth by the grace of God, queen of England, France and Ireland, defender of the faith etc., to our trusty and wellbeloved Sir Thomas Cawarden and Sir Nicholas Pelham knights, Thomas Browne, Edmund Sleafilde, William More, Richard Elderton, John Stapley, John Hussey and John Apsley greeting.

Forasmuch as by the complaints and humble petitions to us made by divers and sundry of our loving subjects of our counties of Surrey and Sussex it is given us to understand that in the time of the reign of our late dear sister Queen Mary that the said complainants and petitioners have diversly sustained great oppressions, wrongs and injuries, that is to say some in that that where they were by undue means persecuted and wrongfully burdened as they allege with heresy and for fear of the malice practised against them severally by divers other did withdraw themselves for safeguard of their lives, their goods, chattels, leases and profits of their lands contrary to the laws of our realm were taken away from them by divers persons of their own wrong having none authority so to do; some other in that that where their houses were searched for the apprehension of them, the searchers have wrongfully taken away out of their said houses as well their money and divers of their goods then found in their said houses as also the evidences there remaining concerning their lands; some other in that that where before their absenting themselves they did make gifts of their goods and leases to other their friends of trust and upon their special promise that at their return they should have them again, and if they chanced to die then the said goods and leases should be employed to the use of the wives and children or other kinsfolks or friends of the said persons that so absented themselves, the which persons to whom such gifts have been made infringing the special trust in them committed have refused to accomplish the said trust in them put and do convert all the same to their own uses; and some in that that where before their said absenting of themselves they did make such gifts of trust, divers persons other, of their own wrong, have taken away

the goods and leases so given of trust from the parties to whom such gifts were made; some other in that that where their husbands, parents or kinsfolks which have been in our said sister's time burnt for heresy before their conviction thereof did give their goods and chattels to other of special trust that the said goods and chattels should be employed to the relief of the wives, children kinsfolks or friends of the said persons so burnt, and divers other persons of their own wrong have taken the same goods and chattels from the said persons to whom the said gifts were made, contrary to our laws; and some other in that that those persons to whom such gifts of trust were made by such as afterwards were burnt contrary to the trust put in them have converted all the said goods and chattels to their own uses and will not perform the said trust in them put to the great offence of almighty God and contrary to equity and good conscience.

We, considering it to appertain to our kingly office to see reformation of such enormities and injurious factions, minding to understand the truth of the premises and that the said injuries may be duly corrected and justly recompensed as reason is, and trusting in your fidelities, wisdoms and circumspections, have appointed and assigned you, eight, seven, six, five, four and three of you, to be our commissioners, and by these presents do give unto you, eight, seven, six, five, four and three of you, full power and authority as well to receive and hear the bills and petitions of all and every our loving subjects, whatsoever they be, touching or in any wise concerning any of the injuries and things aforesaid or any other suchlike in effect at any time heretofore committed by any person or persons within our said counties of Surrey and Sussex and either of them, and by virtue hereof to convent and call before you, eight, seven, six, five, four and three of you, all and every person and persons against whom any such bill or petition shall be so exhibited, to the intent that they may answer to the said bills and petitions, and upon answer duly made to every such bill and petition and an issue thereupon joined, as well by depositions and examinations of witnesses as by all and every other due and convenient ways and means that you, eight, 7, 6, 5, 4 and 3 of you by your good discretions can, to try out the truth concerning the matters objected in the said bills, petitions, answers, allegations of every of the said parties, and thereupon finally to determine all the said matters so to be produced before you, 8, 7, 6, 5, 4 or 3 of you.

And our will and pleasure is that if any person or persons upon the precept of you, 8, 7, 6, 5, 4 or three of you shall disobey the same precept and will not appear before you, 8, 7, 6, 5, 4 or 3 of you at such days and places as you, 8, 7, 6, 5, 4 or three of you shall to him or them from time to time appoint, that upon the certificate of you, 8, 7, 6, 5, 4 or three of you to be made to our chancellor of England or to the keeper of our great seal of England for the time being, several writs of sub pena shall be directed to every such person or persons commanding him and them to appear before you, 8, 7, 6, 5, 4 or 3 of you at such time and places as by you, 8, 7, 6, 5, 4 or three of you shall be from time to time appointed, to answer to such bills and petitions as against him or them shall be so exhibited.

And our further pleasure is that if any such person or persons to whom our said writs of sub pena shall be so directed shall be disobedient and contemn our said process, that then process of attachment for the said contempt upon the certificate of you, 8, 7, 6, 5, 4 or 3 of you shall be awarded out of our court of chancery for the apprehension of the offenders in that behalf, returnable in our said court of chancery, there to receive condign punishment for their said contempt.

And further we do grant by these presents that the certificate of you, 8, 7, 6, 5, 4 or three of you shall be a sufficient warrant as well to our chancellor of England and keeper of our great seal for the time being and every of them for the awarding of every of our said process in any of the cases aforesaid as occasion shall be, as also to proceed to the condign punishment of every such contempt.

And also, forasmuch as we be informed that divers lands and tenements, goods and chattels of divers persons which heretofore in the time of our said sister have been convicted of heresy and burnt, were at the time of their deaths seised and possessed, which lands, tenements, goods and chattels to our said sister by reason of the said conviction did appertain and to us now justly doth appertain, have been by divers evil-disposed persons claimed, taken and seized as their own, and have been holden as well from our said sister in her lifetime as from us since her decease, to the great deceit as well of our said sister as of us; we, minding to understand the truth in that behalf, to the intent that we may be duly answered of all that which to us doth of right belong as reason is, have also appointed and assigned you, 8, 7, 6, 5, 4 and three of you, to be

our commissioners in that behalf, and by these presents do give unto you, 8, 7, 6, 5, 4 and 3 of you full power and authority by all the ways that you can to examine, search, try, and find out as well by the oaths of good and lawful men inhabiting within our said counties of Surrey and Sussex, as well the liberties as without, as also by inquisitions or otherwise, what land or tenements, goods or chattels whereof any person or persons heretofore convicted of heresy at the time of his or their deaths were seised or possessed within our said county of Surrey and Sussex and either of them have been wrongfully taken away or withholden from our said sister and yet be withholden from us, and of what yearly value the said lands or tenements be, and who hath from time to time received the issues and profits of them, and of what value the said goods and chattels be to be appraised according to their just and several values, then where and by whom they were so wrongfully taken or now be wrongfully from us withholden.

And our full mind and pleasure is that of all your doings concerning the premises and every of them you, 8, 7, 6, 5, 4 or three of you, do make due, perfect and undelayed certificate in writing under your seals or under the seals of 8, 7, 6, 5, 4 or three of you to us in our chancery immediately after the finishing and accomplishing of our commandments by these presents to you, 8, 7, 6, 5, 4 or three of you so given as is aforesaid.

And furthermore we will and command our sheriff of our said counties of Surrey and Sussex by these presents that he shall cause to come before you, 8, 7, 6, 5, 4 or three of you, at such days and places as you, 8, 7, 6, 5, 4 or three of you shall appoint to him, such and so many honest men of his bailiwick, as well within the liberties as without, by whom the truth concerning the premises may be the better enquired of, tried and known, straightly charging all mayors, sheriffs, bailiffs, constables and all other our officers, ministers and faithful subjects that they and every of them be aiding, helping and assisting to you, eight, seven, six, five, four and three of you, and at the commandment of eight, seven, six, five, four or three of you in and concerning the due execution hereof as they tender our pleasure, and will avoid the contrary at their uttermost perils.

In witness whereof we have caused these our letters to be made patents; witness our self at Westminster the three and twentieth day of February in the first year of our reign [23 February 1559] Marten.

Notes on the document*The commission*

The text of this commission was not enrolled on the patent roll of 1 Elizabeth (PRO C 66/938–47) in accordance with contemporary practice (see note 17), possibly because no financial interest made the fees worth paying.

The commissioners

All but two of the commissioners had served or were to serve as members of parliament, and their careers are most usefully summarized in *The House of Commons 1509–1558* (S. T. Bindoff ed. 1982) and *The House of Commons 1558–1603* (P. W. Hasler ed. 1981). The constituencies given below were those for which they sat in the parliament of 1559, unless otherwise noted. For the Surrey men, see also 'The Justices of the Peace of Surrey in National and County Politics, 1483–1570' by W. Robison (unpublished Ph.D. thesis, Louisiana State University, 1983).

Thomas Cawarden of Bletchingley, Surrey, kt (by 1514–1559); MP for Surrey (Bindoff **1**, 599–602; Hasler **1**, 569–70; Robison, 431–2).

Nicholas Pelham of Laughton, kt (by 1513–1560); MP for Sussex, 1558; Sussex JP (Bindoff **3**, 80–81).

Thomas Browne of Betchworth Castle, Surrey (c. 1530–1597); MP for Surrey (Hasler **1**, 505–6; Robison, 425).

Edmund Slyfield of Slyfield Place, Great Bookham, Surrey (c. 1520–1591); Surrey JP (Hasler **3**, 395–6; Robison 499–500).

William More of Loseley, Surrey (1520–1600); MP for Grantham (Bindoff **2**, 624–6; Hasler **3**, 86–9), sheriff of Surrey and Sussex (Robison, 477–8).

Richard Elderton [Elrington]; of Wiston (c. 1510–1570); Sussex JP. Younger son of Edward Elrington of London, Udimore and Preston in Brighton (where he was buried in 1515) by Beatrice, daughter of Ralph Shirley of Wiston; succeeded his father as lessee of Preston in 1515 and bought the freehold in 1553; lessee of Goringlee in Shipley by 1551; described as of Preston in 1551; married Mary, widow of William Shirley of Wiston (d. 1551); described as of Wiston in 1560; bought manor of Raddingden (in Preston and Hove) in 1567; died 9 February 1570 and buried at Wiston (Bindoff **2**, 91; SRS **14**, 376; VCH **7**, 270; WSRO Wiston Ms 3007; VCH **7**, 258; SAC **5**, 14).

John Stapley ?of Framfield; almost certainly the Sussex JP of that name who was on the commission in July 1561 but not listed in July 1562 (Cockburn 56, 87), who was almost certainly the John Stapley who was buried at Framfield on 8 August 1561 (ESRO PAR 343 1/1/1); he may also be the John Stapley who served as escheator for a year from 22 November 1546, which service would have made him familiar with the rules governing forfeited and concealed lands.

John Hussey of Cuckfield (c. 1520–c. 1572); MP for New Shoreham (Hasler **2**, 356–7).

John Apsley of Thakeham (by 1527–1587); Sussex JP (Hasler **1**, 348).

APPENDIX 3

FOLGER SHAKESPEARE LIBRARY MS L.b.508

(formerly Loseley MS 1085)

The text has been rendered in modern spelling with the punctuation and capitalization in modern form.

To the right worshipful Sir Thomas Cardyn, Sir Nicholas Pelham knights, Thomas Brown, Edmund Slyfelde, William More, Richard Elderton, John Stapley, John Hussey and John Apsley commissioners within the counties of Sussex and Surrey

Lamentably complaining sheweth to your worships your daily orator John Trewe of Hellingly in the county of Sussex, that where your said orator is and

ever hath been a true, faithful and obedient subject to all the princes of this realm, and always lived quietly without any such notorious offence committed or done whereby he should deserve either extreme punishment or great shame, yet one Sir Edward Gage knight being then an extreme persecutor of the gospel and understanding your said orator to be of a contrary mind unto his, did not only by sundry indirect means continually molest and trouble your said orator, but also without all charity and godly respect of his own authority and without all law and justice unjustly commanded your said orator at 2 several times to be set upon the pillory at the two market towns of Lewes and Hailsham in the said county of Sussex; and not with

this detestable shame satiate or contented, but as a tormentor of innocents, at those two several towns most miserably caused the ears of your said orator to be cut off, both to his great shame and reproach then, and to his continual discomfort for ever. In consideration whereof and for as much as this loss and detriment exceedeth the loss of lands and goods whereof your worships have commission, this your orator most humbly beseecheth your worships to grant your direct and immediate precept to be directed to the said Sir Edward Gage, commanding his immediate repair before you, there to answer the premises, with such further recompense as to your worships, weighing the case, shall seem to stand with equity. And your said orator shall ever pray for your estates in worship always to increase.

Endorsed: [by Thomas Cawarden] John Trye byll for hys ears cutting of

[by William More] John Trewe<s eares cutt by Sir Edward Gage>

[by Craib] 1085 (x); 150

The petition is on parchment; two pin-holes suggest that other documents have formerly been attached to it.

Acknowledgements

Our thanks are due to Mr J. R. More-Molyneux of Loseley Park, Guildford, Surrey and to the authorities of the Folger Shakespeare Library, Washington DC, USA for permission to quote the documents here, to the staff of the Guildford Muniment Room, and in particular to Mrs Shirley Corke, who has made her extensive knowledge of the Loseley archive available to us, and provided the examples of handwriting which have enabled the identifications on which parts of this article depend. Further warm thanks are due to Dr Jane Dawson formerly of the School of History, University of St Andrews, now of Edinburgh, for indispensable guidance in the history of the period and in the preparation of this article, to Dr Roy Hunnisett, formerly of the Public Record Office, for advice on the chancery commission, to Professor Patrick Collinson for many helpful suggestions and to Brian Awty, Anne Drewery, John Farrant, Dr John Fines, Professor Cynthia Herrup, Dr Jason Peachey, Dr Christine Peters and Margaret Whittick for commenting upon earlier drafts.

NOTES

- 1 A. J. Kempe, *The Loseley Manuscripts* (1836), 225 n.
- 2 John Foxe, *Actes and Monuments*, edited by S. R. Cattle and G. Townsend, 8 vols. (1837–41; hereafter Foxe). On Foxe's work, cf. P. Collinson, 'Truth and legend: the veracity of John Foxe's Book of Martyrs', in *Elizabethan Essays* (Woodbridge, 1994), 151–78.
- 3 M. A. Lower, *The Sussex Martyrs: Their Examinations and Cruel Burnings in the Time of Queen Mary, Comprising the Interesting Personal Narrative of Richard Woodman, etc. etc., Extracted from Foxe's 'Acts and Monuments' with Notes* (London & Lewes, 1851). He notes that in the list the first of the Sussex Martyrs, Carver in Foxe's *Actes*, 'is called Harman, but this is doubtless an error'; see note 33; on Lower see *DNB s.n.*
- 4 *The Sussex Martyrs*, iii–iv.
- 5 The entry for Richard Woodman in *Dictionary of National Biography* reveals the existence of a local cult; Edward T. Stoneham, *Martyrs of Jesus* (Burgess Hill, [1952]); the authenticity of a much earlier piece of evidence for a cult, the 'martyrs' fireback' at Anne of Cleves House Museum, Lewes, is doubted on account of its association with Charles Dawson.
- 6 The cases of Gratwick and Woodman were closely linked in their latter stages. For a discussion of the idea of 'London martyrs', see Susan Brigden, *London and the Reformation* (1989), 606–20.
- 7 In Kent 18 were burnt in 1555 (15 at Canterbury, 1 each at Rochester, Dartford and Tunbridge), 7 in 1556 (5 at Canterbury 2 at Rochester), 24 in 1557 (13 at Canterbury, 7 at Maidstone, 2 each at Wye and Ashford), and 5 more at Canterbury in 1558; some of these may have had Sussex connections of their own.
- 8 That is Henry Adlington of 'Grinstead in the county of Sussex' (Foxe 8, 151), East or West, whom Foxe lists with a dozen Essex folk tried by Bonner in London in 1556 and executed by warrant of the then sheriff of London. John Careless addressed a letter to him which refers to the recent executions at Lewes of two of those mentioned in the list, without making anything of the county connection.
- 9 With the Rev. Owen Manning the author of *History & Antiquities of the County of Surrey*, published in three volumes between 1804 and 1814.
- 10 J. C. Jeaffreson in the *Seventh Report of the Historical Manuscripts Commission* (1879), 614 a.
- 11 List of Loseley Manuscripts at Guildford Muniment Room, reproduced by the Historical Manuscripts Commission, pp. 4–7; for the material in the Folger Library see Laetitia Yeandle and W. R. Streitberger, 'The Loseley collection of manuscripts in the Folger Shakespeare Library, Washington DC', *Shakespeare Quarterly* 38 (1987), 201–7.
- 12 Cawarden's career is most usefully summarized in S. T. Bindoff (ed.), *The House of Commons 1509–1558* 1 (1982), 599–602 and P. W. Hasler (ed.), *The House of Commons 1558–1603* 1 (1981), 569–70. For his activities at the tents and revels, see W. R. Streitberger, 'The revels at Court from 1541 to 1559', *Research Opportunities in Renaissance Drama* 29 (1986–7), 25–45, and 'Records of royal banqueting

- houses and Henry VIII's timber lodging, 1543–59', *Journal of the Society of Archivists* **15** (1994), 187–202.
- ¹³ Guildford Muniment Room, Surrey Record Office (hereafter GMR) LM 1075.
- ¹⁴ GMR LM 967 is a parchment membrane containing part of a list of farm-rents belonging to Merton Priory for manors beginning A to K, compiled in about 1530. It too is endorsed, in the same hand as the endorsement of L.b.246, with a note suggesting that it had subsequently been used as a wrapper for shrievalty papers. The hand uses the term *shryweyweke*, and spells the county *Surre*.
- ¹⁵ Folger L.b.44 is Cawarden's original petition, endorsed with the council order of 3 May 1559; L.b.45–80 consist of receipts, lists and other papers relating to confiscated weapons (for a microfilm of all these documents see WSRO MF 708). For the context of the arrest see Hasler **1**, 600–601.
- ¹⁶ Foxe **8**, 336.
- ¹⁷ J. Cockburn, *Calendar of Assize Records Home Circuit Indictments Elizabeth I and James I; Introduction* (1985; hereafter Cockburn), 15, commenting on the failure to enrol assize commissions between 1563 and 1593; J. H. Baker states that Marten held the office jointly with Thomas Powle from 1546 to his death in the 1560s: *Selden Society* **109** (1993), 44.
- ¹⁸ GMR, LM/Cor 3/21; Streitberger (1994) 197, who incorrectly places Cawarden's accident early in July; Folger L.b.519, a poem on death of Thomas Cawarden by William Brown, vicar of Horley, includes the lines:
 And for all causes that he harde by bill or playnte to
 right the wrong
 There was no justice then defarde Nor ponishment
 therto did longe
 He wolde not spare though some did seeke by powre
 wherby him to deface
 Whose manlye harte did that myslyke And for his
 truth the wolde gyve no place
- ¹⁹ The artificial class of documents in which returned chancery commissions have been arranged — PRO C47/7 — is largely medieval in content. The published state papers and acts of the Privy Council do not refer to the investigation, and a search of the particularly full accounts of the Corporation of Rye (East Sussex Record Office RYE 60/7), the home of one of those burnt, has revealed no trace of any process. The lists of both Chancery and Court of Requests petitions have been searched without success, although it should be pointed out that a plaintiff need not have the same surname as one of the victims, and the names of plaintiffs who themselves survived persecution are largely unknown. A bill concerning the estate of Richard Woodman's father Thomas Woodman of Uckfield, who died in December of 1558, was filed in Chancery in 1561, perhaps suggesting that the commission's enquiries had ceased by then (PRO C3/186/46).
- ²⁰ Folger L.b.508.
- ²¹ Bodleian Library MS Bodley 1972, f. 116–25, printed by R. Laurence, *Authentic Documents relating to the Predestinarian Controversy* (Oxford, 1819), 37–70; *The Writings of John Bradford*, ed. A. Townsend, Parker Society (1853), 180–81; both editors allow the date on the face of the manuscript, 1555, to stand, in which they are followed by J. Fines, *A Biographical Register of Early English Protestants* (West Sussex Institute of Higher Education, Bognor Regis, 1985); yet Rede was arrested at the end of April 1555 at the earliest (see note 22), so the date (as might be expected) must be 1556 new style. For the freewillers, see Joseph Martin, 'The first that made separation from the Reformed Church of England', in *Religious Radicals in Tudor England* (1989), 41–70, and Brigden, 615–16.
- ²² The names as they appear in the manuscript are John Trwe, Thomas Avington, Richard Harman, John Jacksonne, Henry Wickham, Cornelius Stevenson, John Guelle, Thomas a Rede, John Saxbye, Robert Hitcherst, Matthew Hitcherst and Margery Russell; Harman, of West Hoathly, a sacramentary, had been committed 'for his lewd and seditious behaviour in Sussex' on 27 May 1554; the arrest of Rede, 'the chief mover of a lewd tumult at Waldron' (in which Trewe, from the neighbouring parish, might also have been involved) was ordered on 15 April and he was already in the King's Bench prison on 3 May 1555 (*Acts of the Privy Council* (hereafter APC) **5**, 28, 115, 120); for Foxe's insertion of information concerning Rede into the editions of 1576 and 1583, see T. Freeman, 'Notes on a source for John Foxe's account of the Marian persecutions in Kent and Sussex', *Historical Research* **67** (1994), 203–11; Jackson and Wickham (a Surrey prisoner) were among those prisoners 'detected for heresy' transferred from the custody of William Saunter to that of Edward Gage on 27 November 1556 but not in custody a year later (ESRO SAS/G36/9, 10); for the escape of Trewe, 'a heretic and seditious person', see APC **5**, 316.
- ²³ William Wilkinson, *A Confutation of Certain Articles* (1579), unpaginated preface (STC 25665); Foxe expunged references to differences between Freewillers and Predestinarians from editions after that of 1563: see Collinson, *Elizabethan Essays*, 169; we owe the last point to Professor Collinson.
- ²⁴ Norman Jones, *Faith by Statute — Parliament and the Settlement of Religion, 1559* (1982).
- ²⁵ A similar problem is inherent in the survival on the KR Memoranda Roll of proceedings arising from a 1556 commission of enquiry into the lands of religious emigrants and fugitives from Essex. Foxe mentions that a similar commission sat at Beccles in Suffolk, but the failure to enrol these commissions again leaves the extent of their activities unclear: see D. M. Loades, 'The Essex inquisitions of 1556', *Bulletin of the Institute of Historical Research* **35** (1962), 87–97. In the light of the Surrey and Sussex commission and particularly the case of Richard Woodman's assets, his observation (p. 90) that 'most of the [forfeited] property . . . was quietly resumed upon the accession of Elizabeth' is possibly an optimistic one.
- ²⁶ Foxe **8**, 377.
- ²⁷ Historical Manuscripts Commission **77** pt 1, 306, 314; ESRO W/A1, 84, 1A.14, 3.95, 103 are wills and administrations of members of the Trewe family from Dallington, Brightling and Salehurst, 1541–1554; a Richard Trewe was the Earl of Northumberland's founder at Tonbridge c. 1553 - M. Zell, *Industry in the Countryside* (Cambridge, 1994), 131–2. In 1563 a John Trewe of Cardiff was employed to make a navigation from Exmouth to Exeter, for which he was to have a 99-year lease of the haven (HMC **73**, 28); the contract resulted in a dispute which the Council eventually left to The Earl of Bedford and the assize judges to arbitrate in 1574 (APC **7**,

- 222, 8, 82, 103, 259). Trewe, described as of Caerleon in Monmouthshire and an old man, was commissioned to undertake major works at Dover Harbour in 1580 (*Calendar of State Papers Domestic 1547–1580*, 671, 672, 4, 6, 85); for a criticism of his proposals see *History of the King's Works* 4, 356–8. The knowledge necessary for these civil engineering contracts could easily have been acquired in the water-powered Wealden iron industry; J. Goring, 'Wealden ironmasters in the Age of Elizabeth' in E. W. Ives, R. J. Knecht & J. J. Scarisbrick (eds.), *Wealth and Power in Tudor England* (London, 1978), 219–21, although most of the evidence is from at least a generation later.
- ²⁸ APC 7, 76.
- ²⁹ Edward Gage (c. 1503–1567) was the first-named working JP in the lists which survive with the assize files from 1558 until July 1564; he is not on the list for August 1565 and died on 26 December 1567 (Cockburn 3, 115, 137; SRS 14, 446, 447); R. B. Manning, *Religion and Society in Elizabethan Sussex* (Leicester, 1969), 153–4, 242.
- ³⁰ For procedure by writ of significavit see F. Logan, *Excommunication and the Secular Arms in Medieval England* (Toronto, 1968).
- ³¹ St G. K. Hyland, *A Century of Persecution under Tudor and Stuart Sovereigns from Contemporary Records* (London, 1920), 64–5.
- ³² H. E. Malden, *A History of Surrey*, (London, 1900), 198 n.; but what he says in *VCH Surrey* 2, 377 is confused.
- ³³ Foxe 8, 250–51.
- ³⁴ 'Derek Harman' is possibly a conflation of Derek (Carver and Richard) Harman. There was initial uncertainty about the surname of Carver, a foreigner — in a council letter authorising his execution he is referred to as 'one named Derike, a berebrewer' (APC 5, 147) — although the significavit authorizing his execution (PRO C 85/127 no. 10) gets the name right. Richard Harman (see note 22) clearly cannot be the same person as the beerbrewer, who was certainly of Brighton; but he could perhaps be the Richard Harman, earlier of Cranbrook, Kent, who graduated MA from Jesus College, Cambridge in 1515, and who in the late 1520s was supplying new testaments from Antwerp for the London market (Fines, *Biography*). Nothing is apparently known of his eventual fate. This involves supposing that Harman did in the end go to the stake and about the same time as Carver. This cannot be proved; but otherwise it seems that we are left with a very odd coincidence in the external evidence of the APC.
- ³⁵ All the early lists, Foxe and the Loseley list agree in the mistaken or at least partial statement that among those burnt at Lewes on 22 June 1557 was 'Alexander Hosmer's servant'. In an excellent investigation of the background of the Rotherfield martyrs, Miss Pullein showed conclusively that Alexander Hosmer himself had been executed on that day: Catherine Pullein, *Rotherfield: The Story of some Wealden Manors* (Tunbridge Wells, 1928), 265–75.
- ³⁶ Appended to *A Brief Exhortation to England for the Speedy Embracing of the Gospel M.D.LVIII*, dated from Geneva 12 January 1559 [New Style, already in use there], bound as pp. 55 ff. together with (pp. 1–54) *The copie of an epistle sent unto the inhabitants of Newcastle, & Barwike* dated from Geneva, November 1558 (STC 15064). This volume was the last published by Knox in Geneva before his departure for Scotland in January 1559. The list is more specifically introduced as follows: 'The names of some part of those most faithful Servantes and deare Children of God, which lately in thee, and by thee, O England! have been most cruelly murdered by fyer and imprisonment, for the testimonie of Christ Jesus and his eternal veritie; whose blood, from under the altuer, crieth lowde to be avenged on them that dwell upon the earth, as before is mentioned; besides a great nombre of God's children who, under the pretence of treason, suffered for Christ's religion'. It is arranged by year, date, and place, and comes to 282 persons, the latest entry being the execution of Bainbridge, a gentleman at Winchester on 29 July 1558 (Foxe 8, 490–92). It is reprinted by D. Laing in *The Works of John Knox*, Wodrow Society (6 vols., 1846–1864) 5, 523–36.
- ³⁷ STC 15217.5. Thomas Cooper had published to the end of Edward's reign (STC 15217); his 1560 edition, brought out in his own name as *Cooper's Chronicle*, is STC 15218.
- ³⁸ STC 3726. On Brice, who early in Mary's reign was engaged in importing Protestant books to London and Kent from the continent, see *DNB*, s.n. The work appeared in two unlicensed printings between 13 January and 10 July 1559, when the printers of both were fined by the Stationers' Company: see J. W. Martin, 'A sidelight on Foxe's account of the Marian Martyrs', *Bulletin of the Institute of Historical Research* 68 (1986), 249 n.7. The work was reprinted with authentic spelling in E. Farr, *Select Poetry, Chiefly Devotional, of the Reign of Queen Elizabeth*, (Parker Society, 1845), 1 and thence, more coarsely, in Arber's *English Garner* 4 (Birmingham, 1882).
- ³⁹ The full title is 'Martyrum quorundam catalogus iuxta seriem temporis post Cranmerum eodem anno (nempe sesquimillesimo quinquagesimo sexto) succensi sunt varii variis in locis martyres', in *Rerum in Ecclesia gestarum quae postremis et periculosis his temporibus evenerunt pars prima autore J. F.* (Basle, 1559), 729–32. The colophon gives the date as August 1559, and the preface is dated from Basel 1 September 1559.
- ⁴⁰ The writ of significavit authorizing the execution of Hooke, referred to by A as a *lame man* and by C as *limbless and lame*, is dated 14 October 1555: PRO C 85/48, no. 19.
- ⁴¹ For Miss Pullein's suggestions, see *Rotherfield*, 268–70.
- ⁴² Foxe 8, 430.
- ⁴³ Corrected to Catsfield in later editions. For Miss Pullein's attempts to identify a John Ashdown of Rotherfield, and for the excommunication of a William Ashdown of that parish in 1555, see *Rotherfield*, 267, 269, 274; the date of the document (PRO C 85/48, no. 20) is now illegible.
- ⁴⁴ 'The Marian regime's failure to understand the importance of printing', and 'The Protestant underground congregations of Mary's reign' in Joseph Martin, *Religious Radicals in Tudor England* (1989), 107–24, 125–46.
- ⁴⁵ We owe this point to Professor Collinson.

Buying time

FISCAL POLICY AT RYE 1600–1640

by Stephen Hipkin

Faced with dwindling revenues from taxation of a contracting economy during the late 16th and early 17 centuries, the search for means to bolster corporate income was never far from the minds of Rye's early Stuart governors. Examination of the fiscal policies pursued at Rye between 1600 and 1640 shows a corporation sensitive of the need to avoid placing additional burdens on already hard-pressed sectors of the economy, and nervous of the impact of general tax levies. But it also reveals the corporation's ability to exploit — and increasing dependence on — the revenue potential of the drink trade, and its willingness to deploy the machinery of the courts as a means of taxing illicit trading activities and a range of minor infringements of the law.

The inhabitants of early-17th-century Rye were well aware that their local economy was in crisis. Many of their erstwhile neighbours had already concluded that the town offered no future and had sought one elsewhere. Many more were to follow in their wake as economic crisis unfolded into terminal decline. In the space of three generations after 1580 Rye's staple fishing industry collapsed, its overseas trade was decimated and the real assets of the corporation were drastically depleted. From being an important trading centre, sustaining a population in excess of 3500 in the mid-1570s, Rye contracted to little more than a market town of fewer than 1300 inhabitants by the Restoration.¹

But if this was to be Rye's fate it was not for want of action on the part of the town's government. Between 1570 and 1640 Rye's rulers waged an ever more vigorous campaign to secure the thousands of pounds of external financial assistance necessary to tackle the build-up of silt in Rye harbour, which was widely perceived within the town to be the root cause of its economic decline.² They campaigned with equal vigour in the early 17th century in defence of the Rye fishing industry against competition from rival fleets on both sides of the English Channel. And they also applied themselves, in ways examined below, to finding the money to invest in these campaigns and to undertake the interim repairs and maintenance necessary to sustain the local economy.

With precious little room for manoeuvre after 1600, the corporation had to seek ways of raising revenue which did not simply further undermine

the economy and destabilize the community. In this the corporation was not without its successes. Rye's ruling freeman oligarchy demonstrated an often resourceful balancing of priorities and a willingness to exploit the flexibility of tools available to early modern urban governments. But the campaigns for external assistance were never rewarded, and by the 1620s the magnitude of the local economic crisis was threatening to engulf the town. Charles I's recurrent demands for ship money during the later 1630s and the fiscal burdens imposed during the Civil War delivered the coup de grâce.

II

The causes and contours of economic crisis in late-16th- and early-17th-century Rye must first be summarized.³ During the early 16th century the town possessed a large and serviceable estuarine harbour, and overland routes provided the connection with London which turned Rye into a mid-Tudor boom town. It was the huge growth in demand for the fruits of Rye's labour-intensive fishing industry from the capital's rapidly expanding population which, above all, generated Rye's own population expansion.⁴ That expansion was given further momentum by the strategic location at the eastern edge of coastal Sussex which made Rye a convenient outlet for trade with Netherlandish and more especially northern French ports, notably Dieppe and the English outpost of Calais. By the early Elizabethan period Rye boasted a population nearly double that of half a century earlier.

Shipments of supplies to Calais accounted for three quarters of Rye's total export trade in the first half of the 16th century,⁵ but its loss in 1558 was to some extent compensated after 1564 as London cloth merchants, reacting to the crisis in England's trade with Antwerp and taking advantage of the disruptions in the French cloth industry caused by the onset of the religious wars, began to export through Rouen via Rye, employing local men as factors. The strength of the trade encouraged a reciprocal flow of imports, particularly of medium and light quality French linens and canvas which were not produced in any quantity in England, and of some luxury textiles mainly of Italian manufacture. The transit trade generated considerable local employment during the 1570s, the number of sea crossings often exceeding 100 per annum, at least half of these undertaken in Rye vessels. But Rye's predominance in the transit trade to Normandy did not endure, for during the 1570s London also became a major exporter to France. Cloth exports through Rye peaked in 1578-79, but after that date exports from London were probably taking place at the expense of Rye, as there was a sharp decline in shipments during the 1580s. Subsequent wartime disruptions to shipping, Rouen's declaration for the Catholic League in December 1588, and growing French opposition to imports of English new and finished old draperies, more or less put paid to the transit trade at Rye by the late 1590s. That in turn provided the catalyst for a number of merchants to shift the base of their operations to the capital. Consequently Rye did not share in the dramatic revival and expansion of Anglo-French trade which occurred in the two decades following the peace concluded with Spain in 1604 and the successful negotiation of the Anglo-French trade treaty in 1606.⁶

The acute crisis which gripped the overseas trading economy of Rye from the later 1580s persisted with few signs of relief until the beginning of the 1630s. At this point there was a partial import-led recovery, mainly of Italian luxury textiles, courtesy of foreign merchants who had been looking for an alternative to the traditional overland routes to England which were now in the Thirty Years War zone, and had found it via Lyons, the Norman ports and Rye. Although this trade stimulated a reciprocal flow of cloth exports from Rye after 1630, it too remained dominated by foreign merchants. No more than a handful of Rye merchants (mostly members

of the Rye magisterial bench) played a substantial role in the revival of overseas trade through the port in the decade before the civil war. The revival did, however, benefit Rye mariners and boat owners, as did the overspill to Rye of some of the re-export trade primarily centred on the Dover entrepôt during the 1630s. Rye vessels derived considerable advantage from their status as neutral carriers in the period after the outbreak of war between France and Spain in May 1635, in the following four years carrying over 90% of a higher number of shipments than at any time since the 1570s.⁷

The evidence for Rye's coastal trade between 1570 and 1640 is very patchy, but a number of broad trends are clear. During the 16th and early 17th centuries grain was regularly shipped along the coast to Rye, for the Weald produced little barley and normally insufficient supplies of wheat, and seacoal was imported in growing quantities from Newcastle and Sunderland. Other coastal imports consisted mainly of composite consignments of grocery and mercers' wares destined for the merchant-retailers of Rye. Rye merchants predominated among the port's coastal importers throughout the period up to the Civil War, and for the first three quarters of the 16th century reaped the benefit of rising local demand from an expanding urban population. Thereafter, the sharp fall in coastal grain and consumer goods imports between the 1570s and the 1630s reflected declining demand from a dwindling urban population. During the 1560s and 1570s normally 70 to 90 grain shipments arrived at Rye each year — more in years of shortage — but after 1599 the annual number ranged between just 21 and 43. Periodic government restrictions and the poor condition of the highways leading into Rye severely depressed Rye's main coastal export trade in iron, timber and wood-fuel in the late 16th century. Successful efforts to repair the highway approaches did prompt a recovery of iron exports during the early 17th century, but an increase in coastal timber shipments was delayed until the 1620s, following Rye corporation's decision to halve the local duty on exports. By the 1630s, however, the number of outward coastal shipments from Rye had regained and may even have surpassed the levels of the 1560s and 1570s. It might have been higher still had river navigation not been seriously impaired as a result of the redirection of the Rother south of the Isle of Oxney in 1635, a change made largely to satisfy Newenden Level commissioners anxious to

drain their wet lands. London merchants dominated Rye's coastal export trade, but its recovery by the 1630s generated vital business for the remaining Rye fleet, which carried over half of all cargoes.⁸

Freight carriage was by no means confined to specialist merchant vessels. Dr Brent has drawn attention to the fact that during the 1630s sea coal imports to Rye were at their heaviest in July and August, when boats returned from the Scarborough cod fair via Newcastle and Sunderland, but scrutiny of Exchequer Port Books suggests a far more extensive involvement of Rye 'fishing' vessels in coastal and short-haul overseas trade throughout the late 16th and early 17th centuries. However, although opportunities for their deployment in freight carriage certainly helped sustain the viability of some of Rye's 'fishing' vessels, the overall reduction in such opportunities caused by the crisis in Rye's overseas trading economy, occurring as it did when the Rye fishing industry was facing acute difficulties, may itself have contributed in no small measure to the decimation of the Rye fishing industry. By the time trade revived in the 1630s only a rump fishing industry remained.⁹

The importance of the London market for Rye fish was reflected in the presence of a resident purveyor supplying the royal household and of local wholesalers or representatives nominated by the London Company of Fishmongers, known as osts, who purchased in the Rye fishmarket supplies which rippers then transported by packhorse to the market in the capital. During the mid-16th century, when the fishing industry was at its height — directly supporting 225 out of the 530 households said to be in Rye in 1565 — the Yarmouth herring fair regularly attracted more than 25 Rye boats and might provide employment for upwards of 400 men and boys, some of them seasonal migrants to Rye from the surrounding countryside. Similar numbers of Rye boats were engaged in Channel fishing at other times of the year, and in the early 1550s more than 30 boats were undertaking the annual voyage to Scarborough. During the 1560s and 1570s, when Rye's coastal and overseas trade was also still buoyant, the Rye fleet, classified variously (and arbitrarily) as 'fishing boats' or merchantmen but numbering between 50 and 60 vessels, generally exceeded 1200 tons, making it one of the largest in southern England.¹⁰

But the fishing industry, even when most buoyant, was never very profitable, and increasing

competition from other fleets to supply the London market had, by the late 16th century, made it impossible to pass on in full to the consumer any rises in local operating costs. So it was essential, especially for boat owners unable after 1580 regularly to obtain freight carriage contracts, that the high overheads characteristic of the fishing industry were not subject to further upward pressure.¹¹ Unfortunately a number of factors combined to do just that.

The 1560s saw the beginning of what was to become a deluge of complaints about the decay of safe harbourage at Rye. By 1570 the fishermen were protesting that

the shore weareth lower, the Camber being gone and worn away, therefore the force and rage of the sea hath more power to fall in here than ever heretofore it hath had . . . We lose and are damaged among our sea craft, for want of good harbouring, in one foul night more than we are able in one whole year to get up again.

Looking back in 1638, by which time much damage had been done, the 'men of most experience in the town of Rye' were quite emphatic that

the inning of salt marshes from time to time, for private men's gain and profit, hath been the utter decay of the harbour of Rye, which had certainly been good to this day if the salts had never been inned.

This judgement contained an element of truth, for although probably inevitable in the long term, the pace and timing of Rye harbour's deterioration between 1550 and 1650 can be attributed in large measure to the physical consequences of marshland drainage by commercial farmers in the Rother levels, who were responding to the upturn in demand for agricultural produce from the expanding population of 16th- and early-17th-century England.¹²

Increased exposure to storm damage was only one of the factors — albeit an important one — tending to increase the Rye fishing industry's operating costs. Piracy and frequent 'stays' of all shipping during the late Elizabethan wars were almost as great an impediment to fishing as to trading operations. Furthermore, beginning in the 1580s, and to a far greater extent during the early 17th century, Rye's fishermen faced fierce competition from other English and especially French fishing fleets which, according to much local testimony, regularly invaded Rye's fishing grounds in the

English Channel armed with illegal nets 'and violently bent to defend their unlawful proceedings'. Rye's ability to compete with other ports in supplying the London market was also undermined by the worsening state of the main road leading out of Rye to the capital, which often caused 'the stay and interruption of rippers' and which, like the decay of the harbour, was largely blamed on the effects of marshland reclamation. By the beginning of the 17th century Rye fish had acquired an unenviable reputation in high circles. 'I shall send you what news comes to hand', Thomas Phelips informed secretary Cecil in July 1602, 'if staleness make it not like Rye fish, unfit for market'. Finally, those with fishing enterprises who coped with all these problems long enough still to be in Rye in the late 1590s found themselves having to contribute to additional local taxes in order to fund an ambitious harbour restoration scheme. Although the size of the Rye fleet sailing to Yarmouth held up until the closing years of the 16th century, the Rye fishing industry as a whole contracted by about one third between 1585 and 1600.¹³

Peace returned to England at the beginning of the Jacobean period, but armed and occasionally violent confrontations between fishing vessels in the English Channel appear to have occurred with ever greater frequency in the first two decades of the 17th century. In 1604 John Swayne deposed that he had been attacked at sea by French fishermen armed with muskets. French fishermen 'in great barks' taking cod and herring were alleged to spoil the nets of Rye fishermen 'by running over them', so destroying the equipment needed for the Yarmouth and Scarborough voyages. A panic-stricken corporation protested in February 1603 that 'there were at sea the 16th of this present month . . . about 30 or 40 boats . . . (from Dieppe) . . . with unlawful nets', and in succeeding years Rye put out a torrent of complaints about 'insolent and irregular fishers which yearly have used to come in swarms from Dieppe and Tréport and the places near adjoining'. The Privy Council sought a resolution by licensing a certain number of French fishermen in the service of the king, and from 1609 onwards notes of those licensed were entered regularly in the Rye assembly books. But a night-time check in 1616 showed that several French boats were carrying counterfeit licences, and in 1620 it was alleged that although only 13 French vessels were licensed, '40 or 50 sail boldly'.¹⁴

Meanwhile, competition from other English

fishing fleets continued to grow. Prior to the 17th century trawl fishing had been banned within the Cinque Ports confederation on the grounds that it damaged fish fry. But in the harsher competitive climate at the turn of the century Hastings began to follow the lead of fishing fleets from the Essex and north Kent coast, which were by then commonly to be found trawling in the Channel. Already labouring under many disadvantages, and unwilling or unable to meet the costs of re-equipping which might have enabled it to compete on at least somewhat better terms, the Rye fishing industry, via the town's government, sought protective legislation that would ban trawling and champion the trammel fishing which was only practised at Rye and Hythe. Rye managed to get the ban on trawling at Hastings reaffirmed in 1608 after a disputed trial of fishing techniques, but whether or not it was subsequently observed at Hastings, and this is difficult to judge, trawlers from Barking, Rochester and Strood continued to invade Rye's traditional fishing grounds in the 1610s and 1620s.¹⁵ In 1621 Rye sought the support of Hythe for a bill in parliament to place a general restraint on trawling. The move provoked sharp opposition from the ports which relied on trawling. 'Trammells', a counter-petition declared, 'hath been usually used at Hythe and Rye and in no other places in the sea coast'. The proposed bill was intended

to monopolise this kind of fishing unto those two towns only and, by so consequence, the whole city (of London) to be served with such fish as shall be sent from those places unto the fishmongers, and that at unreasonable rates, and so to utterly debar and keep back all such as bring fish to the gate. Because that plenty of fish by us daily sent unto the gate doth bring down their prices in fish street, for which cause they complain.

That, indeed, was the crux of the matter; the Rye fishing industry was unable to pass on its rising operating costs to the London consumer. If the long-running battle between Rye corporation and the London Company of Fishmongers over the latter's attempts to control the Rye fish market abated somewhat after 1610 that was only because the Rye industry was no longer a major supplier to the capital.¹⁶

Unable to withstand pressure from all directions, the Rye fishing industry rapidly fell apart in the decade after 1614. In 1619 it was claimed that the number of boats engaged in fishing had decreased

Table 1. The size of the Rye fleet sailing to Yarmouth Herring Fair 1580–1659.

Year	No. of Boats	No. of Men	No. of Boys	Year	No. of Boats	No. of Men	No. of Boys
1580	25	296	42	1620	16	159	33
1581	25	280	35	1621	15	152	30
1582	27	284	49	1622	13	130	27
1583	28	287	47	1623	11	104	25
1584	25	264	37	1624	10	100	20
1585	29	300	46	1625	11	94	26
1586	24	235	47	1626	10	98	18
1587	22	221	40	1627	10	79	21
1588	23	232	42	1628	4	35	10
1589	24	239	43	1629	9	87	15
1590	25	245	45	1630	10	100	20
1591	25	251	46	1631	10	96	27
1592	26	246	57	1632	9	94	24
1593	23	266	34	1633	9	91	18
1594	25	244	48	1634	10	111	20
1595	26	247	61	1635	8	81	20
1596	26	258	42	1636	8	78	19
1597	24	237	39	1637	7	69	19
1598	22	215	37	1638	10	93	22
1599	20	193	34	1639	9	88	24
1600	17	195	42	1640	8	83	19
1601	18	196	32	1641	8	83	18
1602	18	194	29	1642	9	100	19
1603	17	181	28	1643	7	75	20
1604	14	146	21	1644	9	100	22
1605	15	157	24	1645	8	90	18
1606	16	182	31	1646	10	111	25
1607	15	178	22	1647	10	117	14
1608	17	178	40	1648	10	103	31
1609	17	186	39	1649	7	72	16
1610	16	180	28	1650	6	60	16
1611	15	166	29	1651	0	0	0
1612	15	160	39	1652	1	10	3
1613	16	169	39	1653	5	51	13
1614	18	199	40	1654	3	33	10
1615	18	189	39	1655	3	28	6
1616	18	171	36	1656	3	34	9
1617	–	–	–	1657	4	49	9
1618	17	175	39	1658	5	58	11
1619	–	–	–	1659	5	57	15

Sources: R. F. Dell (ed.), *Rye Shipping Records 1566–1590*, Sussex Record Society 64 (Lewes, 1965), 146; RYE 1/5–14.

‘of late years’ to 16 or 18 sail. By 1626 only 16 vessels of all types — a total of 295 tons — were left at Rye, less than a quarter of the 1282 tons recorded in 1580. By the 1650s the Rye fishing industry had all but disappeared. Eighty-eight mariners and seamen, but only 16 fishermen, were noted in the demobilisation tax of 1660. No ostmen or rippers were listed.¹⁷

III

The finances and administrative structure of Rye corporation reflected a long-standing division between income derived from the maritime

economy and that from land-based activities. The sea chamberlain, usually appointed from among the master fishermen of Rye, was responsible for collecting the corporation’s ‘shares’ of the proceeds of fishing expeditions, and the common sergeant collected income recorded in the lesser box, namely dues on fish sales, revenue from local customs (keyage and measurage), and passenger and freight agency fees (grand and demi-passage). As far as land-based trades were concerned, in 1600 taxes for licences to trade were paid by those in business as butchers, bakers, feters (fishmongers), brewers, vintners, victuallers and tipplers, together with all

those engaged in other trades who operated a 'shop'. The collection of income from land-based trading licences was co-ordinated by the sergeant-at-mace and recorded in the quarterly accounts of the great box, which survive fitfully, other than for the period between 1612 and 1617, up to the point at which it was put to farm in 1632.¹⁸

By 1585 it had become apparent that 'town revenues diminish rather than increase'. Thereafter the impact of economic contraction began to register sharply on income. Rents on many corporation properties fell into substantial arrears during the last decade of the 16th century.¹⁹ More seriously, taxation of trading activity, which was responsible for approximately half of all the land chamberlain's regular income, fell precipitously after 1590. Income from local customs and dues on sales in Rye fishmarket fell from in excess of £80 per annum during the 1580s to below £30 per annum in the closing years of the 16th century, and tax revenues from land-based trading activities also dwindled alarmingly as the crisis in Rye's labour-intensive maritime economy adversely affected demand for goods and services within the town. As a result, the land chamberlain's overall income, which regularly exceeded £300 in the early 1580s, had fallen by over one third by the turn of the century.²⁰

It was against this inauspicious background that Rye's government determined to take radical action. In 1596, amidst predictions that 'the channel will shortly swarve up . . . and become so shallow that no ship, bark or boat will or can be harboured there', the corporation gambled on a scheme to make a cut to divert the waters of the Rother through marshland to the north of the town into the Tillingham, in the hope that 'with the force of the water thereof the late increased sands may be reared and carried away, and the said channel deepened'. It was an extremely expensive exercise.irate landowners had to be compensated, the sluice for the scheme alone was contracted for £600, and by mid-1599 a total of over £1400 had been spent. To help pay for the project the corporation imposed local rates and sought charitable contributions from neighbouring areas, but it was also forced to borrow substantially from those willing to lend, which meant from the wealthy within its own ranks with a vested interest in the revival of the economic fortunes of the town. By the beginning of the 17th century, however, it had become obvious that the scheme was failing, and the corporation's individual

member creditors, notwithstanding interest incentives of up to 9% per annum, were increasingly unable or unwilling to extend their loans in view of the unprecedentedly bleak prospects for the town.²¹ Wholly unable to repay its debts from existing and greatly depressed regular sources of income, the corporation was forced to sell properties against which loans had been secured.

Excluding the many properties on which only nominal quit-rents were payable, the corporate rent-roll in late-16th-century Rye was not substantial. But the corporation did own a number of properties, principally a storehouse, the 'vine', a ferry, the custom house, two rows of shops and some lofts, garrets and tenements, which were let at commercial rents. Although rents were depressed, income from these properties made an important contribution to the town's coffers. Despite arrears of £37 13s. 4¹/₂d. noted in the account for the mayoral year 1600–1601, the land chamberlain derived £54 17s. 11d. of his net income of £174 6s. from rent. But between June 1600 and January 1604 the corporation raised a total of £503 18s. 4d. from the sale of all but a fraction of its most valuable properties in order to satisfy creditors, and thereby permanently sacrificed two-thirds of its income from rent. In 1608–1609 rent income amounted to just £22 15s. 7d. and further asset sales reduced the total to just £17 10s. 9d. in 1613–1614.²²

Faced with undiminished calls on its purse, and in the light of dwindling receipts from existing taxation and the sacrifice of future income from rent, the corporation undertook what amounted to a thorough review of its money-raising options. In October 1602, some six months after the sale of the town ferry, storehouse and two rows of shops, a campaign 'for the better advancement of the town's revenues' began.²³ In the ensuing six months a spate of legislation was passed increasing both the range and, selectively, the rates of taxes imposed on trading activity at Rye.

At the beginning of the 17th century Rye possessed no craft guilds or retail companies, and, apart from a brief period of experimentation in the 1570s, the town had no tradition of such organizations. No guilds or companies were set up after 1600, so throughout the period under investigation Rye corporation remained the only authority with powers to regulate trade. Notwithstanding the claims of two of the leading historians of early modern urban society, Rye was

not one of those towns in which 'elaborate and restrictive controls were in operation' by 1600.²⁴ Freemen enjoyed preferential treatment in that their trading activities were taxed, in most instances, at half the rate of non-freemen, but the right to engage in independent trade was in no sense confined to freemen (who comprised no more than 10% of the adult male population), nor were there any other general proscriptions. Rye's governors certainly sought to protect the economic interests of the town's inhabitants against external threats, but by the early years of the 17th century the corporation was far too dependent on revenue from taxation of economic activity to contemplate any overall policy designed to limit competition within the town. The corporation's problem was rather the reverse, of how to increase its revenue without driving even more traders out of Rye.²⁵

Aware of the extreme vulnerability of many sectors of the economy, the corporation was not prepared to risk increasing taxes across the board. Revenue from shares levied on fishermen had declined by over a third between the 1570s and 1600, but to increase tax rates would only hasten the departure of fishing vessels from Rye. Accordingly they were left unchanged throughout the early 17th century, yielding on average £13-£15 per annum to the sea chamberlain until 1614 (after which no detailed accounts survive), most of which was spent directly on repairs and maintenance in the fish market; any residue was passed into the land chamberlain's hands. Similar considerations led, with one major exception, to the retention of current levels of taxes which contributed to great box revenue. The corporation did, however, have some scope to broaden the tax base, since there were 'artificers of divers sort' within the town who were not as yet paying 'quarterage unto the town as well as other handicrafts men'. Thus, in November 1602, 'for the better advancement of the town's revenues in regard of the great decay thereof and manifold charges which do daily increase',

the Rye assembly extended the requirement to pay quarterage, at rates of 6d. and 1s., to include all tanners, fellmen, carpenters, shipwrights, masons, pumpmakers, ropemakers and windmill operators within the liberties of Rye. Income resulting from this decree was hardly likely to transform corporate revenue, but every little helped.²⁶

Formal accounts provide a less than perfect record of the number of legitimately licensed businesses operating at any one point, not least because of a number of *ad hoc* arrangements entered into by the corporation to clear debts to individuals by waiving quarterage.²⁷ Nevertheless, evidence presented in Table 2 clearly demonstrates the wider impact of the sharp second phase of contraction in the Rye fishing industry during the 1610s and 1620s. Fewer traders meant less corporate revenue, and yet income from the great box did not decline in the early 17th century. On the contrary. Whereas in 1600-1601 receipts from the great box totalled £50 2s. 11d., by 1608-1609 they had risen to £85 19s.

Table 2. Average numbers licensed to trade recorded in the Great Box 1600-1632.

Year	Bakers & Brewers	Feters & Butchers	Ostmen	'Artificers of Divers Sort'	Shops
1600	12	10	16	-	64
1601	12	10	17	-	66
1602	12	10	16	-	70
1603	11	10	16	16	73
1604	10	10	15	13	64
1605	9	10	15	12	68
1606	9	10	14	15	72
1607	9	10	16	18	70
1608	8	10	15	18	74
1609	9	10	16	17	72
1610	9	12	16	20	70
1611	9	12	15	17	72
1612	9	12	14	11	72
1617	9	10	11	17	72
1618	7	9	8	9	66
1619	6	9	7	10	62
1620	5	10	6	11	60
1621	6	10	6	12	60
1622	5	10	7	10	54
1623	5	10	7	11	61
1624	5	10	6	11	60
1625	5	5	5	7	c. 40
1626	5	9	5	5	50
1627	6	7	5	6	50
1628	6	6	5	6	50
1629	6	4	6	7	51
1630	6	4	5	6	50
1631	5	4	4	6	49
1632	5	6	4	6	49

Source: RYE 65/69-127.

4d., reached their highest point in 1618-1619 at £111 0s. 2d. and generally remained well in excess of £75 per annum until 1632, when the great and lesser boxes were farmed out for £110.²⁸ That this was so was due almost entirely to tax increases on beer tipping.

Beer tipplers, conspicuously, were not falling in number during the early 17th century. As Table 3 shows, the number of licensed victuallers and tipplers never dropped below 20 before the Civil War, and at any time up to half as many again were trading illicitly within the town. It is not surprising that tipplers were common. It was comparatively cheap and easy to convert a parlour into a drinking house, and even if drink could not be manufactured on the premises there was no shortage of brewers ready and willing to deliver supplies without too much regard to the legal status of their customers. The majority of tipping houses were run as by-employments or secondary employments. The 30 that were 'licensed to tipple for the year to come' at the sessions in February 1603 comprised five widows, three yeomen, three fishermen, two masons, two butchers, two beerbrewers, two tailors, a cook, a mariner, a baker, a labourer, a mercer, a shoemaker, a sawyer, a blacksmith, a sailor, a brewer and a currier. Demand was high, especially among the poor and poorer sort, for what the tipping house had to offer: cheap nutrition, entertainment, gossip and the oblivion of drunkenness. Tipping houses also served as a focus for the informal market. In November 1623 Rye assembly reported the 'great wrong and injury offered unto the tradesmen of this town by strangers that come into this town and sell cloth, linen and

woollen and other wares and merchandise within this town in private houses and alehouses'.²⁹

In some respects the early-17th-century Rye magistracy regarded the tipping house with a puritan suspicion. It was also under pressure from the Privy Council for the number of alehouses 'not to be increased but diminished'. But its attitude was tempered by more practical considerations. If tipping houses were thought to represent a threat to social order they more obviously provided cheap nourishment for the poor and an income for some, particularly widows, who might otherwise have become a burden on the poor rate. Less subtle vested interests were also at stake. Brewers, who were well represented within the commonalty and not infrequently within the magistracy, would not have endorsed any general campaign against tipping houses and did not invariably observe laws they were party to enforcing on others. Two of the four brewers fined for supplying beer to unlicensed tipping houses in 1609 were magistrates.³⁰ But above all, tipping houses were a lucrative potential source of corporate income. At a time when the corporation was desperately short of funds, but nervous of the likely political and economic impact of increasing the tax burden on already depressed sectors of the land-based economy, it was not inclined to limit revenue from the drink trade by fully implementing Privy Council directives.

Instead Rye corporation set out to exploit the proliferation of tipping houses while taking the necessary steps to placate the Privy Council and safeguard public order. Unruly drunken behaviour was punished by the courts with punitive fines, and efforts were made to prevent unlawful gaming, the entertainment of minors and Sabbath-breaking. Tipplers who persistently kept an unruly house were likely to forfeit their recognizances and have their licences revoked. They might then be bound over to desist from tipping, either permanently or for a set period.³¹ On the other hand, tipplers who kept reasonably good order most of the time, could find sureties, and were not unable or repeatedly unwilling to pay tax, experienced no difficulty in retaining a licence.

The majority of unlicensed tipplers presented by the grand jury were, in effect, brought to court for trying to evade taxation, and the corporation's reaction to them reflected its desire to profit from the drink trade. Unlicensed tipplers were not ordered to give up tipping; they were encouraged to take

Table 3. Number of victuallers and tipplers licensed at Rye 1600-1642.

Year	Number	Year	Number	Year	Number
1600	21	1615	23	1630	27
1601	21	1616	23	1631	27
1602	28	1617	25	1632	23
1603	30	1618	?	1633	22
1604	30	1619	21	1634	23
1605	22	1620	?	1635	23
1606	20	1621	25	1636	23
1607	25	1622	24	1637	24
1608	29	1623	29	1638	22
1609	30	1624	25	1639	23
1610	21	1625	22	1640	22
1611	22	1626	24	1641	24
1612	28	1627	27	1642	26
1613	25	1628	27		
1614	26	1629	24		

Source: RYE 1/7-13.

out a licence. The case of Christopher Myles is typical of many that can be uncovered in almost any year for which records survive; it was but one of four in 1601. Myles was fined five shillings at the December sessions for 'tippling the year past without licence', but he was immediately licensed for the following year, on condition he paid quarterly duties to the corporation, which he did.³² Such arrangements suited all parties; the town received tax revenue and Myles benefited from the maintenance of his income. Moreover, in paying a fine for his period of unlicensed trading Myles contributed to the taxation of the informal economy. And ensuring the taxation of the informal economy, it will be suggested, was one of the functions of the sergeant-at-mace, ward constables and presenting jurymen.

Some unlicensed tipplers were a little more recalcitrant. Widow Wilson was fined two shillings in May 1601, but a second fine of 6s. 8d. in February 1602 prompted her, the following month, to obtain a licence and pay formal duties into the great box. Graduated fines probably served to persuade a majority of tipplers with more than a fleeting interest in the trade to transfer from the informal to the formal economy. High tax rates on beer tipplers after February 1603 must have encouraged attempted evasions of the licensing system, but the chances of operating an unlicensed house for long without attracting the attention of one of the twelve ward constables were slim, and constables and jurymen for their part were under pressure to present unlicensed tipplers from a corporation clearly determined to minimize evasions of a tax which, after 1603, became the single most lucrative source of its revenue. After that date, fines on unlicensed tipplers were dramatically increased, usually to a minimum of 20 shillings, and when, in 1610, a number of tipplers began operating outside the jurisdiction of the corporation in Rye Foreign in an attempt to evade duties, the corporation responded by prohibiting the delivery of any beer supplies 'to be drawn there in common tippling houses before they shall have paid town duties for every barrel'. Assuming high levels of detection and prosecution, presentments for the first decade of the 17th century indicate that there were between five and ten unlicensed tippling houses in existence at any one time, while the more fragmentary evidence available for the period after 1610 suggests that a steady stream of unlicensed tipplers continued to be brought before the court.³³ All the evidence,

however, suggests that individual tipplers seldom remained unlicensed for long.³⁴

Until February 1603 those licensed to 'draw beer and ale and to tipple' paid quarterly duties at a rate fixed in advance by the corporation. Thus, for instance, between 1601 and the early months of 1603 Francis Daniel (butcher) was paying five shillings per quarter, Samson Dale (beerbrewer) and Thomas Wattes (sawyer) each paid four shillings per quarter, and Hugh Tedder two shillings per quarter. On this basis beer tipplers contributed on average just over £4 per quarter to the great box, some 23%–29% of great box revenue. However, in February 1603 this situation was transformed by a decree made necessary 'by reason of the great and manifold sums of money that this township is daily to pay about the amendment of the decayed harbour'. Henceforth, it was agreed that 'every tippler and victualler of this town that is licensed . . . shall pay for every bonne of beer which he or they shall utter or retail . . . 6d., and so according to that rate for every greater or lesser vessel, and that the same shall weekly be collected'. Any victualler or tippler refusing to pay the new rates was to be 'dismissed from victualling within the town'.³⁵

The impact of this change was an immediate and dramatic increase in the effective tax burden on tipplers. Widow Robinson, who had paid two shillings in the second quarter of the mayoral year 1602–1603, found herself paying seven shillings in the third quarter. Hugh Tedder's payments rose from two shillings to 19 shillings, Thomas Wattes's from four shillings to 19s. 6d., Samson Dale's from four shillings to 15s. 6d. and Francis Daniel's from five shillings to £1 6s. Other tipplers were faced with less dramatic rises, but overall receipts from beer tipplers more than tripled, rising from £4 9s. 6d. in the second quarter to £14 0s. 6d. in the third. Suddenly beer tippling was providing 58% of great box revenue and not far short of one-fifth of the land chamberlain's income.³⁶ Henceforth, any campaign to reduce numbers of tippling houses was ruled out by the scale of the corporation's dependence on revenue raised from taxes levied on stocks retailed in tippling houses. Moreover in 1618, in the midst of a further severe contraction elsewhere in the town's economy, the corporation must have decreed another dramatic increase in taxes paid by beer tipplers. A comparison between payments from tipplers in the first quarter of 1617–1618 and the same period a year later reveals that, for example,

Widow Whale's contribution rose from eight shillings to £1 1s., Widow Myles's from £1 2s. 6d. to £2 10s., and John Kempe's from £2 to £2 14s. Total revenue from tippers in the latter quarter amounted to £25 18s. 6d., no less than 72% of great box revenue — a proportion that was exceeded during most of the 1620s. Indeed by the 1620s revenue from the taxation of beer tipping was providing one third of the income on the land chamberlain's account. In 1630 'beer money' was farmed out for one year to George Blaunch for £70.³⁷

The campaign begun in the Autumn of 1602 'for the better advancement of the town's revenues' also embraced the maritime economy. As already noted, fishermen were spared tax increases on their operations, but in October 1602, 'in regard of the great decay of this poor town and the manifold charges . . . by reason of our waterworks, quays and other places which want reparations and daily do run to ruin', duties charged on fishmongers were doubled, or, in the case of some ostmen — local representatives of the London Company of Fishmongers — more than doubled. The assembly also decreed swingeing fines and the threat of imprisonment to deal with the anticipated resistance. The following month saw an upward revision of customs 'set upon all goods, wares and merchandise . . . transported, brought or carried by water'. As a result, income from taxation of the maritime economy recorded in the lesser box accounts of the common sergeant rose from £29 9s. 7d. over the year ending August 1602 to £50 13s. 2d. during the following twelve months.³⁸

The upwardly revised schedule of local customs duties may have been judged unavoidable in the context of the review of fiscal policy carried out in 1602, and its beneficial short-term impact on corporate income was obvious. In any longer term perspective, however, its economic consequences were more mixed. Depressed timber exports from Rye in the early 17th century, for example, became a cause of growing concern, and in January 1621, having 'discussed and thoroughly debated' the matter, the Rye assembly laid the blame on itself for having erected a barrier to trade. The imposition, in November 1602, of a local duty of one shilling on every ton of timber exports had proved 'so great that many have not only forborne to transport timber from our town, but have, in regard of the easy task in other places near adjoining our town, there shipped timber, to the prejudice of this corporation'. Accordingly, Rye cut its duty on timber

to 6d. per ton from 1621 onwards. A revival of coastal timber exports recorded in exchequer port books thereafter, up to 153 tons in 1623, 242 tons in 1630 and over 300 tons in 1636 and 1641, lends some support to the suggestion that they were indeed sensitive to local customs rates, and it may be that the decision of Hastings corporation to rescind its duty on timber exports in the 1630s was forced by the success of the earlier measure at Rye. Similar cost-sensitivity may explain why the keyage rate on iron exports, set at 4d. per ton for non-freemen in November 1602, was never rigorously enforced, a fact repeatedly and disapprovingly noted by the Rye assembly in the later 1650s.³⁹

The fiscal benefits of the upward revision of keyage and measurage rates were in any case limited by the fact that all local customs dues at Rye were specific, rather than *ad valorem* as the national customs were becoming, and that on many items, notably textiles and luxury goods, the corporation did not fix commodity-related specific dues, but simply levied local customs, *pro rata*, at twopence 'for every horsepack'. Hence, unlike the exchequer, corporate revenue at Rye benefited very little from the increase in the volume and value of luxury commodities shipped in and out of the port during the partial import-led revival of overseas trade during the 1630s. This, on the other hand, may have been one of the port's attractions for foreign merchants.⁴⁰

IV

Overall, measures taken to boost income from taxation of the formal economy in the autumn and winter of 1602–1603 had the effect of markedly increasing revenue without placing additional direct burdens on the most vulnerable sectors of the economy. Combined lesser and great box revenue rose some 45%, from £85 15s. 2d. in 1601–1602 to £123 14s. 7d. the following year. Later years were to see the extension of taxation to cover casual sales of fruit and vegetables, quayside storage of wood, and further hefty increases in sums extracted from victuallers and tippers.⁴¹ But official trade taxes did not exhaust the corporation's means of raising revenue. There was the option, *in extremis*, of resorting to the general cess, and short of this there were regular opportunities, via the use of presentments, to raise revenue from the illicit activities and technically negligent inactivities of the town's population.

Presentment was the multi-purpose tool of government *par excellence*. One of its purposes, certainly, was to provide a means to punish and deter a range of unacceptable behaviours, from assault and affray, via unruly drunkenness and verbal abuse, to Sabbath-breaking and non-attendance at church. Fiscal considerations are unlikely to have greatly influenced decisions to prosecute such offences, though they probably have some role in explaining why the vast majority were punished with fines. But in other cases the prospect of revenue loomed larger in the decision to prosecute. A note in August 1612 recording that 'the last presentment book is not yet taxed' was true in more senses than one with respect to some of its contents.⁴² Presentment clearly provided a method whereby, through fines, Rye corporation could tax the town's twilight economy. As a proportion of the whole, the number of presentments motivated by purely fiscal considerations may have been small, but it does seem that fines levied on illicit victuallers, tipplers, bakers, brewers, leather dealers, hawkers and various others, often had a lot to do with retrospective taxation and/or prompting moves into the formal economy and little or nothing to do with stopping their trade *per se*. The case of Richard Shervall is illustrative of the pattern which can be widely observed across a range of trades. In June 1601 Shervall was fined 1/- for baking without licence. The following February he was again presented for the same offence and fined 3s. 4d. In May 1602, apparently without impediment, he took out a licence and thereafter paid quarterage of 3s. into the great box. In a sense little had changed; Shervall still paid tax to the sergeant-at-mace, but he paid him when he was collecting for the great box rather than when he was collecting fines on presentment.⁴³

It also seems likely that enforcement waves were sometimes prompted by fiscal priorities. Unapprenticed traders were technically liable to prosecution for breach of statute, but as professor Coleman has observed, the disposition of JPs to support formal apprenticeship 'was never so strong as their concern with the maintenance of employment in the interest of social order'. Even if Rye's magistrates had tried systematically to prevent the occupation of crafts and trades by unapprenticed townspeople, it would have faced enormous problems in enforcing the law in an environment where the part-time or seasonal nature of many employments, not least those at sea, and the

consequent struggle to secure an adequate income, must have led many inhabitants to take up by-employments in breach of statutory apprenticeship law. To judge from the comparatively few — less than five in most years for which evidence survives — who were prosecuted by public agencies for unapprenticed trading in early-17th-century Rye, the magistracy was, on the whole, reluctant to entertain presentments of unapprenticed traders where not to do so did not jeopardize livelihoods. But there were some striking exceptions. In February 1602, for example, 17 persons were fined, having been presented for 'using the trade of a barber-surgeon'; among them were three brewers, two victuallers, two butchers and an innkeeper. Eight of the 17 also ran tipping houses. In addition three more, including a tallow-chandler and a basket-maker, were fined for 'using the trade of a physician-surgeon, contrary to statute'. The two shilling fines on each of the barber-surgeons and the one shilling fines on the physician-surgeons may have caused some to give up their by-employment, but the modest scale of the fines, the numbers involved and the timing of the presentments suggest they arose not so much from any desire to suppress unapprenticed medical practitioners as from a decision to impose an *ad hoc* tax on services, very often provided in alehouses, in a year when the corporation faced 'manifold charges' and was desperately short of funds.⁴⁴

Enforcement waves prompted by the desire to augment corporate revenue may indeed have some part in explaining patterns in the prosecution of a wide range of regulatory offences. But since these patterns are the results of fluctuating combinations of factors, and since in most cases there is no way of ascertaining which factors were most influential at any time, firm indications of fiscally inspired enforcement waves can only be sought in the evidence for those offences which the corporation and its officers were least obliged to prosecute on other grounds. Whereas, for example, constables and jurymen could not afford to turn a blind eye to such marketing abuses as forestalling and regrating, which threatened 'the great hurt, prejudice and detriment of the common weal of this place and impoverishment of the poor people of this town', they generally had more discretion over the diligence with which they inspected pavements for signs of neglect or searched out those responsible for casually dumped refuse and other filth. Such

'annoyances' resulted in between 10 and 50 presentments in most years for which there is evidence. But at times when demands on corporate revenue were particularly heavy, the inspection of pavements and the pursuit of those responsible for other annoyances tended to become more thorough.⁴⁵ In May and June 1601, 34 unsatisfactory pavements were reported, and by February 1602 another 51 had been unearthed. Little if any opprobrium attached to the offenders — among those fined were the mayor and five other magistrates — but at 6d. per offence, 85 defective pavements yielded £2 2s. 6d., which was more than the amount raised over twelve months from official taxes introduced later in 1602 on 'artificers of divers sort'. A further 37 annoyances of various descriptions, also presented in February 1602, yielded an additional £3 1s. 10d. Similarly, in December 1614 in excess of 100 'annoyances' were presented at a time when the corporation was looking to fund a local scheme, agreed the previous month, which it was hoped might check the recently observed acceleration in the decay of the harbour. Some of the fines levied were in accordance with an assembly decree of September 1613 which set, in effect, a tax of 'one shilling per offence, to the use of this corporation', albeit a tax disguised by the rhetoric necessary to justify its collection through prosecution. On the other hand, occasional clampdowns on annoyances of a particularly unpleasant nature were probably simply a response to popular pressure. In February 1619, an 'officer' was appointed specifically to detect and fine (at 4d. per offence) all those 'lewd, filthy persons that most beastly lay their tails at their own doors and at other men's doors . . . and suffer their children so to do'.⁴⁶

Whatever the variety of motives underlying presentments, income from fines levied by the sergeant-at-mace made an important contribution to corporate revenue in early-17th-century Rye. A single bill of presentment might list up to 200 regulatory offences and would result in fines totalling anything from £10 to well in excess of £20. Occasional notes in assembly books also make quite clear the corporation's appreciation that income from fines was a source of funds for capital expenditure. In July 1629, for example, it was agreed 'all money Edward Benbrick shall lay out and disburse about the pipes and water springs of this town shall be gathered and repaid from money collected by the mayor's sergeant upon the presentment books'. But since income from fines

was sometimes spent directly on such projects by the sergeant-at-mace, the true significance of presentment as a source of funds for capital expenditure is not always apparent from the residual sums passed on and recorded in land chamberlains' accounts.⁴⁷ Moreover, from the later 1620s onwards, partly in response to the promptings of statute, fines resulting from presentment also made an increasing contribution to poor relief, as warrants for the collection of fines on unlicensed tipplers, sales of excessively strong beer and 'strong waters', swearing, drunkenness and Sabbath-breaking were issued to churchwardens and overseers for the poor.⁴⁸

V

The general cesse was the corporation's fiscal weapon of last resort. Between 1600 and 1640 cesses were authorized to meet local needs on only six occasions. As the corporation was well aware, cesses were the imposition most likely to provoke resistance from the town's inhabitants. In 1610 the assembly was forced to order distraint and imprisonment after hearing that 'divers and sundry persons' were refusing to pay a cesse, and in 1618 Edmund Harry 'did hope to see those that made the cesse run mad, and withal wished that his goods were buried about their ears'.⁴⁹ Fears of provoking widespread public disorder made the corporation not only wary of resorting to general cesses but also sensitive to the need to exempt the most vulnerable sections of the population from their provisions. But similar considerations also meant that the corporation needed, wherever possible, to avoid concentrating the burden too heavily on a narrow percentage of households. The delicate balance required had to be calculated afresh each time the corporation ran out of other options for meeting necessary expenditure.

Detailed records of general cesses levied between 1600 and 1634 have survived, and comparison with the results of demographic analysis allows us to review the balance that was struck on each occasion.⁵⁰ In 1604 and 1610, when cesses of £40 and £100 were ordered to carry out work on the harbour walls and jetties, the corporation opted to spread the burden as widely as possible. 391 households were taxed in 1604 and 354 in 1610, some 71% and 64% respectively of all households in the town. But in 1618, when £100 was urgently required 'for the new erecting, amending and

repairing of the lower jetty at the Strand', the corporation evidently took a calculated decision, in view of the alarming decline in their numbers since 1614, to spare the majority of the town's remaining fishermen from contributing to the *cesse*. The *cesse* was decreed on 28th September, after the Rye fleet had sailed to the Yarmouth herring fair, and it was directed that 'the *cesse* shall be fully made and taxed by the *cessors* . . . before the 20th October next', that is, before the fleet returned.⁵¹ As a result, only 28 mariners, seamen and fishermen were taxed in 1618, compared with 126 in 1610 and 67 in the following *cesse* in 1624. Since other vulnerable sections of the community were also deemed unable to contribute, only 210 households — about 42% of the total — were called on to pay in 1618. Consequently the rate at which these 210 households paid had to rise to 4d. in the £, double the rate in 1610. Widespread poverty within the town during the 1620s also led to the exemption of between 40% and 50% of households from contributing to *cesses* of £100 in 1624 for a house of correction, £100 in 1626 for ship money and £40 in 1628 for military equipment. Just over 60% of households (273) were deemed able to contribute to a *cesse* to raise £60 for a new conduit head in 1634, but that they had to be taxed at 4d. in the £ in order to raise the money gives some indication of the depleted personal wealth of many of Rye's inhabitants by the early 1630s.

VI

Although able, by a variety of means, to boost revenue in the short term, during the early 17th century Rye corporation came to see itself trapped in a vicious circle. Even as it levied the 1618 *cesse* the corporation was convinced, as the town clerk explained, that many 'so burdened by *cesses* and taxes, we having no other revenues or other means to maintain the town, are most of them determined rather to seek other dwelling than here by such extraordinary impositions and charges to decay and impoverish themselves'. In truth, the resilience of the victualling and tipping trade is testimony to the fact that comparatively heavy taxation, in itself, was not necessarily an insurmountable barrier to economic survival. Nor were the tax burdens imposed on the majority of inhabitants of early-17th-century Rye as severe as the town clerk implied,

for the corporation had long feared the scenario he outlined and had carefully sought to avoid it. But he did have grounds for concluding in 1618, with pardonable exaggeration, 'that in short time this town, that hath been long since of good and respectable importance, is now in possibility, if some gracious aspect shine not upon it, to be quite depopulate and abandoned'.⁵² Rye's population fell by at least 20% in the 15 years after 1610, and was below 2000 by the late 1620s.⁵³ Emigration was not to any significant extent caused by local taxes, it was prompted by deep economic malaise, and it might have been greater and sooner had not the corporation shown some skill in its fiscal policy. But the best the corporation could manage was to spread the burden as judiciously as possible, buy a little time, and hope that its campaigns for external aid succeeded before it was too late.

During the early 17th century strenuous efforts were made to put revenue raised from local taxes to good use. Land chamberlains' accounts tell only part of the story, but they do show annual expenditure on lobbying and/or wages and materials for repairs and maintenance often well in excess of £100. If the corporation could not prevent harbour deterioration it could at least do something to check its pace.⁵⁴ But 1634 saw the last of the *cesses* to raise money to meet purely local needs and the beginning of an era during which the king and subsequently Parliament, or more specifically its armies, were to prey on Rye's limited resources. Faced by an annual succession of ship money writs, which forced five *cesses* in as many years beginning in 1635, and later a monthly succession of parliamentary assessments, Rye risked the exhaustion of the tax-paying powers and the patience of the population if, in addition, it tried to sustain a regime of purely local taxes sufficient merely to undertake essential repairs and maintenance. Much of what remained of Rye's economy in the early 1630s became a casualty of Charles I's drive for solvency and Pym's revolutionary overhaul of the means to tap the wealth of the localities. For decades the corporation had lobbied for funds to flow into the town, what happened after 1634 was the opposite. Rather than repairing and expanding its provision, the corporation had the house of correction dismantled in 1654 and the building materials sold off. The action was symbolic of a wider process.⁵⁵

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NOTES

- ¹ S. A. Hipkin, 'The economy and social structure of Rye, 1600–1660' (Oxford University D.Phil. thesis, 1985), 2–64. For more generous estimates of Rye's early Elizabethan population see G. Mayhew, *Tudor Rye* (Falmer, 1987), 19–20.
- ² S. A. Hipkin, 'The impact of marshland drainage on Rye harbour 1550–1650' in J. Eddison (ed.), *Romney Marsh, The Debatable Ground* (Oxford, 1995), 138–47.
- ³ For detailed examination of the economic crisis see Hipkin, 'Economy of Rye', Part Two and *Idem.*, 'The maritime economy of Rye 1600–1640' (in preparation).
- ⁴ R. Finlay & B. Shearer, 'Population growth and suburban expansion' in A. L. Beier & R. Finlay (eds.), *London 1500–1700* (Harlow, 1986), 37–59.
- ⁵ Mayhew, *Tudor Rye*, 247–53.
- ⁶ Hipkin, 'Economy of Rye', 127–32, 139–54.
- ⁷ Hipkin, 'Economy of Rye', 154–61; J. S. Kepler, *The Exchange of Christendom: The International Entrepôt at Dover 1622–1641* (Leicester, 1976), *passim*.
- ⁸ C. E. Brent, 'Employment, land tenure and population in eastern Sussex, 1540–1640' (Sussex University D.Phil. thesis, 1974), 305–6; Hipkin, 'Economy of Rye', 26, 129–30, 132–8; *Idem.*, 'Marshland drainage', 145.
- ⁹ C. E. Brent, 'Urban employment and population in Sussex between 1550 and 1660', *Sussex Archaeol. Collect.* **113** (1975), 36–44; Hipkin, 'Economy of Rye', 109–16, 126.
- ¹⁰ Hipkin, 'Economy of Rye', 110–11, 114, 121–5; A. J. F. Dulley, 'The early history of the Rye fishing industry', *Sussex Archaeol. Collect.* **107** (1969), 39–64; R. F. Dell (ed.), 'Rye shipping records 1566–1590', *Sussex Record Society* **64** (Lewes, 1965), xxxv, 8–10.
- ¹¹ Dulley has estimated that a 25 ton boat costing £100 when new, and employed for two fishing voyages per year, would take ten years to repay the cost of her construction. Tackle was also expensive. 'Rye fishing industry', 46–8.
- ¹² ESRO, RYE (hereafter RYE) 99/5; RYE 47/129; Hipkin, 'Marshland drainage', 139–42.
- ¹³ *Idem.*, 'Economy of Rye', 115–19, 124–5; Dulley, 'Rye fishing industry', 57.
- ¹⁴ Hipkin, 'Economy of Rye', 119–20.
- ¹⁵ Hipkin, 'Economy of Rye', 120–21.
- ¹⁶ RYE 47/97, 115; Hipkin, 'Economy of Rye', 124.
- ¹⁷ *Historical Manuscripts Commission, 13th report, Appendix IV, The Manuscripts of Rye and Hereford Corporations* (London, 1892), 156; BL, Add. MS 5705, fo. 141; RYE 82/82.
- ¹⁸ Hipkin, 'Economy of Rye', 209–14, 313–35.
- ¹⁹ RYE 1/5, fo. 70v; RYE 119/3-5; RYE 71/9–15.
- ²⁰ RYE 66/12–69; RYE 60/6–10; RYE 61/10–11.
- ²¹ RYE 95/1; RYE 96/1–3; RYE 97/1; RYE 98/8–11; RYE 99/8–11; Hipkin, 'Economy of Rye', 100–101; RYE 1/7, fos. 302r, 382–3r, 386v.
- ²² RYE 61/10, 14, 20; RYE 1/7, fos. 324v–325r, 326r, 328, 373r, 386v, 412r, 417–20r, 437v–438r, 487, 501r; RYE 130/45, 46; RYE 135/26; RYE 1/8, fos. 5r, 27r, 160v, 163v, 186r, 196v, 339r; RYE 131/5–6.
- ²³ RYE 1/7, fo. 440v.
- ²⁴ Hipkin, 'Economy of Rye', 39–40; P. Clark & P. Slack (eds.), *Crisis and Order in English Towns 1500–1700* (London, 1972), 16; *Idem.*, *English Towns in Transition 1500–1700* (Oxford, 1976), 108.
- ²⁵ Hipkin, 'Economy of Rye', 118–24, 280–88, 291–2, 338–9;
- Idem.*, 'Closing ranks: oligarchy and government at Rye 1570–1640'; *Urban History* **22**, pt 3 (1995), 321–42.
- ²⁶ RYE 62/1–9; RYE 1/7, fo. 448.
- ²⁷ RYE 1/8, fo. 200v, 1/11, fo. 291.
- ²⁸ RYE 61/10, 14, 25, 30, 34, 37; RYE 1/12, fo. 15v.
- ²⁹ P. Clark, 'The alehouse and alternative society' in D. Pennington & K. Thomas (eds.), *Puritans and Revolutionaries* (Oxford, 1978), 53–4; RYE 1/7, fos. 455–9v, 1/11, fo. 7r; By 'informal' or 'twilight' market/economy I mean the range of economic activities which, although technically illicit, was widely recognized and not necessarily socially condemned, even when prosecuted.
- ³⁰ RYE 47/73; RYE 7/10.
- ³¹ RYE 7/5–17; RYE 1/7, fos. 606–7r.
- ³² RYE 1/7, fos. 393–4; RYE 65/69–75. Myles's primary occupation was baker.
- ³³ RYE 1/7, fos. 368v, 405r; RYE 65/69–75; RYE 1/8, fo. 211v; RYE 7/5–11; RYE 47/72.
- ³⁴ RYE 1/8–1/13; RYE 7/11–17; Hipkin, 'Economy of Rye', 220–22.
- ³⁵ RYE 1/7, fos. 390–94v, 464r, 468r; RYE 65/69–77; RYE 1/8, fos. 211v–212r.
- ³⁶ RYE 65/77–8.
- ³⁷ The assembly book has not survived for the mayoral year 1617–18. RYE 65/107–11; RYE 61/25–37; RYE 1/11, fo. 278v.
- ³⁸ RYE 1/7, fos. 396r, 411v, 422v, 428r, 440v, 446–7, 454, 469v, 477r, 478r; RYE 61/11.
- ³⁹ RYE 1/10, fo. 210v, 1/11, fo. 201v, 1/12, fos. 101v–102r; Hipkin, 'Economy of Rye', 135–7; RYE 1/14, fos. 120r, 231v, 261v.
- ⁴⁰ Hipkin, 'Economy of Rye', 153–63, 318–19.
- ⁴¹ RYE 61/11; RYE 1/7, fos. 454r, 469v, 477r, 478r, 1/8, fo. 112, 1/9, fo. 457r.
- ⁴² RYE 1/9, fo. 338v.
- ⁴³ RYE 1/7, fo. 369r, 404r; RYE 65/75–9; Hipkin, 'Economy of Rye', 322–3.
- ⁴⁴ D. C. Coleman, *Industry in Tudor and Stuart England* (London, 1975), 22; M. G. Davies, *The Enforcement of English Apprenticeship, 1563–1642* (Cambridge, Mass., 1956), 225–6, 252, 266; Hipkin, 'Economy of Rye', 222–7; RYE 7/5–17; RYE 1/7, fos. 367v, 368r, 404v, 405r.
- ⁴⁵ RYE 1/8, fo. 111v; RYE 7/5–17; RYE 47/72.
- ⁴⁶ RYE 1/7, fos. 367r–368r, 401v–405v; RYE 7/12; RYE 1/9, fos. 380r, 405v, 429v, 437, 465r, 477v, 1/10, fo. 100v.
- ⁴⁷ RYE 1/7, fos. 374–5r, 410r, 1/11, fo. 242r; RYE 71/5; Hipkin, 'Economy of Rye', 323–4, 328–30, 335–9, 390–401.
- ⁴⁸ Hipkin, 'Economy of Rye', 330–31.
- ⁴⁹ RYE 1/8, fo. 264v–265r, 1/10, fo. 111v.
- ⁵⁰ 1604: RYE 1/7, fos. 527r, 529, 535–43. 1610: RYE 77/7; RYE 1/8, fos. 232v, 233. 1618: RYE 1/10, fos. 70, 71v, 73r–82r. 1624: RYE 1/11, fos. 7v, 44r–49r. 1626: RYE 1/11, fos. 131v, 133v–140v. 1628: RYE 1/11, fos. 201r–208r. 1634: RYE 1/12, fos. 103r, 104–10r. Estimates of proportions of households taxed are based on demographic analysis in Hipkin, 'Economy of Rye', chapters 1 and 2. For detailed analysis of the social and occupational structure of early-17th-century Rye, based on linkage of taxation evidence with other sources see chapters 4 and 5 and appendices 1–4.
- ⁵¹ RYE 1/10, fos. 70v–71r.
- ⁵² BL, Add. MS. 5705, fo. 140.
- ⁵³ Hipkin, 'Economy of Rye', 69.
- ⁵⁴ RYE 61/10–42; Hipkin, 'Economy of Rye', 390–401.
- ⁵⁵ Hipkin, 'Economy of Rye', 53–4, 68, 183–7, 227–9, 234–5, 250–52, 346–8, 401; RYE 61/52.

Ashburnham furnace in the early 18th century

by P. W. King

Ashburnham furnace was not (as has been reported) let in 1709 to John Hanbury and Ambrose Crowley, but to the (Foley) Forest Partnership from the Forest of Dean (Gloucestershire). Their managing partner was William Rea, the probable compiler of the well-known list of ironworks in the Fuller manuscripts. Their production at Ashburnham was on a scale comparable with their Gloucestershire furnaces, and rather larger than then usual in the Weald. Its products were marketed unusually widely, and included firebacks sold in London, hammers and anvils sold for use in forges in the Midlands and south Wales, pig-iron and blooms sold to their Midlands partners; Winlaton Mill in Durham, Carburton Forge in Nottinghamshire, and several Wealden forges were also customers. The business was transferred to its resident manager, Thomas Hussey, probably with partners, about 1717 and they went on to acquire further ironworks. These became the basis of the gunfounding business of Harrison and Legas in the 1740s and of Harrison, Bagshaw and Tapsell in the 1750s. Ashburnham Furnace was leased to the Crowleys in the late 1730s, however, probably initially to supply their works near Newcastle.

During the 18th century, production in the Wealden iron industry became increasingly focused on casting iron cannon, to the extent that in the 1740s the material supplied to two forges belonging to the executors of William Harrison consisted exclusively of gunheads.¹ It has long been known that there was a decline in the iron industry in the Weald from the middle of the 17th century, if not earlier. It is indicated, for example, by the numbers of works named in lists of 1653, 1664–67, and c. 1717, and also by the very low output appearing for Wealden forges in the last.² Åström has argued that this decline is related to increasing level of imports of Swedish iron sold at such low prices that Sussex ironmasters could not compete profitably.³ The Wealden decline may be mirrored by the disappearance of ironworks from north Yorkshire and Durham in the same period: Rievaulx probably closed about the time of the Civil War;⁴ the only ironworks in County Durham to be revived after the Civil War was probably that at Helmington which Bishop Cousins worked until about 1669, while Allensford, virtually the only one in Northumberland, survived slightly longer.⁵ This decline was peculiar to the east and south-east of Britain and had no counterpart in the Midlands or Wales.

In addition, the Weald was burdened by an Elizabethan statute which required ironmasters moving goods by road in summer, between 1 May and 12 October, to carry back a load of road-making material for every ten tons of iron or thirty loads of charcoal or mine (iron ore). For the rest of the year a toll at the almost prohibitive rate of three shillings per ton (or three loads) per mile was payable. These dues, which did not apply to other iron-making districts, remained in force until 1767, by which time the Wealden iron industry was in terminal decline.⁶ To avoid this toll, pig-iron cast at Waldron Furnace during one winter was taken to the forges the following summer, made into bar iron the next winter and probably often not sold until the second summer, two years after the ore had been mined.⁷ This procedure inevitably increased the financing costs of ironmasters, thereby reducing their profits, and this in an industry where the transport costs of a particular ironworks could easily make the difference between eventual profit or loss.⁸

Ashburnham furnace had been worked since 1554. In 1677 Thomas Western, a London ironmonger and from 1664 a gunfounder, took a lease of the furnace, perhaps renewing a previous one; he was succeeded by his sons in the 1690s. When their lease expired in 1701 during peacetime, they did not

renew it and William Ashburnham was left with the furnace in hand. Accounts for his woodlands, however, show little wood being cut to provide charcoal, implying that the furnace was out of use.⁹ Accordingly, in 1706, having considered using the furnace himself if he could get a long term ordnance contract, he approached John Hanbury and Ambrose Crowley.¹⁰ John Hanbury, of Pontypool in Monmouthshire, had a considerable iron-making business on his estate there and also at Llanelly in Brecon (now in Gwent) some miles to the north, producing not only bar-iron, but also rod-iron (for nailers) and blackplate and later tinplate. In addition, he had a furnace near Neath in Glamorgan from 1708 to 1712.¹¹ Ambrose, later Sir Ambrose, Crowley was another leading figure in the iron industry, but as a London ironmonger rather than an ironmaster. He was born in Stourbridge, Worcestershire (now West Midlands), the son of a prominent ironmonger there, and still had a Stourbridge warehouse from which iron was put out to local nailers and other manufacturers. He had also been developing a similar manufacturing business at Winlaton, south-west of Newcastle upon Tyne, for the manufacture of nails, edged tools, and other finished ironware. He presumably established them there because there was plentiful cheap coal for firing smiths' hearths close to a port of entry of the Swedish iron used for his manufactures. From there he sent finished ironware to London for sale to the navy, to exporters, and to retail ironmongers in south and east England. Around this time he added a forge to his mill at Winlaton and was, therefore, looking for a supply of pig-iron.¹² His father, another Ambrose Crowley, though principally a Stourbridge ironmonger, was interested in ironworks in Wales — a furnace at Ynyscedwyn in Brecon (now in West Glamorgan) and Forest Forge, a few miles from Swansea.¹³ In 1706 when Crowley and Hanbury were asked by William Ashburnham to lease his furnace, Crowley offered to buy 400–500 tons of pig-iron from Ashburnham, evidently to supply his works in the North, but declined to take the furnace.¹⁴ The existence of accounts for the furnace has led to the erroneous supposition that Crowley and Hanbury were subsequently persuaded.¹⁵ Neither the content of these accounts nor their provenance, from the Foley archive, supports this;¹⁶ indeed William Ashburnham's own accounts name John Duke as tenant from Michaelmas 1706 to 1708.¹⁷

Though largely a typical accumulation from a

landed estate, the Foley archive includes considerable material derived from the family's interests in the iron industry in the late 17th and early 18th century, including the accounts and other records of the 'Forest Ironworks', in the Forest of Dean and elsewhere. Since 1692 this business had been in the hands of a partnership, which from 1705 comprised Thomas Foley of Stoke Edith in Herefordshire, his uncle Philip Foley of Prestwood in Staffordshire, Richard Avenant of Shelsley Walsh in Worcestershire, John Wheeler of Wollaston near Stourbridge, and William Rea of Monmouth. The Foleys were respectively fourth and third generation ironmasters and were by then country gentlemen rather than professional ironmasters. Wheeler and Avenant had originally been managers under Philip Foley and his father, but had run the business together as principals in the 1680s. Philip and Paul Foley had re-entered the partnership in 1692, John Wheeler remaining managing partner. Under a new partnership agreement of 1705, William Rea, having first been a junior manager under John Wheeler and then partner with him in some forges, became his assistant as managing partner with a small share in the firm. On John Wheeler's death in 1708 Rea succeeded him as managing partner. Richard Avenant, who had for a number of years run Shelsley Forge as his own private affair, had died not long before and part of his share was sold to Richard Knight of Bringewood in Herefordshire, another prominent ironmaster, who also succeeded to Avenant's salary for inspecting the Dean works monthly.¹⁸

It was thus as newly installed managing partner that Rea was offered the chance to diversify by the acquisition of Ashburnham furnace. The lease does not survive, but according to the schedule to a partnership deed of 1713 the furnace was 'held by articles from William Ashburnham esq. bearing date . . . 22 June 1708 made . . . between the said William Ashburnham and . . . William Rea for himself and partners . . . for seven years from 29 September 1709'. The same schedule states that the firm held Westfield Forge 'by articles from Thomas Gilbert gent. bearing date . . . 4 April 1710 made between the said Thomas Gilbert on behalf of Peter Got esq. of the one part and Thomas Hussey agent to the said partners on the other part . . . for seven years from 29 September 1710'.¹⁹ In the annual account of the Forest Works for the accounting year to 29 September 1709, a variety of period hereafter referred to in the form, '1708/09', William Rea stated that he had advanced

£870 cash to Thomas Hussey, the clerk at Ashburnham.²⁰ At the end of the following year the sum invested in stocking the ironworks in Sussex, for which Hussey was accountable, had risen to £2909 and to £5099 by Michaelmas 1711, after which the net assets in his hands fluctuated usually between £5000 and £6000; the annual profit achieved by Hussey varied between £384 in the accounting year 1715/16 and £778 in 1716/17.²¹ Copies of the accounts that Hussey rendered to Rea survive only for the first few years,²² but certain sales from 1711/12 were handled by Rea and appear in the general accounts under the titles, 'Sussex pigs', perhaps representing goods in transit or held in stock at Bristol, and 'Bewdley storehouse'.²³

According to the partnership account for 1709/10, Nota — [Ashburnham] furnace made 458t. 1c[wt] 0q. 11lb. of pigs and castings, but the most part of them are left in stock and not disposed on, and therefore it was presumed unnecessary to make up any account of this work until the pigs are sold, because we cannot tell what value to put upon them until they are disposed of. But reckoning at £5 per ton the furnace there is cleared £613.0.4d. per this year's account as Thomas Hussey's account makes it appear.²⁴

And further on,

Note — The account of this furnace is not brought into this years account by reason most of the pigs lie yet in stock . . . ; and therefore I only allow general account interest for the money advanced . . . , and also a presumptive profit in case the pigs are sold at no more than £5 per ton at furnace according to the account made up by Mr Hussey.²⁵

This uncertainty presumably reflects the difficulty in selling pigs. This contrasts with the Forest Ironworks, whose surplus pig-iron was easily sold to the owners of forges in South Wales, Herefordshire and up the river Severn, sometimes through their warehouse at Bewdley in Worcestershire.²⁶

In the accounts, which Hussey drew up at Michaelmas 1711 for the first two blasts at the furnace, he showed 917 tons to have been cast, of which all but about 145 tons and 157 tons at the Sluice (near Pevensey) had been disposed of, as is shown by extracts from the account printed overleaf. The products included not only the usual pig- and sow-iron, but also ballast bars (for ships), backs (probably for fireplaces), and plates (some, at least,

probably for lining the finery and chafery hearths of forges). Much of the pig-iron and some of the plates, 272 tons in all, were sent to the firm's Westfield Forge and to other Wealden forges, but some also went to Sir Ambrose Crowley, evidently for his forge at Winlaton, for which he also bought 'forge and slitting mill castings', the former probably principally hammers and anvils. The local forges supplied with pig-iron can be identified as Etchingham and Eridge Forges, belonging to Henry Jarman and Henry Weller, while Lord Montague and John Fuller bought plates for Pophole and Burwash Forges, and Jarrett Holloway, another buyer of pigs, had Coushopley Furnace. The ballast bars were delivered in London for Mr Martin, but this predates their use by the navy.²⁷ Nearly 49 tons of backs and plates were sent to Mr Baggs, probably Giles Baggs of London, to whom 20 wrought anvils were delivered from Gloucestershire in 1708/09; he was probably an agent for the firm, selling on commission.²⁸ There is no obvious purpose for almost 170 tons of metal, i.e. sow metal, and 35 loads of brays, i.e. small charcoal, sold to Mr Harrison, probably William Harrison, the London ironmonger: the simple explanation would be that he had a forge, but he is not known to have had one then; the alternative, that he had a foundry in London, does not explain his purchase of brays. He was later an important gunfounder, but perhaps did not enter that trade until about 1716.²⁹

Out of the 458 tons cast in the first blast, 157 tons, probably its unsold output, had been taken to the Sluice at 6s. per ton and 68t. 16cwt to Maidstone at £1 per ton and thence to London, presumably by water, at 4s. per ton. The forge account for its first year shows 56 tons to have been made of which about half had been sold, mostly in small parcels. Unsold stock included 5t. 12cwt in stock at Tenterden (part of nine tons sent there), ten tons sent to Rye for London and six tons of share moulds sent to London by way of Maidstone. The forge had one finery and one 'chaffery', as is shown by the number of pairs of bellows. In the two blasts 918t. 17cwt was cast, requiring 3³/₄ loads of 'myne' and 2⁴/₅ loads of 'coles' per ton.³⁰

In 1712/13 Thomas Hussey began 'potting', i.e. casting iron pots, on his own account and was charged in the General Account of the Forest Works with £157 7s. 2d. laid out on it and 26t. 4cwt 'pott iron' for it, some being grey iron was charged to him at the high price of £8 per ton, a premium of

Table 1. Sales of Ashburnham furnace and Westfield Forge 1709–11.

ton. c. q. lb		£. s. d.
	<i>metal sold in small parcels</i>	
0. 1. 0. 9	a plate to Mr Venter	0.13.0
0. 0. 1. 14	a set of boxes	0. 7. 0
0. 3. 0. 7	in 2 furnaces and pots	2. 2. 6
0. 1. 3. 25	3 plates sold at Maidstone	1. 1. 6
0. 3. 0. 21	4 plates sold Lord Montague	1.18.0
<u>0. 1. 3. 8</u>	2 mist plates sold John Phillips	<u>0.16.6</u>
0.11. 2. 0		<u>6.18.6</u>
	<i>unpaid for</i>	
0. 8. 0. 10	8 plates sold John Fuller	4.16.0
0. 2. 0. 25	in boxes to Nicholas Terry	<u>1.11.0</u>
		<u>6. 7. 6</u>
		<u>13. 5. 6</u>
	<i>Iron sold at the forge (includes)</i>	
1. 12. 0. 11	Mr Gott for Beckley Furnace at 16s. [per cwt.]	25.13.6
3. 8. 1. 3	sold at Tenderden for	58. 0. 7
etc.	[a long list of names, addresses, and amounts]	
<u>29. 11. 0. 14</u>	sold at 16 and 17s. per c[wt].	
5. 12. 1. 4	unsold at Tenterden	
6. 0. 0. 0	of share moulds to London per Maidstone	
10. 0. 0. 0	at Rye for London	
0. 13. 2. 11	delivered for forge use	
0. 0. 0. 14	a share mould to Mr Richardson for trespass	
<u>4. 15. 2. 15</u>	in the iron house	
56. 12. 3. 2	[total iron made]	
	<i>The stock at the furnace</i>	
40. 3. 0. 0	of sows sold Henry Jarman in 1710 at £5 10s. per ton	220.16.6
2. 0. 0. 0	pigs Jarrett Holloway	11. 0. 0
14. 1. 0. 4	ballast bars to Mr Martin	90. 0. 0 ^a
2. 2. 2. 21	in backs to Sir Ambrose Crowley at £11 per ton	23.12.3 ^a
3. 13. 3. 21	in forge and slitting mill castings to him at £9 per ton	33.15.6
48. 17. .25	in plates sent to London at £10 per ton ^b	488.10.0
0. 10. 2. 20	in metal sold in small parcels for	7. 7. 5
0. 17. 0. 0	in backs at furnace not very good	5.19.0
157. 0. 0. 0	of pigs at the sluice at £5 per ton	785. 0. 0
139. 3. 3. 0	sent to forge in 1710	
57. 10. 3. 0	sent to forge in 1711	
13. 0. 0. 0	sent of pigs Brede Bridge for Sir Ambrose Crowley	63. 1. 0
10. 0. 0. 0	sold Henry Weller at	46. 5. 0
20. 14. 2. 0	in sows to Henry Jarmin at £5 per ton	103.16.0
169. 15. 0. 0	in metal to Mr Harrison at £5 10s. per ton	1018.10.0
0. 19. 3. 14	to Jarrett Holloway at £6 per ton	5.19.0
1. 1. 3. 7	sold in small parcels	13. 5. 6
3. 2. 2. 18	sold Mr Walter at Maidstone at £9 15s. per ton	30.10.0
23. 15. 3. 15	sent London at £10 per ton	237.10.0
8. 7. 2. 0	in plates to Sir Ambrose Crowley at £9 per ton	75. 0. 0
45. 17. 2. 14	in ballast bars to Mr Martin at £6.6.6	290.15.0
140. 0. 0. 0	of pigs at the furnace at £4 15s. per ton	665. 0. 0
3. 1. 0. 0	in ballast bars at furnace at £5 per ton	15. 5. 0
9. 18. 0. 14	in plates at the furnace at £8 per ton	79. 0. 0
<u>0. 0. 1. 15</u>	in sow rings plates etc and a furnace at the furnace	<u>8. 0. 0</u>
917. 9. 0. 5	[total production of first two blasts]	
	35 loads of brayes to Mr Harrison at 18s.per load	31.10.0
	587 loads of coals at the furnace at 18s. per load	528. 6. 0
	1220 loads of mine there at 5s.10d. per load	355.13.4

Source: Extracts from HRO E12/VI/Bf/28 'Tho. Hussey's account Sussex Workes Michaelmas 1711'. In providing this edition, spelling has been modernized, certain superfluous zeros have been omitted, and zeros substituted for dashes for null amounts. The sales of bar iron, here omitted, usually give the addresses of the buyers, probably local blacksmiths.

Notes: ^a In E12/VI/Bf/29 these figures are marginally different.

^b E12/VI/Bf/29 names the consignee as Mr Baggs.

£2.³¹ But in the absence of his own accounts we know nothing of his local sales; William Rea, however, included details of certain more distant sales in the main partnership accounts. These sales fall broadly into two groups, western sales in the Midlands and south-east Wales, and northern sales.

The western sales began in the accounting year 1712/13, when nearly 100 tons of pig-iron were sent to Bewdley and sold mostly, that year and the next, to Richard Knight of Bringewood, one of the Forest partners, who probably used them in his own Wolverley Lower and Cookley Forges in the Stour valley in north Worcestershire. The storehouse at Bewdley in 1713/14 also received 7½ tons of Sussex iron and 40 tons of blooms — blooms were an intermediate product on the way to bar-iron that were only rarely sold. These blooms were sold to John Wheeler's executors, probably for Whittington Forge (also in the Stour valley, but in Staffordshire), and again to Richard Knight; both these trades continued for several years.³² Sales of cast iron hammers and anvils for use in forges also began in 1713/14, but were sold much more widely. Some of them went that year to Monmouth and were used at the firm's own forges at Lydbrook. The rest went to Bewdley and were sold to Robert Payne, probably for Moreton Corbett Forge; to Thomas Dorset, for Wytheford Forge, both in Shropshire; and to Lord Foley, for Wilden and Shelsley Forges, in north Worcestershire.³³ These sales of hammers and anvils continued at least until 1716/17, when Thomas Hussey sent 80 hammers and some anvils. Almost all the customers, too many to name, can be identified as the owners of forges; sales for Shropshire and north Worcestershire were handled through the firm's storehouse at Bewdley, but there were also customers, dealt with separately, in the Wye valley and Monmouthshire, including in 1716/17 Mr Hanbury of Pontypool.³⁴

Some northern sales, those to Sir Ambrose Crowley, have already been mentioned. In 1712/13 he spent £316. 2s. 1d. on pigs and castings, perhaps 50 tons. In 1715/16 his son paid £150, perhaps for 25 tons of pigs, to Mr Hoare, presumably the banker.³⁵ In 1713/14 four anvils and two hammers, sold to Dennis Hayford 'at London', appear in the account of Carburton Forge to midsummer 1715. In November 1715 John Watts, the manager there and at Staveley in Derbyshire, wrote to William Rea asking for two to three tons of his Sussex pigs for a trial, and slightly over two tons each of hammers

and anvils and of Sussex pigs appear in the Carburton account to midsummer 1717.³⁶

Regrettably, there is a break in the run of surviving accounts from 1717, and little is known of the Foley ironworks until 1725. This is particularly unfortunate, as the gap covers a period of increased production and higher prices stimulated by an embargo on Swedish trade, which stopped the import of iron. The price fell back on the lifting of the embargo and resumption of direct imports in 1719.³⁷ During the embargo William Rea had agreed to buy a large quantity of cordwood and timber growing at Holme Lacy in Herefordshire, evidently at a high price reflecting the price of iron during the embargo. Realizing that the bargain was too big for him, he asked Thomas Foley to join him. The precise details of what happened are not entirely clear, but the timber partnership lost money enormously. Rea was seriously behind in producing annual accounts and was thought to be in debt to the Forest partnership. The partners met at Wolverhampton in 1725 and sacked him as manager. The ensuing litigation dragged on for years, but the Holme timber contract left William Rea a ruined man. The ironworks in Sussex were, however, only mentioned in passing in the course of this litigation, suggesting the firm had disposed of them before 1723.³⁸ Though William Rea continued to describe himself as an ironmaster, for example when he gave evidence to the Commons on the question of the import of iron from America in 1737, no ironworks operated by him at that time has been traced. Indeed it is improbable that he had any significant business, as in 1739 he lost his estate around Monmouth, including Monmouth Forge, to his mortgagee, the Duke of Beaufort.³⁹ Rea was living in the parish of St George, Hanover Square, in the 1740s when he successfully sued members of the Jewkes family of Wolverley in respect of a partnership in Wolverley Forge he had entered into in 1717; he had supplied Samuel Jewkes with pig iron and received nothing back until the Jewkes' estate was sold in 1747.⁴⁰

The well-known list of furnaces and forges from the Fuller manuscripts was annotated with the comment that it was obtained from 'Mr Ray one of Mr Hussey's partners . . . in . . . 1717 . . .'.⁴¹ The foregoing description elucidates this statement and confirms, as has long been supposed, that 'Mr Ray' was William Rea of Monmouth. This implies a western provenance for the list; indeed it is likely

that William Rea himself was its compiler. The authority of this list has often been questioned, partly because of the obviously poor quality of the Wealden data, but, with the identification of a non-Wealden origin for the list, this problem disappears. The difficulties with its Wealden data are comparable with those for other areas, such as Yorkshire, relatively remote from Rea's familiar Midlands and south Wales.⁴²

The Forest Partnership most probably withdrew from its Wealden business about 1717, transferring it to Thomas Hussey, probably jointly with another of their former managers, John Legas.⁴³ In 1718 Thomas Hussey took over Waldron Furnace and Bivelham and Brightling Forges from Henry Pelham.⁴⁴ Hussey and Legas together took leases of Gloucester Furnace at Lamberhurst and Chingley Forge sometime in the 1720s; in 1725 Hussey, Rea, and Mr Gott were partners in Beckley Furnace and Westfield Forge.⁴⁵ Hussey and Legas leased Hawksden Forge at Mayfield in 1727, and kept Ashburnham Furnace until perhaps 1734.⁴⁶ Following Hussey's death in about 1736, the business was owned by Legas until he formed a partnership with William Harrison, the gunfounder and leading London ironmonger mentioned above, using four furnaces. After the deaths of both these partners, the business, probably by then mostly gunfounding, was continued by Harrison's sons and manager with Legas' nephew, Richard Tapsell, as Harrison, Bagshaw, and Tapsell. After the Seven Years War, the firm's works were in the name of Tapsell alone, until his bankruptcy in 1765 resulted in the closure of many of them.⁴⁷

Ashburnham and Darvel Furnaces were leased very shortly before 1739 by the Crowleys; Ambrose and John Crowley only produced ordnance from 1745,⁴⁸ and not in sufficient quantities to occupy both furnaces, which suggests that the acquisition was primarily made to supply pig-iron to their forges near Newcastle. Thus, as at an earlier period under the Forest Partnership and probably for most of the intervening two decades under Hussey and Legas,

Ashburnham Furnace, though also producing sundry cast iron goods, was primarily engaged in the main branch of the iron trade, the production of pig- and bar-iron for sale. This had been the main function of the Wealden industry up to that time and had been the principal business of the Pelham family's ironworks centred on Waldron Furnace, for which accounts survive up to 1714.⁴⁹ The Ordnance Board's records suggest that at that period, during peacetime, three to five ironmasters were engaged in gunfounding at any one time, probably each using one furnace and even then not fully occupied.⁵⁰ This must leave at least another half dozen furnaces supplying forges making bar-iron, which contrasts with the war years in the mid 1740s and late 1750s, when virtually every Wealden ironmaster was a gunfounder,⁵¹ and also with the 1690s when the demand for guns and shot was such that new furnaces at Heathfield, Lamberhurst and Pippingford had to be built to meet it.⁵² In these respects Ashburnham was typical of its time, but it was atypical in other respects: while most Wealden ironworks at all periods belonged either to London merchants, such as the Westerns and Harrisons, or to local landowners, the Forest Partnership were from a completely different part of the country; they sought to produce pig-iron from it on a scale usual in Gloucestershire and the Midlands, but rather higher than was common in the Weald; and Ashburnham's products were marketed more widely than those of other Wealden ironworks.

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NOTES

¹ Guildhall (London), Ms. 3736/2 'General account . . . Gloucester Furnace'; on the industry generally see H. Cleere & D. W. Crossley, *Iron Industry of the Weald* (Leicester, 1985; 2nd edn, Cardiff, 1995).

² H. Cleere & D. W. Crossley, 184–8; E. W. Hulme, 'The statistical history of the iron trade', *Transactions — Newcomen Society* 9 (1928–29), 21–2; P. W. King, 'Early statistics in the iron industry: a vindication', *Historical Metallurgy* (forthcoming).

³ S-E. Åström, 'Swedish iron and the English iron industry

- about 1700', *Scandinavian Economic History Review* **30** (1982), 129–41.
- ⁴ H. R. Schubert, *History of the British Iron and Steel Industry from c. 450 BC to AD 1775* (London, 1957), 385.
- ⁵ Helmington: Bishop Cousins' survey 1662, Durham University Library, Mickelton ms. 91 and CC bishopric, Transumpt books, *passim*. Allensford: P. Riden, *A Gazetteer of Charcoal-fired Blast Furnaces in Great Britain in Use since 1660* (2nd edn, Cardiff 1993), 123–4; the forge (only) there is mentioned in John Crowley's will, but there was no stock there at his death in 1727 and it is presumed therefore that it too had closed: Suffolk Record Office, Ashburnham mss, HAI/GA/3/6; HAI/GA/2/3; HAI/GD/2/3.
- ⁶ Statute 39 Eliz. c.19, replacing 27 Eliz. c.19, s.3 which had proved ineffective; J. G. Dodgson, 'Old Acts of Parliament relating to roads in Sussex', *Sussex Archaeological Collections* **15** (1863), 142–3. The alternative of paying three shillings would have cost more than carrying a load of road-making material.
- ⁷ Accounts: British Library, Add. Ms. 33154–6.
- ⁸ Compare (on fuel costs) G. Hammersley, 'The charcoal iron industry and its fuel 1540–1750', *Economic History Review* [hereafter *Econ.H.R.*] ser. II **26** (1973), 593–613.
- ⁹ 1554: H. Cleere & D. W. Crossley, 381; Western: East Sussex Record Office, Ashburnham mss [hereafter ESRO ASH], ASH B983, B1084; ASH 1178 ff.94–5, 219, 252; 1664 gunfounder: Public Record Office [hereafter PRO], Ordnance bill books, WO 51/5, f.86.
- ¹⁰ M. W. Flinn, *Men of Iron: The Crowleys in the Early Iron Industry* (Edinburgh, 1962), 100. G. E. Mingay, *English Landed Society in the Eighteenth Century* (London, 1963), 65; B. Short has (probably wrongly) taken Ashburnham's idea as acted upon: B. Short, 'The de-industrialization process: a case study of the Weald 1600–1850', in P. Hudson (ed.), *Regions and Industries: A Perspective on the Industrial Revolution in Britain* (Cambridge, 1989), 164. In fact the practice of the Board of Ordnance was to award contracts about once a year and its contracts were very few at this period; accordingly, the sort of contract sought by Ashburnham was not obtainable: Public Record Office [hereafter P.R.O.]. Ordnance bill books, WO51/70–80 *passim*.
- ¹¹ H. R. Schubert, *History*, 425; A. H. John, 'Coal and iron on a Glamorgan estate 1700–1740', *Econ.H.R.* [1st Ser.] **13** (1943), 93ff..
- ¹² M. W. Flinn, *Men of Iron*, *passim*.
- ¹³ M. W. Flinn, *Men of Iron*, 14–15, 29–30; West Glamorgan Record Office, Yc 558. I am certain Flinn was mistaken in referring to a furnace at Treforest. It does not fit the context of his source, which refers to Ynyspenllwch, also near Swansea.
- ¹⁴ M. W. Flinn, *Men of Iron*, 100–101. It was presumably the son, rather than Hanbury's partner, whom Ashburnham approached.
- ¹⁵ H. Cleere & D. W. Crossley, 195–6, 310–11; this is corrected (2nd edn), 382. The error is repeated by B. Short, 'De-industrialization', 164.
- ¹⁶ Before the Foley archive was taken to Herefordshire Record Office, it was kept in an outbuilding at Stoke Edith Park (near Hereford). It is largely a typical estate management archive, including the papers of Paul Foley of Stoke Edith, Philip Foley (his brother) of Prestwood (Staffordshire), Thomas Foley of Stoke Edith (Paul's son), and their respective descendants. The Prestwood archive must have been taken to Stoke Edith prior to the sale of that estate in 1913: the modern history of the archive is based on information from J. W. King.
- ¹⁷ ESRO, ASH 1178, f.95.
- ¹⁸ R. G. Schafer, 'Genesis and structure of the Foley "Ironworks In Partnership" of 1692', *Business History* **13**(1) (1971), 19–38; Herefordshire Record Office [hereafter HRO], Foley archive, ironworks documents, E12/VI/Dec/10–15, 20–21; E12/VI/Def/9–13; E12/VI/Dff/1–13; Worcestershire Record Office, r899:228 BA 1970. It is necessary to cite these original documents as the standard published description of the business for that period omits certain details, probably because the author was only able to examine accounts, the Foley archive then being unsorted: B. L. C. Johnson, 'New light on the iron industry of the Forest of Dean', *Transactions of the Bristol and Gloucestershire Archaeological Society* **72** (1953), 129–43. It should be noted that the Foley archive cannot be consulted without the written permission of the depositor.
- ¹⁹ HRO, Foley Portfolios, E12/P5, partnership schedule: this portfolio series represents a scrapbook probably made up by P. H. Foley of Prestwood in the 1880s largely from the Prestwood archive, but with some purchased material; this document is not extraneous material since another copy of it is still attached to a duplicate of a partnership deed dated 1713, presumably Thomas Foley's: HRO, E12/VI/Dec/14; yet another copy survives as a stray in the archive of a Foley-founded school: Dudley Archives, Old Swinford Hospital mss, D/OH/5/1.
- ²⁰ HRO, E12/VI/Dff/4, f.38. Dates in the form 1708/9 refer to one year starting at Michaelmas.
- ²¹ HRO, E12/VI/Dff/5–13, f.18 or 17 'Thomas Hussey'.
- ²² HRO, E12/VI/Bf/28–9.
- ²³ HRO, E12/VI/Dff/8–13, f.26 or 25.
- ²⁴ HRO, E12/VI/Dff/5, f.3 (among accounts for other furnaces). The spelling has been modernized.
- ²⁵ *Ibid.*, f.18.
- ²⁶ B. L. C. Johnson, 'The charcoal iron industry in the early eighteenth century', *Geographic Journal* **117** (1951), 167–77.
- ²⁷ HRO, E12/VI/Bf/29; 53. Henry Jarman at Etchingham Forge: ESRO, ELT/Etchingham; Henry Weller of Frant probably had Eridge Forge: H. Cleere & D. W. Crossley, 329–30; Lord Montague's forge was Pophole: West Sussex Record Office, Cowdray 96, 1443–5 and *passim*; John Fuller's was Burwash: H. Cleere & D. W. Crossley, 321; Jarrett Holloway at Coughopley Furnace: ESRO, SAS/AB/199; ballast: cf. P. W. King, 'Iron ballast for the Georgian Navy and its producers', *The Mariners Mirror* **81**(1) (Feb. 1995), 15–20.
- ²⁸ HRO, E12/VI/Bf/29; cf. E12/VI/Dff/4, f.4.
- ²⁹ HRO, E12/VI/Bf/29; William Harrison's direct involvement in gunfounding for the Board of Ordnance began about 1716 due to his being one of Richard Jones' guarantors: PRO, Ordnance Board minutes, WO 47/28, pp. 362, 368; WO 47/29, pp. 199, 205, 233; however his appearance in the Rye Port Books for 1712 and 1713, shipping guns, suggests he may have been a subcontractor earlier: PRO, E 190/808/26, E 190/809/35.
- ³⁰ HRO, E12/VI/Bf/28–9.

- ³¹ HRO, E12/VI/DFf/8, f.17
- ³² HRO, E12/VI/DFf/8–13, f.26 or f.25 ‘Sussex pigs’ and f.6 or f.5 ‘Bewdley Store’; Knight: Robert Page, ‘Richard and Edward Knight: ironmasters of Bringewood and Wolverley’, *Woolhope Naturalists Field Club Transactions* **43**(1) (1979), 10; Worcestershire Record Office r899:228 BA 1970. Cookley, ‘Woolverley’, and Whittington are specifically mentioned as destinations for pigs in HRO, E12/VI/DFf/13, f.5.
- ³³ HRO, E12/VI/DFf/8-13 f.26 or 25 ‘Sussex pigs’; as to identification of forges: R. Page, ‘Knight’, 8; B. Trinder, *Industrial Revolution in Shropshire* (Chichester, 1973), 52; B. L. C. Johnson, ‘The Foley partnerships: the iron industry at the end of the charcoal era’, *Econ H.R.* Ser. II **4** (1952), 330.
- ³⁴ HRO, E12/VI/DFf/9–13, f.25 or f.27 ‘Sussex pigs’ and DFf/13, f.5 ‘Bewdley Store’. There is not sufficient space to list the 15 named customers and give their locations.
- ³⁵ HRO, E12/VI/DFf/8, f.17. ‘Potting’ in this context is casting iron pots; the iron was evidently delivered molten at the furnace mouth, weighing it being postponed until later.
- ³⁶ HRO, E12/VI/DFf/9, f.17; E12/VI/DFf/13, f.27; Sheffield Archives, Watts diary and letterbook, MD 3483, 29 Nov. 1715. Sheffield Archives, Spencer-Stanhope collection, Carburton accounts SpSt 60472/24, 26.
- ³⁷ J. F. Chance, *George I and the Northern War* (London, 1909), 210–12; T. S. Ashton, *Iron and Steel in the Industrial Revolution* (Manchester, 1922, 1951, and 1963), 110–12; P. W. King, ‘Early statistics’ (in preparation).
- ³⁸ This paragraph is based on PRO, Exchequer proceedings, E 112/957/94-6, 107–11; tantalizingly the missing accounts were produced to witnesses in this and a related action: PRO, Exchequer depositions by commission, E 134/4 Geo. II/Hil./13; E 134/5 Geo. II/Hil./8; presumably they were not returned to Stoke Edith after the proceedings were disposed of, though there are some case papers in the Foley collection: HRO, E12/VI/DGd/1–39.
- ³⁹ Commons: *Journal of House of Commons* **23**, 109; Monmouth: National Library of Wales, Badminton II, 8401-04; cf. HRO, E12/VI/DGf/12 (unpaginated) indicates that Monmouth Forge passed when the lease expired to the Duke of Beaufort, who presumably then let it.
- ⁴⁰ PRO, Chancery orders, C 33/388, f.278–80; Worcestershire Record Office, Kidderminster Library (Knight) collection, 899:310 BA 10477 no.7142.
- ⁴¹ E. W. Hulme, ‘Statistical history’, p. 23. The comments following the words quoted as to ‘want of wood’ for certain named ironworks probably belong to the period at the end of the embargo; those works may have increased production to take advantage of the high prices of the embargo period by the use of wood from coppices that would normally not have been cropped until succeeding years, since most such works remained in operation for many years.
- ⁴² P. W. King, ‘Early Statistics’ (forthcoming).
- ⁴³ ESRO, ELT/Dallington; cf. payments by them to Richard Knight, who withdrew from the Forest partnership at that time: PRO, E 112/1127/5, answer of Richard Knight, schedule. John Legas managed Blackpool Forge (Pembrokeshire) for the Forest Partnership for several years until 1 March 1717, when it was given up: HRO, E12/VI/DFf/13, f.12.
- ⁴⁴ ESRO, ELT/Brightling; the other two were in the same ownership and still in the same occupation in the 1760s: British Library, Add. ms.33167, *passim*; ESRO, ELT/Waldron.
- ⁴⁵ Gloucester: E. Melling (ed.), *Kentish Sources: III Aspects of Industry and Agriculture* (Maidstone, 1963), 94–5; Chingley: Kent Archives Office, U409/T1, abstract; D. Crossley, *Bewl Valley Ironworks* (London, 1975), 5; Westfield: ESRO, ELT/Westfield; Beckley and Westfield: HRO, E12/VI/DGd/10.
- ⁴⁶ Hawkesden: ESRO, GLY 1234; Ashburnham: ESRO, ELT/Dallington.
- ⁴⁷ J. S. Hodgkinson, ‘The iron industry in the Weald in the period of the Seven years’ war 1750–1770’ (M.A. diss. University of Brighton 1993), 103–5, 107; cf. note 29 above; H. Cleere & D. W. Crossley.
- ⁴⁸ leases: the leases were probably to Mrs Theodosia Crowley, prior to her sons’ majority; Suffolk Record Office, HAI/GD/2/3 (balance sheet of Crowley business 1739) indicates that an investment of £2000 had recently been made, of which no particulars had then been received; ordnance: H. C. Tomlinson, ‘Wealden gunfounding: an analysis of its demise in the eighteenth century’, *Econ.H.R.*, Ser. II **29** (1976), 386, 398; PRO, WO 51/159, p. 223 (bill dated 28 Jan. 1745 in respect of a warrant dated 8 Aug. 1743).
- ⁴⁹ B.L. Add. mss. 33154–6.
- ⁵⁰ e.g. PRO, WO 47/28, pp. 149, 170; WO 47/31, p. 168.
- ⁵¹ H. C. Tomlinson, ‘Wealden gunfounding’; J. S. Hodgkinson, ‘Iron industry’.
- ⁵² H. Cleere & D. W. Crossley, 194–5; I calculate production of guns, shot, and shells to have peaked at over 3000 tons per year at the height of the Nine Years War in 1695: my calculation from PRO, Ordnance Bill Books, WO 50/14 and WO 51/40–56.

◆ Stoolball

CONFLICTING VALUES IN THE REVIVALS OF A 'TRADITIONAL SUSSEX GAME'

by John Lowerson

This article examines the history of stoolball both as a supposedly 'Sussex game' and as the focus for arguments over how traditional games are adapted by modern society. It deals with its origins and its rediscovery by antiquarian writers before it was taken up as a means of improving the lives of village women. This involved rule-making and organization; much depended on the patronage of the gentry. With the First World War it acquired a new role, as a therapy for injured soldiers. At that point, a Sussex lawyer and landowner, W. W. Grantham, became its leading proponent, tying it in with both charitable causes and an idealized 'Merrie England'. His insistence on male or mixed play eventually provoked a backlash by leading women and bitter disputes. It was then revived again, on a much smaller scale after the Second World War, with a particularly strong Sussex identity.

Stoolball is widely held to be a, if not *the* quintessential Sussex game, representing an idyllicized continuity with the rural past. Its history is by no means so simple as that view suggests and it encapsulates issues and conflicts both within the county and in a much wider context of social and cultural change over the last 100 years or so.

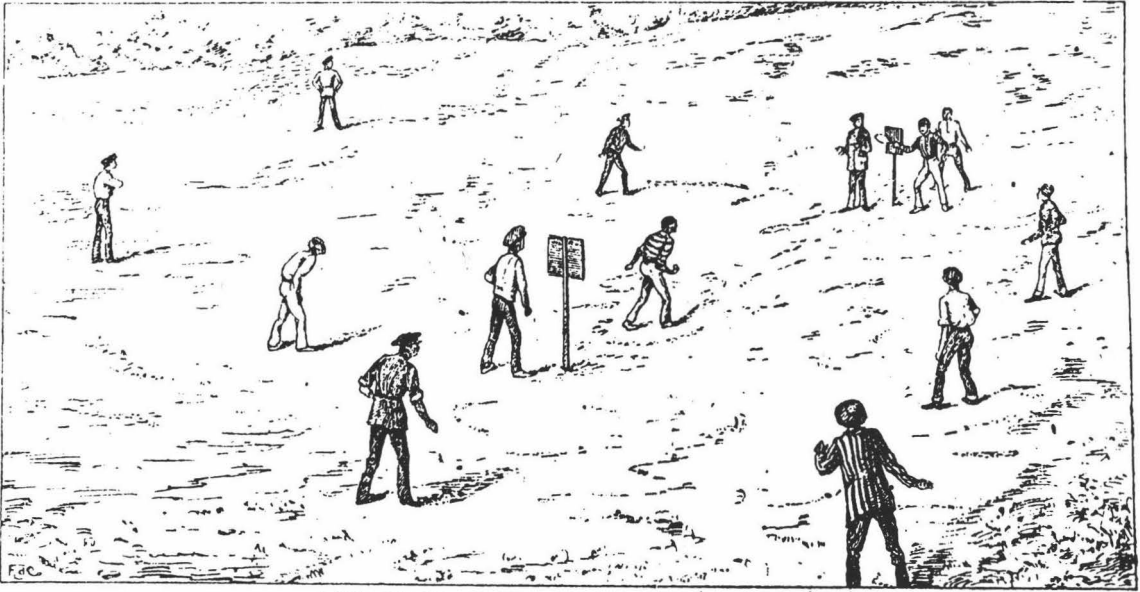
Much of the recent history of sport has been concerned with the 'modernization' of such traditional games, with codification and bureaucracy, to meet both the leisure and political requirements of urban, industrialized societies. In England, the centre of attention has almost inevitably been cricket, with its pastoral overtones, and football, transmogrified from pre-industrial near-riot into mass spectator symbol. Into the debate have come concerns of class, gender and social control, 'popular culture' and the annexation or invention of tradition for nationalist and imperial purposes. It is against this background that this paper examines stoolball.

As it is now played, at its most formalized, stoolball is a spring and summer game, widely followed in the south-east. Two teams of 11 a side play, if enough players can be recruited. It requires two wickets, boards one foot square mounted on poles four feet six inches tall, placed some 16 yards

apart and usually freestanding. To players holding willow bats seven and a half inches across, shaped rather like heavy table tennis bats, balls are bowled underarm. The balls are soft, derivatives of those used in real tennis. The fielders are placed as in cricket, a game with which it shares some rules and has a complex symbiosis.

Its history illustrates many of the issues I have mentioned above, but there are other elements, of symbols of rural-urban opposition and of questions of regional and national identity. In particular, it fits into the search for the 'real England' which has occupied so many people since the 1870s. It has a place in the hunt for that idealized peasantry, the 'Folk', which Georgina Boyes has examined in her recent study, *The Imagined Village*. As she put it, 'A marginalised, rural and anachronistic Folk were maintained as the source of culture' for an urban society feeling dispossessed.¹

Stoolball is one of a number of loosely-related ball games surviving from pre-industrial England, such as Knurr-and-Spell and Trap-Ball. Unlike those demonstrations of individual skill, however, it became enshrined in the values of late Victorian team game ethics and the bureaucratization of 'modern' sports with all their cultural apparatus and associated moral loadings.²



THE PLAN OF THE STOOLBALL FIELD.

Stoolball can be played almost anywhere. The village green is an ideal spot. Our sketch shows a plan of the field, and is explanatory in itself.

Fig. 1. The stoolball field — note the all male players.

ORIGINS AND ANTIQUARIANS

The first difficulty is the nature of the 'tradition' that it is supposed to represent. This is compounded by both the nature of the surviving documentation and the way in which that has been incorporated into historical writing. Its very identification is problematic because of its weaving in and out of so-called cultural mainstreams. At least one major spokesman for the history of sport, Allen Guttman, has claimed, quite wrongly, that it was a game which disappeared not long after the Reformation.³ Some very recent historians have placed it in a tradition of ritualized combat and even of protest which probably overstates the case and certainly would not fit the rosy pastoral picture which late Victorian revivalists tried to paint and recreate.⁴

Much of what material is available owes its accessibility to the growth of antiquarianism during and after the Industrial Revolution and most especially to its late Victorian and Edwardian refinements. It is a commonplace that those years produced an increasing search for national Folk roots, in which local history was mingled with an emerging anthropology and ethnography, not least in the Sussex Archaeological Society. Our

conventional explanation of the collection of dialects and rituals is that they were designed to preserve a dying rural/peasant culture from urban and industrial destruction. Georgina Boyce has shown how far the process went beyond this, into inventing and annexing the Folk for quite distinctive purposes. This is certainly true of stoolball. It fitted both the needs of heritage preservation and production but, unlike some similar games, it was *not* employed to serve a notion of steady imperial progress.

Originally 'Stoolball' was a generic description of a loosely-grouped variety of games, whose nature was complicated by the interpretation of the word 'stool'. Its symbiosis with cricket affects this further, particularly where it provided ammunition for the sort of explanation which set popular recreations in a simplistic, neo-Darwinian, 'fall and rise' model.

One populist explanation is that the stool was literally just that — a three-legged milking stool. Depending on the writer and his fancifulness the stool was either used as a primitive wicket or employed as a bat by milkmaids bowled to by village lads.⁵ More dialect-precise scholars, particularly in Sussex, claimed that 'stool' was a local term for a tree stump used as a wicket in Wealden clearings.⁶ From this grew the view that it originated as a

woodland-pasture pastime which subsequently bifurcated; in one direction it moved towards male cricket, in the other to a simpler women's game, stoolball. The amount of writing on this is quite surprising and is firmly located in regional patriotism. The idea that cricket had any ancestor, instead of emerging fully formed, is remarkably difficult territory to enter.⁷

These near-mythical origins were ascribed to an activity mentioned in late medieval and early modern writings as being pursued in Lancashire, Wiltshire, Gloucestershire and Somerset amongst others. The Earl of Leicester is said to have played it in Elizabeth's reign, as did the common people of London. It was usually portrayed as an informal game for both sexes, played for cakes and ale on Shrove Tuesday, or in post-Easter festivities where it secularized medieval models of ball-play representing the resurrected world. It was this which appeared in the pastorate of such 17th- and 18th-century writers as Robert Herrick and *Poor Robin's Almanack*. Both late medieval and post-Reformation clergymen such as archbishop Laud fulminated against its Sunday playing in churchyards by groups of both sexes including both the gentry and the 'rascality'. Paradoxically it continued with very little interruption during the Interregnum.⁸

In this loose reconstruction attempts at historical precision were mixed conveniently with a sense of an indistinct past. As one observer commented in 1893:

Stool Ball, is a game shrouded in some degree of mystery. Some descriptions of the game are indeed of so hazy a nature as to put it beyond the understanding of all but a select few.⁹

The greater the ascribed vagueness of its origins, the more it was valued by the antiquarians who portrayed it as reaching an Elizabethan and Jacobean heyday, very convenient for bolstering the myth of a 'Merrie England' in which it served as a 'harmless pastime'. Its ascribed purity proved valuable for some late Victorian commentators concerned at a modernized cricket seen increasingly as commercialized, dependent on admission charges and prostituted by professionals and amateurs. Their views were reiterated some decades later by another observer:

... all those British sports came within the limits of scientific calculation compared with the vast possibilities of stoolball, in which the novice can defeat the expert and the latest

recruit confound the most experienced veteran. . . . there is at least one game in English sport which is not subject to professionalism and in which every player may hope to excel irrespective of sex, age and experience.¹⁰

VILLAGE REVIVALS AND GENTRY PLAY

The apparent former wide diffusion of stoolball was reduced by the 18th century to a few geographically restricted survivals. It was played in Brighton to celebrate a royal birthday in the 1780s and by the early 19th century appeared to be limited to a few Kent and Sussex Wealden settlements where it was played as a distinctly localized, intermittent seasonal game by village women.¹¹ Rules were part of an oral tradition and varied in detail between villages. Its actual extent is difficult to reconstruct.

The growth of folkloric interest coincided with, rather than caused immediately, an almost systematic revival in some Sussex scarpland and Wealden parishes, largely those dominated by gentry and clergy. There it became an auxiliary to a genteel and Anglican concern with reviving village life, whilst controlling the exuberance of acceptable public recreations and trying to expand activities for women.

The Gages' closed village of Firle was frequently claimed to be the only place where it had survived with regular play, but this owed more to local patriotism than to actuality. A photograph dated to 1861 shows a very diversely clad team from Chailey, ten miles away.¹² The key centre for the late Victorian revival appears to have been another closed parish, Glynde, outside Lewes. Under the patronage of the family of Mr Speaker Brand a local girls' team, the Glynde Butterflies, played teams such as the Chailey Grasshoppers, 'in the most determined spirit of resistance'.¹³ These teams seem to have consisted mainly of younger girls from the gentry and clergy families together with superior farmers' daughters and a few strapping village girls to pad out the numbers to the ideal eleven. They prompted a spate of patronising reports in the local press: 'the butterflies again spread their light wings to enjoy another little day of sunny bliss'.¹⁴

The horizons for competition of these gentry-led teams were limited by the walking distances between villages or the slightly extended frontiers of daylight travel in farm carts. Brand's social neighbour, Christie of Glyndebourne, provided an



Fig. 2. The village game — Chailey, 1860s.

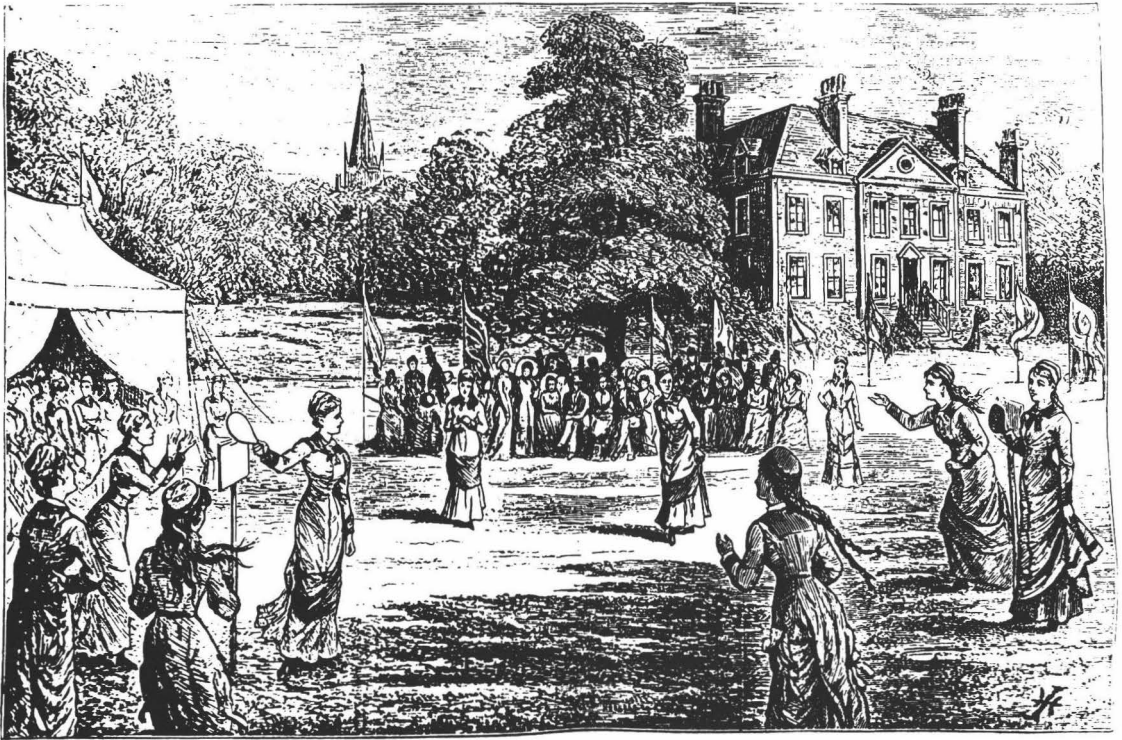
annual treat for schoolchildren on his son's birthday; as part of the entertainment, a team of local married women would play one of single girls and all would be given tea.¹⁵ Generally, though, the age and condition divide was ignored and teams were usually all-age.

These models prompted a modest growth, fostering village rivalries and producing the first known codification of the rules in 1867, designed to stop squabbles over local variations.¹⁶ It grew essentially as a game for women, but was almost invariably umpired by men. Its immediate purpose was made explicit by a Sussex clergyman in 1875 — the clubs, he wrote, 'not only provide good exercise for young ladies who might otherwise become lazy, but also promote kind social intercourse among all classes'.¹⁷

As such its fortunes and leadership depended on younger women from county families for whom it became a socially benevolent auxiliary to the essentially class-specific, space-private fashionable games of croquet and lawn tennis whose fluctuations

in popularity during the 1870s and 1880s reverberated into the game. It attracted national attention in the later 1870s when a match in Horsham Park was portrayed as a *fête champêtre*, with carriage-borne families watching the players in the interstices between picnics in a marquee.¹⁸ The engraving which accompanied the *Graphic* report treated it as a variation on more established, carefully controlled country house amusements such as archery parties with their bonding and mating rituals. It was another opportunity for gentle exhibition of the mobile female form in the marriage mart. When the Duchess of Norfolk fostered a club in Arundel in 1912, it became 'quite the rage this summer'.¹⁹

A similar match in the Lewes area was described as being played by, 'fair athletes . . . the sides were composed of the younger branches of the leading county families in the neighbourhood . . . supplemented by a few village girls', who acted as 'rustic auxiliaries'.²⁰ Thus portrayed, the latter were not too far from the rollicking peasantry drafted into paintings for genteel amusement in the 18th century.²¹



STOOLBALL—A MATCH AT HORSHAM PARK

Fig. 3. *Fête champêtre*: Horsham Park.

This growth was small-scale, dependent as it was on being fitted into a sometimes capricious country house social calendar. When a Glynde meeting revised the rules in 1891, 14 local clubs were represented by female members of gentry, clergy and upper farmers' families.²² A similar rule revision elsewhere was designed 'for Girls living in the country who want a change from the inevitable tennis'.²³ The drafters went on to claim that, 'It is also a good game to teach working girls, for the essentials cost very little'. Its moral virtues were also lauded by the bishop of Chester, Dr Jayne, who was prepared to encourage its being played on Sundays because of its lack of potential depravity.²⁴

There was a steady growth after the rules were clarified and competition became more organized. Fifteen clubs formed a Sussex Stoolball League in 1903, offering an elaborately woven banner as its annual tournament prize, to be kept by any club that won it three times in a row. That happened when Ringmer, near Lewes, won twice before the outbreak of war and immediately after its end;

unfortunately, the banner has disappeared without trace.²⁵ In all these meetings, the policies and groupings were determined exclusively by women, still largely from the gentry. In East Sussex, the annual season was dominated by matches gathered round a team organized by the family from Sheffield Park. Not far away a similar part was played by the Champions of Danny Park, whose daughter, Gertrude, set it firmly in the context of country house lawn pastimes in articles in the fashionable press.²⁶ It was at this point that it was described briefly in the 1911 *Encyclopaedia Britannica*. The village clubs which can be traced through infrequent newspaper reports depended heavily on management by clergy wives and daughters. They fielded such teams as the Barcombe Iolanthes.²⁷ There are no prizes for guessing the origins of that name but, Gilbert and Sullivan apart, they represented also a growing Edwardian obsession with the 'faerie' and nature mysticism.²⁸

Such teams offered inspiration for a wider social role. When it was introduced into Surrey, at

Bookham, reports in the national press made clear the influence of social maternalism in this new stage of its development:

It is just the game for village women. As a rule they play no game, because there is no game for them to play. . . . The very women who ought to play the game, the thousands of whom spend their lives in constant drudgery in their cottages, are the very women who have no chance of active recreation.

The reporter placed it even further in a context of Georgian root-seeking and social imperatives:

There is no doubt that the countryside would be merrier if there were a stool-ball club for women in every village. They cannot be very well left to organise it for themselves. . .²⁹

It had now moved some way from spontaneous celebration of the passing seasons.

In Bookham, as in the many Sussex villages where it was established outside the immediate purlieus of a great house, the symbiosis with men's cricket clubs was very strong. Women practised and played on those evenings when men did not. Gratitude and dependence were recognized by ritual annual games between women's teams and those drawn from cricket or working men's clubs. The men were almost invariably required to play left-handed to give the women 'a sporting chance'. Stoolball in these circumstances was practically as well as symbolically marginalized. Because it did not require specially prepared grounds it was often played on the edges of cricket fields, to preserve the sacred crease, or on rough pasture loaned by farmers. Other mixed matches were played, often as gentry novelties, 'Trousers' versus 'Petticoats' and so forth.³⁰ Sometimes the gentry fielded mixed teams and it was male participation in these that eventually prompted the greatest spurt of growth and a crisis in gender and regional identities which still reverberates in the game. At this point it became almost inseparably intertwined in the career of one individual whose energy and eccentricities had singular effects.

THERAPY, SOUTH SAXONS AND MERRIE ENGLAND

For once in the history of traditional games we have a hero (and occasional villain). This was William W. Grantham, a lawyer and landowner, with a manor house, Balneath, in Chailey, north of Lewes,

where he claimed to be, and certainly behaved as if he was, the lord of the manor, reviving tenants' dinners and so on. Born in 1866, the son of a High Court judge, he was educated at Harrow and Trinity, Cambridge, then called to the Bar in the Inner Temple. He took silk in 1923 and became Recorder of Deal. He was variously Master of the Grocers' Company, Chairman of the Governors of Hackney Downs School (to which he introduced the game for junior boys to help overcome a severe shortage of cricket pitches), Deputy Chairman of the London County Council, where he long sat as a Conservative, and a Lay Reader of the Church of England.³¹ The social contacts he made were exploited ruthlessly when he decided to develop stoolball as a mass game, part of a proposed revival of an England of the Folk.

He was an enthusiastic sportsman, riding in the Pegasus Club, the Bar point-to-point he founded with his father, and a keen cyclist and a member of the MCC.³² In Sussex he was a key figure in the Society of South Saxons, a gentry recreation club founded in the 1830s and revived in the 1880s, which played lawn tennis and croquet in the parks of its more influential members.³³ His almost legendary eccentricity accompanied considerable organizing skills and an insatiable appetite and ability for self-publicity. He made sure that most of his activities were reported in both the local and the national press, usually writing the reports himself. This did a great deal for stoolball's new revival and extension but eventually prompted a gender-focused backlash. Just occasionally it produced oddities, such as widespread press reports in the 1930s of Grantham's collection of 23,000 different used railway tickets.³⁴

Grantham had played stoolball in the occasional mixed lawn matches of the Edwardian years but the reason for his becoming the game's key popularizer was essentially masculine and military. He served in the Volunteers, with the rank of Major by which he always preferred to be addressed. He was the eternal adjutant, effectively non-combatant but a first-rate depot organizer. He served eventually in the 6th (Cyclists) Battalion of the Royal Sussex Regiment, staying at home during conflicts. As the battles of the First World War took their toll Sussex became a major hospital centre for the seriously injured. Grantham saw demoralized wounded officers needing recuperation either to return to the Front or to life as maimed civilians. Most of the

manly games associated with military character formation, rugby etc., were either too strenuous for men in the early stages of mobile recovery or totally unsuitable for those who had lost an arm or a leg.

In 1917 Grantham hit on the idea of using stoolball for this. The predominantly women's game was now harnessed for men, although occasional mixed matches were staged to allow officers and nurses to play together. Grantham provided a further level of competition by fielding teams of his legal and country friends with such titles as 'Ye Ancient Lawyers'. The first games took place in the grounds of the Royal Pavilion, Brighton, a temporary convalescent hospital.³⁵ The bored patients turned to it with enthusiasm and other hospitals joined in. Grantham was prompted to go further and began frenetically to raise money to buy stoolball sets and lists of rules for widespread circulation.

Using his MCC links he arranged a demonstration match at Lord's in August 1917.³⁶ After a wholesale lobbying of the influential he secured the patronage of minor royals, some key generals and various aristocrats. The Lord's match was repeated annually for a decade, eventually being linked with the Not Forgotten Association, a British Legion-type organization raising money for invalids. Other sites he exploited eventually included Ranelagh Gardens, the Temple gardens, the so-called 'Raft', now covered by the former London County Hall, and, for 20 years, the gardens of Buckingham Palace. These were loaned by George V and his sons for the games and a garden party whilst the family was away.³⁷

The cash raised from the accompanying collections enabled Grantham to post stoolball sets to various English hospitals and also to army hospitals for the less severely wounded in France, where it offered a useful means of prompting the more rapid return of convalescents to the trenches. Whilst Grantham was accredited in 1918 with 'a popular revival of Merrie England' the game was now being used for very un-merry purposes.³⁸ One commentator was more instrumental — the wounded, he claimed, 'will find in it plenty of harmless and innocent recreations plus a good deal of that fighting spirit which appeals to all of them so irresistibly at the moment. It is also a good game to teach our women and girls engaged in war work'.³⁹

This unlikely addition to the demands of total war found other customers. From the Front, a sergeant in the 1st Battalion of the Norfolks described it as ideal for play, 'on rough ground,

dotted with shell holes, quite close to the trenches', with entrenching tools as bats.⁴⁰ The chaplain of a Guards battalion, responsible for entertainments, wanted to teach it for play in rest periods.⁴¹ Perhaps the most surprising was an officer in the 7th Australian Infantry Brigade who praised this former women's game as a useful addition to the repertoire of masculinity, with qualifications; 'I am afraid, however, that at the moment everyone is much too engaged in Boche-strafting to have much time . . . later in the year when the fighting season is over we hope to have the opportunity for further games'.⁴² This was a new twist on seasonality.

The war's end saw a shift in Grantham's focus, although the game's place in the charitable calendar remained until the next war when its aged proponent tried unsuccessfully to revive it for casualty therapy. Royalty continued to support the fund-raising but a more active interwar part was played by Winnington-Ingram, the pan-athletic bishop of London. He played in gaiters, apron and shirt-sleeves or cricket whites and a flat cap but failed to enthuse his diocesan clergy to take the game up.⁴³ Grantham persuaded Mrs Lloyd George to play at Chailey in a Welsh team in which she was the only one not wearing national costume; he also cajoled the young Duke of Norfolk into trying his hand.⁴⁴

Grantham's abundant energy was now used in a new crusade to popularize the game. His objectives were held in uneasy tension. They involved a revival of stoolball as a mixed-gender or male activity on a scale designed to make it a mass pursuit which would spread throughout the Empire and beyond. In actuality it was a virtual re-invention rather than a revival and Grantham was never slow to parade his own role in this. He endowed it with the drive which the Victorian apostles of manly sports had employed, but he also became entangled increasingly in a Merrie England tableau which eventually proved counter-productive.

His organizing abilities resulted in a controversial national governing body, the Stoolball Association of Great Britain, which he founded in 1923 in league with a fellow-enthusiast, Canon Masters of Kent. It was distinctly evangelistic but with a fragile base; it was Grantham's enthusiasm which held it together and it reflected both his ebullience and the weaknesses of his character.⁴⁵

The game was promoted as easy to learn, cheap to take up, playable at any age from seven to 77, and by both sexes. As such it would contribute to



Fig. 4. Stoolball reviver — W. W. Grantham in smock and beaver.

physical and moral health and to 'the team spirit which may almost be said to have been discovered by the Anglo-Saxon people'.⁴⁶

This provoked a positive response. By the mid-1920s there were some 500 clubs, 250 of them in Sussex. A decade later there were claims of 1000; the game was played in Lancashire, Norfolk, Staffordshire and the Home Counties. Grantham tried to provide a recruitment base in schools, and East Sussex and London both developed school leagues, with county shields for annual tournaments; one was embroidered by Mrs Grantham. Nottingham took it up, using boys in its handicraft training centres to make the bats for girls to play. Huddersfield had 600 pupil players. It was played by both sexes in primary schools, but only by girls in elementary schools. By the 1930s it was commonly claimed that the grammar (or secondary) schools regarded it as socially inferior and there were frequent complaints that the scholarship system robbed competitions of

their best girl players as they matured.⁴⁷

Grantham continued to field teams of upper and upper-middle class males and I shall return to the tensions surrounding this. He talked on BBC radio about the game, took part in a sound movie and demonstrated it on the embryonic television service at Alexandra Palace in 1939. He travelled extensively for recreation and business — hence the 23,000 railway tickets — and invariably took sets and rules along with him. Between the wars he cajoled locals and expatriates into playing in Geneva, Iceland, Greenland, the United States, Chile, the Caribbean, South Africa, Japan and Vladivostok, as well as during long halts on the trans-Siberian railway. For transoceanic voyages he developed a deck version and there were few of his voyages where he did not end up on the ship's entertainments committee.⁴⁸ There was some minor take-up in the Dominions but there were elements in the game's Englishness which made transferability difficult and this was exacerbated by the way in which its apparent simplicity was increasingly shrouded in a patriotic pseudo-ruralism of which Grantham became a virtual caricature. Because of his actions stoolball came to typify a mildly dotty Englishness rooted in a near-mythical Sussex.

The immediate post-war growth fostered doggerel verse and some banal songs based on the Edwardian fantasy anthem, 'Sussex by the Sea':

We play in Leagues and Cup Ties,
Just like all other clubs do,
For handsome silver trophies,
And we play County Matches too.⁴⁹

Grantham's rôle as a South Saxon has already been noted but it took a new direction when he became a key figure of the new Society of Sussex Downsmen, founded in 1923 to encourage the county's preservation against the likes of Peacehaven. Grantham soon founded a stoolball section. As part of his romanticizing of a supposedly secret county, he took to wearing a black linen Sussex smock, the idealized garb of Victorian labourers and shepherds, which Mrs Grantham made and embroidered for him. He played and umpired in it, together with a beaver hat, wearing it increasingly to address public meetings and dinners and on his foreign travels.⁵⁰

He persuaded his fellow Downsmen to don similar ones and the Society's team played its matches so attired, travelling from railway station to ground in specially-hired and decorated farmers' drays.⁵¹ The press rarely pictured Grantham

thereafter without his smock. Thus dressed, the team was filmed by the Ideal Film Company, 'In the days of Merrie England', at his manor in 1929, a paradoxical juxtaposition with the media he exploited so systematically.⁵² As an antidote to modernism he offered, 'Old fashioned English games instead of jazz'. 'Young women in the drapery shops of Brighton are being invited' to give up the cinema for 'old-fashioned games on the greens, camping rambles and the revival of Sussex crafts'.⁵³ Almost incredibly, some of them joined in, at least those who joined the morally prophylactic stoolball clubs sponsored by churches and chapels.

There was one area where Grantham's energies attracted participants whose observations of Englishness were to have profound and far from desirable effects. Between the wars he was cultivated by Japanese diplomats in London and responded enthusiastically. They introduced him to professors of physical education anxious to introduce western games into their country as part of an accelerating modernization process. Japanese individuals and teams played in English fixtures and supported Grantham's charities. But there was an ambivalence. He responded to their polite interest in traditional cultures by pressing the antiquarian aspects of the game.⁵⁴ There is a remarkable photograph of Grantham in a smock demonstrating the use of a bat to a clearly apprehensive Japanese diplomat's wife dressed in the most recent Paris fashions; the cultural icons jar on the observer (Fig. 5). Grantham seems to have avoided the sort of public statements of fascism which scarred many of those in other parts of the Folk revival, but one can only speculate as to what extent the antiquarianism he proffered so assiduously was considered by Japanese Intelligence when it planned its attacks upon a clearly effete and decadent British Empire.

SUSSEX RULES

Grantham dominates any account of the game's interwar history, but he also masks developments closer to its older patterns and these revealed a never fully-resolved tension over gender-restricted play and the exercise of traditional local leadership. Grantham claimed occasionally that stoolball was a woman's invention, but all his efforts were aimed towards mixed play at a serious level and a standardized national organization which he dominated. This offended the social maternalists



Fig. 5. Cultural transmission of culture clash?: W. W. Grantham's Japanese diplomacy.

who saw it as primarily for women and also those whose identity with a regional culture was as much concerned with local autonomy as with male romanticism.

Grantham's activities were paralleled almost immediately after the Armistice by a revival of Sussex play by its Edwardian matriarchs who also promoted its 1920s extension as a bastion against the urbanisation of village life. The burgeoning Women's Institutes were often associated with clubs as were women's branches of ex-service organizations.⁵⁵ Local leagues, such as the Cuckmere Valley or Chelwood Gate, emerged in tandem with a revived Sussex Federation. Financed by whist drives, jumble sales and dances they extended the associative range of village women's lives. The simpler dress of the post-war period undoubtedly made the game easier to play — by the 1930s short tennis dresses were a feature of most team uniforms. In addition, a number of institutional teams

appeared, such as that for the nurses of Hellingly Mental Hospital.

The physical and moral values underpinning this were a scarcely muted revival of the case familiar to students of women's sport before 1914. In the words of one writer in 1934,

Cricket never has been and never can be a women's game, for they cannot endure the prolonged fatigue, nor with impunity bear the blows of the ball. . . during the summer they have had capital matches, pleasant tea parties and have enjoyed fresh places.⁵⁶

The idyllic marched with the useful for women who were told repeatedly, including by the vice-president of the Women's Amateur Athletic Association, that 'motherhood is her very function in life'.⁵⁷ It also offered therapy for those hard-pressed by being mothers.

Many of these participants from all social levels welcomed the revival but balked at the self-declaration of a male figurehead and systematic mixed play. For them the clubs, games and the social

apparatus were a limited space in which female control was essential. Men might umpire and be admitted to annual dances and prize awards but they should stay out otherwise. This division remained strong in local situations where stoolball occupied cricket's peripheral spaces.

The unease came into the open at the same time that Grantham founded his national association. The gentry ladies had extended their social leadership by organizing inter-county matches between Kent and Sussex. In 1922 one of these resulted in an acerbic dispute over the placing of umpires and catching out. The Sussex people insisted that, as the oldest organization, inter-county matches must follow their rules. Kent pleaded ignorance, but both Canon Masters and Grantham intervened to demand a standard national rule in which the Sussex 'clean catch' would be replaced by the varieties initially allowed for Grantham's male invalids.⁵⁸

A furious row erupted in which women's self-determination, interpretations of historical precedence and deep personal animosity played

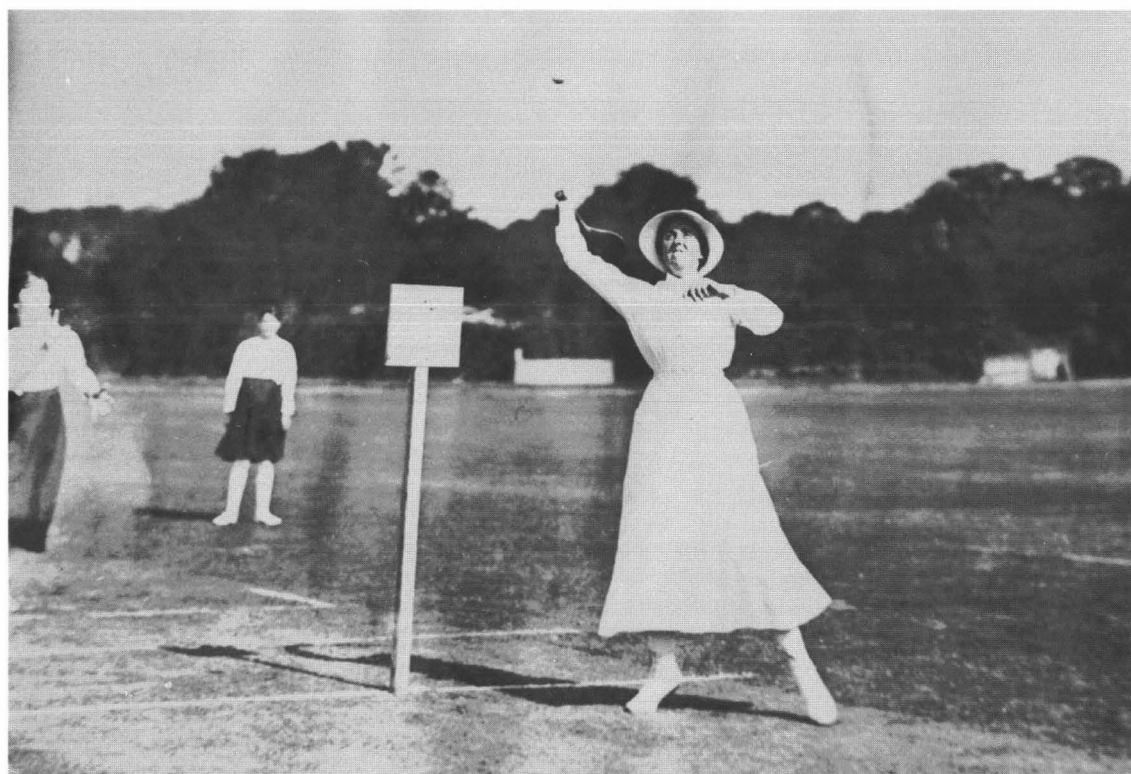


Fig. 6. 1920s action: the athletic woman.

almost equal parts. Opposition to Grantham was coordinated by the leader of the Sussex Federation, Mrs John Blencowe, who as Miss G. Brand of Glynde, had been a leading prewar player. She was also one of Grantham's neighbours in the Chailey area. She engineered his removal without warning from the Sussex area council in 1923, accusing him of disloyalty to the county and the game.⁵⁹ He rejoindered unwisely that the game had wider national roots, remarkable in view of his customary Sussex emphases.⁶⁰ A sharp correspondence ensued between the two which Grantham made worse when he published it in the local and national press. He then claimed that the Sussex federation was singularly unrepresentative of its local game, attracting only a quarter of the county's clubs.⁶¹ The row dragged on, with Sussex refusing repeatedly to join the national body; delegates from the area continued to attend it but only as individual members. Grantham and his friends organized intercounty matches but they did not use the Sussex rules. At one point in 1927 Mrs Blencowe proposed a Women's Stoolball Association for the county with the hope that it would become the genuine national body, but there were few takers for any further level of organization and conflict.⁶²

The issue was never really resolved and the game operated at several separate organizational levels throughout the 1930s. Grantham's male-dominated mixed game existed uneasily alongside a Sussex/Surrey network which ran its own affairs. On the other hand, many village and institutional clubs were only interested in a world of friendlies and sub-regional leagues that ignored their would-be leaders, extending the older base without becoming involved in power disputes away from home.

The phoney war of 1939–40 prompted a brief public burst of fund-raising games played by aristocratic ladies in the Temple gardens.⁶³ Grantham and Masters both died in 1942, the national body died with them and war work diverted the energies of the social maternalists.

SURVIVALS

The post-war story has to be brief. Life flickered back in the villages of Kent, Surrey, Sussex and Hampshire, where *Country Life* claimed the 'memory of rural

England . . . is tenacious';⁶⁴ the emphasis was firmly on local leagues. In the late 1970s a new National Stoolball Association was formed, but the game is effectively limited to the south-eastern crescent where 13 affiliated districts playing in 18 leagues represent just over 200 clubs.⁶⁵ But there are others. In one issue of the *Sussex Express* in 1993, for instance, the Eastbourne–Hailsham area fixtures listed 34 clubs not in the Association's list. Many of them are institutional rather than community-based: Anglo-Dutch Meat and Apple Windows in Eastbourne for example.⁶⁶ Yet even these seem to fit what one 1980s' observer described as 'districts with a lively folk memory'.⁶⁷

A small schools league still exists in East Sussex and the game is sampled as part of the National Curriculum's physical education menu in some other schools. At adult level it is threatened by increasingly high ground costs and the public indemnity insurance now demanded where it uses local-authority controlled space. It also suffers from the changing education and mobility patterns of many girls in their late teens. Sussex still requires a 'clean catch' rule at odds with its neighbours; it is tolerated with resigned shrugs. And the gender issue still divides. Four of the affiliated leagues are officially mixed and it is accepted that this is often essential for the game's survival in smaller villages where enough women cannot be persuaded to form a single-sex team. A substantial number of the active players of all ages, however, refuses to play in any game with men. It is still gently contested territory.

Acknowledgements

I am very grateful for the help given in the preparation of this paper by the staffs of the Sussex Archaeological Society's Library and the East Sussex Record Office. I also owe thanks to Mrs Daphne Hunt of Barcombe and Mrs Delia Saunders, secretary of the National Stoolball Association, for sharing their enthusiasm and deep knowledge of the game with me. Earlier versions of this paper were read at the ISHPES conference, 'The World of Games', in Berlin in June 1993, at the history work-in-progress seminar of the University of Sussex and at the Victorian and Edwardian seminar of the Institute of Historical Research; I am grateful for the additional insights and leads offered there.

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NOTES

Much of the material quoted was assembled as manuscripts, cuttings and ephemera by W. W. Grantham in two substantial scrapbooks and a box, now held in the library of the Sussex Archaeological Society, Barbican House, Lewes. The material in the scrapbooks is organized more or less chronologically, but the cuttings are not always ascribed. For convenience they are referred to in the references as 'G. S.'.

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Short articles

New discoveries on Bullock Down, near Eastbourne, East Sussex

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Since the publication of the main Bullock Down multiperiod landscape project (Drewett 1982), various new discoveries of archaeological material have been made on Bullock Down Farm. Some of these discoveries have already been reported (Rudling 1987; Rudling 1988; Holgate 1988). This note reports on finds made by the farmer, Mr E. Williams, since 1987. All the finds were made with the aid of a metal detector. The majority of these metal objects were probably associated with the medieval farm site at Kiln Combe (Drewett 1982, 143-90). These finds provide additional information regarding coin loss and material culture associated with the medieval farm.

KILN COMBE

A. FIELD TO THE EAST OF THE MEDIEVAL FARM

(see Drewett 1982, fig. 72)

Copper alloy (Fig. 1)

Romano-British enamelled copper alloy brooch or *fibula* of the tapering bow type (Collingwood & Richmond 1969, 295: Group M). This type of brooch is a derivative of the classic pre-Roman Colchester type. The Bullock Down example is probably a hybrid of two sub-divisions of the tapering bow type, i.e. the T-shaped and Headstud sub-types (Hattatt 1982). The upper bow has four lozenge shaped enamel cells in line (the cells contain alternating blue and yellow enamel), below a circular (empty) enamel cell headstud. A prominent 'button' at bow centre separates the upper bow from the leg, which

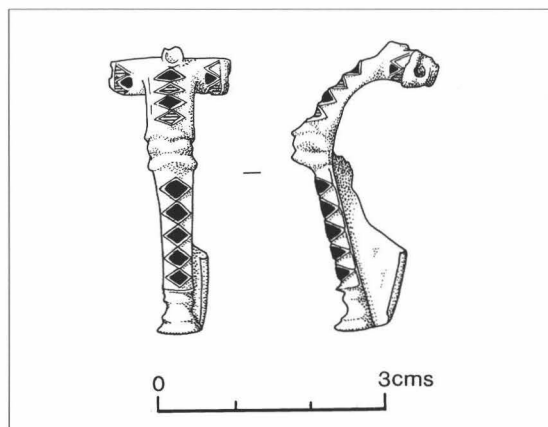


Fig. 1. Bullock Down. Romano-British copper alloy brooch.

has five lozenge shaped blue enamel cells in line. Below the leg is a small foot knob; the catchplate is of the solid variety. The short wings are decorated with triangular blue and yellow enamel cells. The pin/spring is missing. Enamelled brooches of this general type are dated to the late 1st and 2nd centuries. Other Roman finds from this field include pottery and coins (Rudling 1982, 138: *Site 67*).

B. FIELD INCLUDING THE MEDIEVAL FARM SITE

(Drewett 1982, fig. 72)

Most of the coins were found to the west or north-west of the medieval farm.

Coins

1. Anonymous Saxon Denarial Coinage, c. 680-750, Series L: The 'London' and Connected Types. Type 12. Silver Scaet: 0.94 g; 12 mm diameter; 180° die axis: worn. (Fig. 2).
Obverse: DE [LVNDO]NIA, profile diademed bust right.
Reverse: Standing figure holding two long crosses.
References: North (1980) no. 63; Stewart (1984, 15).

Note: The only other artefact found on Bullock Down which can definitely be attributed to the Saxon period is a silver penny of King Eadgar (Rudling 1988, 243).

2. Henry II, 1154-1189. Silver penny. Cross and crosslets (Tealby) Type (1158-1180). ?Bust A.
Obverse: + HENRI RE[X A]NG, crowned bust facing.
Reverse: + CVDDBE [RT] ON: EV[?ERI], large cross potent with small potent in each angle.
This coin was minted at York by the moneyer Cuthbert.
Reference: type as North (1980) no. 952.

3. Richard I, 1189-1199. Cut halfpenny. Short Cross Coinage. Class 3, c. 1190-c. 1194.
Reverse:]RD, ON.C[(probably the moneyer Ulard of the mint of Canterbury).
References: North (1980) no. 967; Wren (1992, 47).

4. John, 1199-1216. Cut halfpenny. Short Cross Coinage.



Fig. 2. Bullock Down. Saxon silver scaet.

Class 5b, 1204–c. 1208/9.

Reverse: NIC[OLE] (probably either the moneyer Nicole of Kings Lynn or Nicole of York).

Reference: North (1980) no. 970; Wren (1992, 53).

5. John, 1199–1216. Cut halfpenny. Short Cross coinage. Class 5, 1204–c. 1208/9.

Reverse: M[]S. O[] (the moneyer Miles of either the Winchester or Oxford mints).

Reference: North (1980) nos. 969–71; Wren (1992, 51).

6. Short Cross Coinage, 1180–1247. A large fragment from a very worn penny: Class uncertain.

7. Scotland. Late William I and posthumous issue. Cut halfpenny. Short Cross and Stars Coinage, Phase B, c. 1205 (?)–c. 1230.

Obverse: L]E REI WILAM, head left with sceptre.

Reverse: HVE [WALTER], short cross with star in each angle (the Edinburgh and Perth moneyers working jointly).

Reference: Seaby & Purvey (1984) no. 5029.

8. Henry III, 1216–1272. Cut farthing. Long Cross Coinage. Class III a–c, 1248–50.

Reverse:]LCE[(mint: Ilchester).

References: North (1980) nos. 986–8; Wren (1993, 51–3).

9. Edward I/Edward II, 1272–1327. Penny. New Coinage, Class 10c–f, c. 1305–10. Mint of London. Very worn.

Reference: North (1975) nos. 1040–43.

10. Edward II, 1307–1327. Farthing. Class XI, 1310–1314.

Reference: North (1975) no. 1070.

11. Namur (Low Countries), William, 1337–1391. Silver sterling.

Obverse: + GVILELMVS COM[ES], crowned bust facing.

Reverse: NAM VRC ENS IS+, long cross pattée with three pellets in each angle.

Reference: Mayhew (1983) no. 361.

Details of other medieval continental coins found in Sussex have been noted elsewhere (Rudling 1989).

DISCUSSION

The number of medieval coins recovered by both excavation and metal-detecting from the Kiln Combe farm site and the adjacent fields now totals 16 (see also Rudling 1988). The earliest coins are two examples of Henry II's Tealby Coinage (i.e. c. 1158–1180). Six coins (including a Scottish issue) are of the Short Cross Coinage (i.e. c. 1180–c. 1247). There is one example of Henry III's Long Cross Coinage (i.e. c. 1247–1272). Five examples of the Edwardian New Coinage span the period c. 1279–1327. In addition, there are two continental coins of the period c. 1230–c. 1391. As one might expect, the coin losses at Kiln Combe include a high number (10) of small, low value, fractional halfpennies (4) and farthings (2), and round farthings (4).

The coin finds from Kiln Combe are also of interest regarding the dating of the medieval farm/s. The excavations of these settlement areas resulted in the discovery of dating evidence (e.g. pottery, but only one coin) which has been

interpreted as indicating occupation during the period c. 1250–1550 (Drewett 1982, 143). The new coin finds, which include eight coins dating to the period c. 1158–c. 1247, may indicate that the start date for occupation at Kiln Combe could be revised to c. 1200. Also of interest, especially since the area has been thoroughly searched with the use of metal detectors, is the lack of any coins issued during the period c. 1400–1550. This situation may indicate a decline in the supply of coinage to the farm.

LEAD TOKENS AND COUNTERS

1. Elizabeth I, 1558–1603. Cast counter. c. 1574. Diameter: 20 mm. Weight: 2.9 g.

Obverse: Two-headed eagle.

Reverse: [GOD] SAVE [THE] QUENE, rose, crowned, between E.R.

The exact nature and purpose of these pieces is unknown.

Reference: Hawkins (1885, 123) 68.

2. Token, 20 × 18 mm (i.e. oval). Illegible.

3. Token. 19 mm diameter. Illegible.

4. Token (large fragment). 14 mm diameter. Illegible.

COPPER ALLOY OBJECTS (Figs. 3 & 4)

Note: Most references are to the Museum of London thematic volume: *Dress Accessories c. 1150–c. 1450* (Egan & Pritchard 1991).

1. Plain annular brooch or buckle. The pin which is missing, would have been attached to the constriction in the frame. Cf. *Dress Accessories* 1307; Drewett (1982, fig. 100, no. 1). c. 1350–c. 1400.

2. Oval buckle with ornate outside edge. Two knobs flank five grooves; pin missing. Cf. *Dress Accessories* 289 and 292; Marshall (1986) Type 1B. c. 1250–c. 1350.

3. Oval buckle with ornate outside edge. Two prominent knobs flank a groove; pin missing. Cf. *Dress Accessories* 299; Marshall (1986) Type 1B. c. 1250–c. 1400.

4. Oval buckle with ornate outside edge. Two knobs flank a constriction, presumably for a missing roller; pin missing. Cf. *Dress Accessories* 298; Marshall (1986) Type 1B. c. 1250–c. 1400.

5. Oval buckle with offset and narrowed bar, groove for pin which is missing. Cf. *Dress Accessories* 277; Marshall (1986) Type 1F. c. 1350–c. 1500.

6. Oval buckle with pointed loop and forked spacer plate; the separate top and bottom plates are missing; notch for missing pin. Cf. *Dress Accessories* 324; Drewett (1982, fig. 100, no. 2); Marshall (1986) Type 1G. c. 1350–c. 1400.

7. Circular buckle with integral plate and traces of gilding. The plate, which is broken, had at least one rivet hole; part of the pin is missing. Cf. *Dress Accessories* 320–21; Marshall (1986) Type 1D. c. 1250–c. 1400.

8. Double oval buckle with oblique grooving; pin missing. Cf.

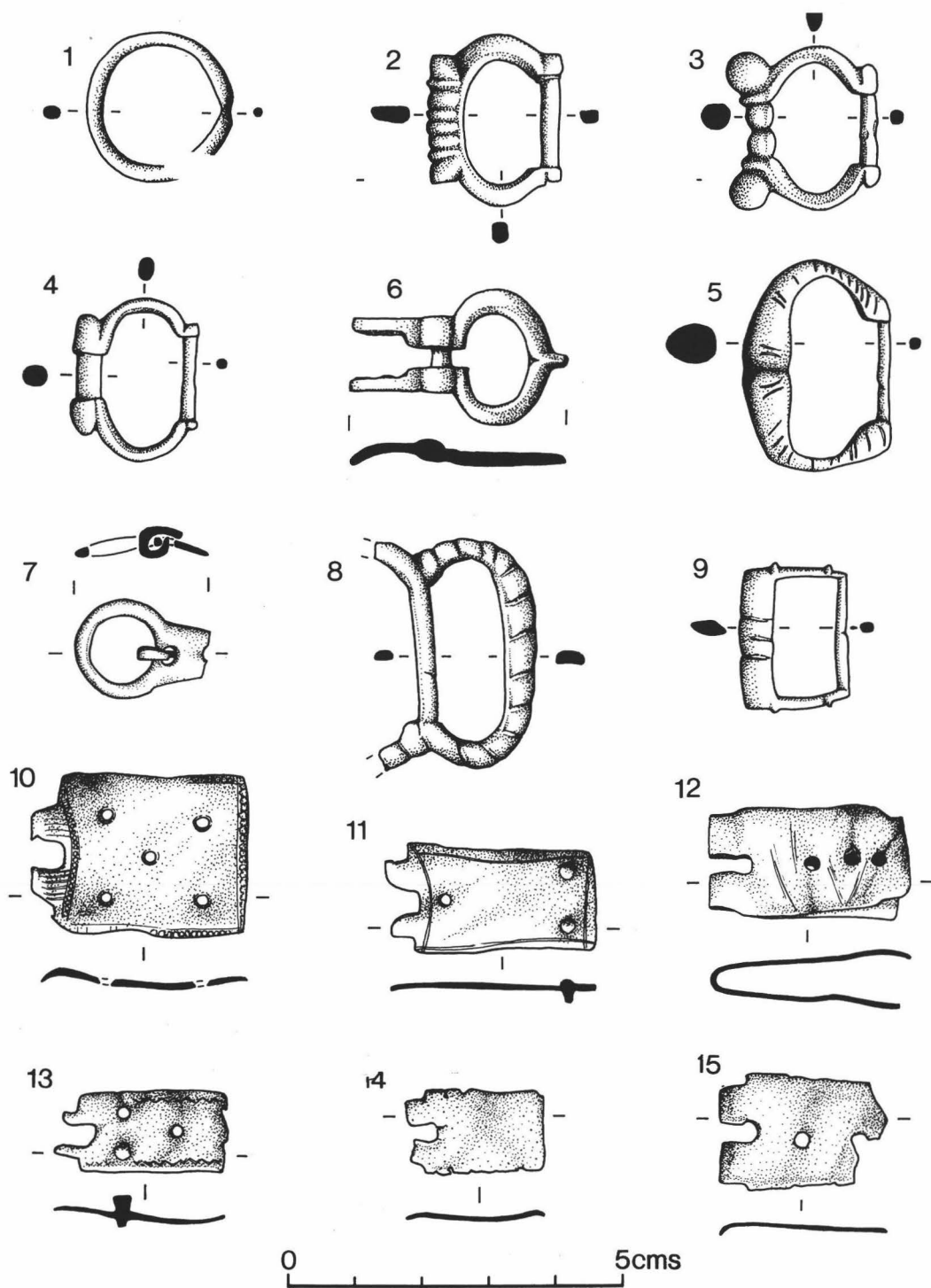


Fig. 3. Bullock Down. Copper alloy objects.

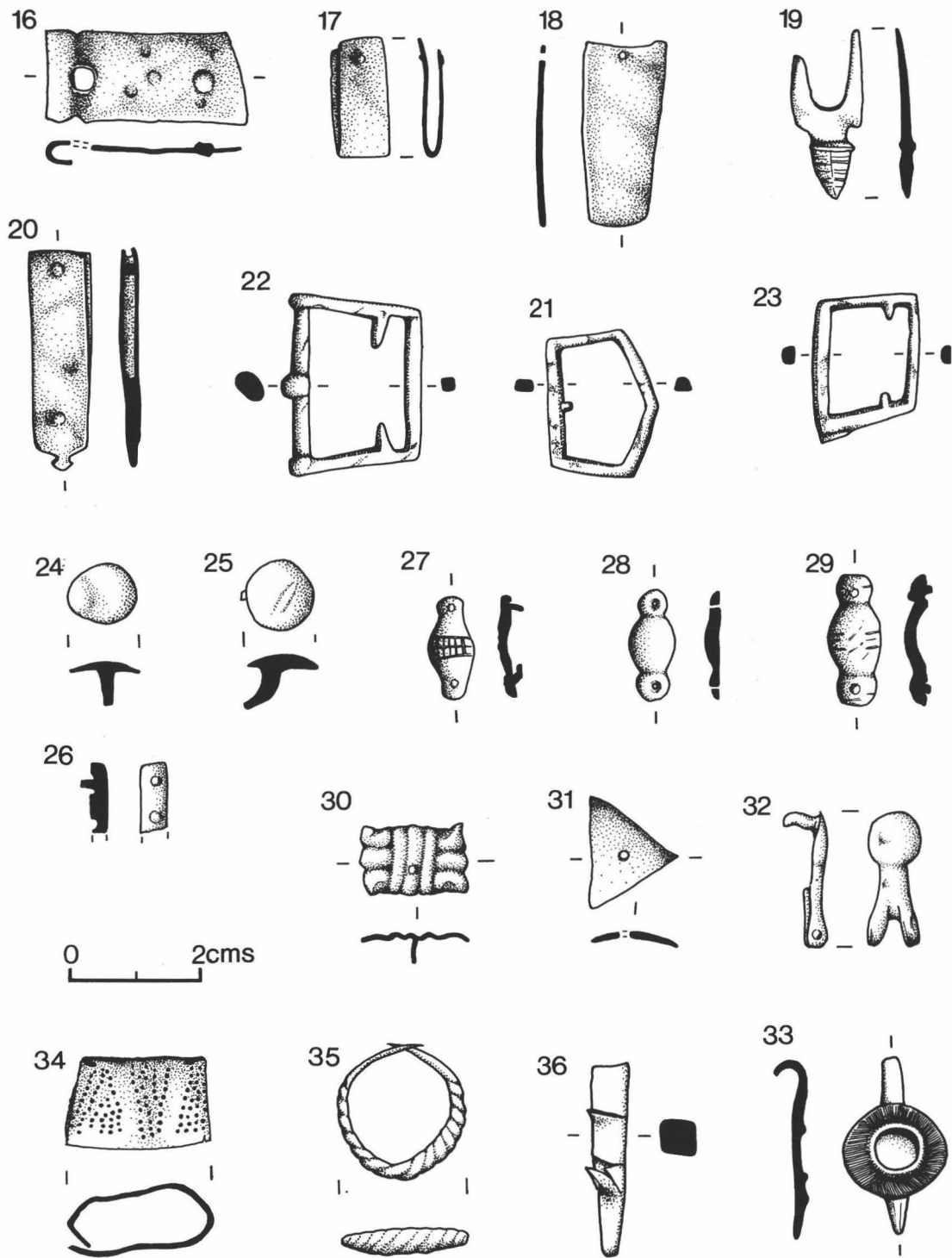


Fig. 4. Bullock Down. Copper alloy objects.

Dress Accessories 342; Marshall (1986) Type IIIC. c. 1350–c. 1450.

9. Rectangular buckle with (missing) plates. The frame has a ridge near each corner and three grooves on its thick outside edge; pin missing. Cf. *Dress Accessories* 437; Marshall (1986) type 1K. c. 1350–c. 1400.

10. Buckle plate broken off at fold; recessed for the buckle frame; slot for the pin; holes for five missing rivets; border of punched pellets; traces of gilt on the upper surface. Cf. *Dress Accessories* 499–530.

11. Buckle plate broken off at fold; recessed for the buckle frame; slot for the pin; holes for three rivets, two of which survived; border of engraved lines.

12. Buckle plate; recessed for the buckle frame; slot for the pin; holes for three missing rivets.

13. Buckle plates broken off at fold; recessed for the buckle frame; slot for the pin; holes for three rivets, one of which survives; border of engraved wavy lines; traces of gilt.

14. Buckle plate broken off at fold; recessed for the buckle frame; slot for the pin.

15. Buckle plate broken off at fold; recessed for the buckle frame; slot for the pin; holes for two missing rivets.

16. Buckle plate broken off at fold; holes for the pin and the single iron rivet. Cf. *Dress Accessories* 310.

17. Strap-end with single rivet.

18. Strap-end with rivet hole.

19. Forked spacer for acorn-type composite strap-end; collared knob. Cf. *Dress Accessories* 680. c. 1350–c. 1400.

20. Composite strap-end with sheet spacer; two rivets, one for strap and one for spacer; angled end. Cf. *Dress Accessories* 696–701. c. 1350–c. 1400

21. Five-sided arched strap loop with internal rivet. Cf. *Dress Accessories* 1252; Drewett (1992, fig. 80, no. 40). c. 1350–c. 1400.

22. Trapezoidal strap loop with two opposed internal projections; knobs in middle and at corners of top. Cf. *Dress Accessories* 1263; Marshall (1986) Type IVA. c. 1250–c. 1400.

23. Trapezoidal strap loop with two opposed internal projections. Cf. *Dress Accessories* 1258; Drewett (1982, fig. 100, no. 3); Marshall (1986) Type IVA. c. 1250–c. 1400.

24–25. Circular mount/stud, flat with integral rivets. Cf. *Dress Accessories* 797–8.

26. Bar-mount with two rivets. Cf. *Dress Accessories* 1138; Drewett (1982, fig. 81, nos. 36–7).

27–28. Bar-mounts with terminal and central lobes; each has had two rivets. Incised decoration. Cf. *Dress Accessories* 1154–61; Drewett (1982, fig. 81, no. 38).

30. Rectangular mount with corrugated profile; single rivet.

31. Triangular mount; single rivet hole.

32. Mount for pendant or bell, with stud for fastening to harness. Cf. Saunders & Saunders (1988, fig. 4, no. 25). c. 1200–1400.

33. ?Harness pendant; incised decoration; traces of gilt; central recess for ?paste or jewel setting

34. Open-ended thimble; decoration in the form of six triangles of punched indentations. Cf. Bailey (1993, 13, nos. 9 & 10). c. 1400–c. 1500.

35. ?Earring made of two strands of wire twisted and beaten together; each end tapers to a fine point. ?Roman.

36. Piece of tapering bar with cut/chop marks.

Other metalwork finds include copper alloy sheet fragments and part of a copper alloy vessel. Finds of lead also include several droplets and one sheet fragment.

FIELD NO. 1000

COIN

George III. Gold half-guinea, 1785. Fourth Head. This find may be associated with the Napoleonic 'Camp' (Holgate 1988, 29).

Acknowledgements

I would like to thank Mr E. Williams who kindly loaned me his recent discoveries. Mrs J. Russell produced the illustrations of the copper alloy objects.

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Burpham village hall

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During the rebuilding of the village hall at Burpham, West Sussex in 1994 the opportunity arose for the Field Archaeology Unit (Institute of Archaeology) to carry out a small-scale excavation within the boundaries of the 10th-century Saxon burh. Burpham is listed among the forts in the Burghal Hidage and the village hall lies within the area of the Scheduled Ancient Monument (county no. 48). No archaeological investigation has been carried out within the burh, with the exception of excavations undertaken in 1972/3 in advance of the construction of the old village hall and car park (Sutermeister 1976), and as the footings for the new building were likely to destroy all archaeological remains, excavations were initiated on areas to be affected.

Two areas were excavated to the top of the underlying chalk by hand in an attempt to identify and record features cut into the bedrock (Figs. 1 & 2). The first area measured 5.9 m × 4.7 m. The chalk bedrock was overlain by building rubble dating from the original building in the 1970s, which was in

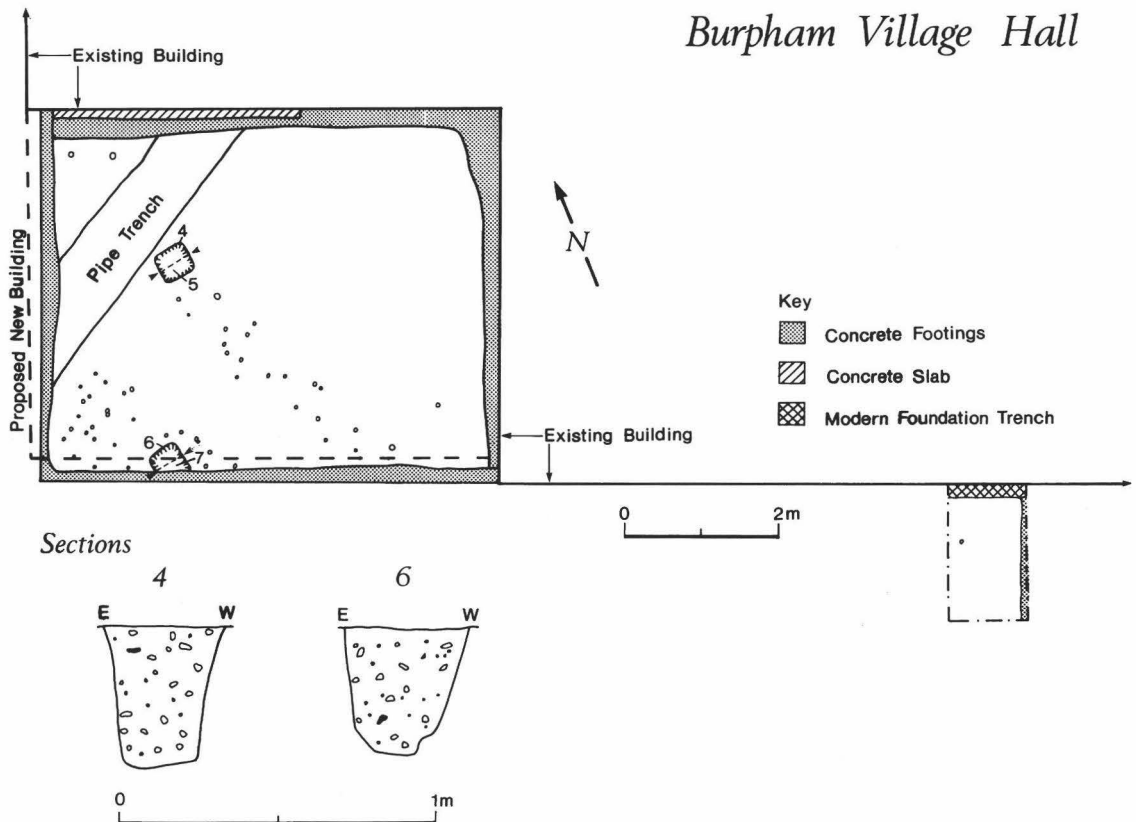


Fig. 2. Plan and sections of excavated features.

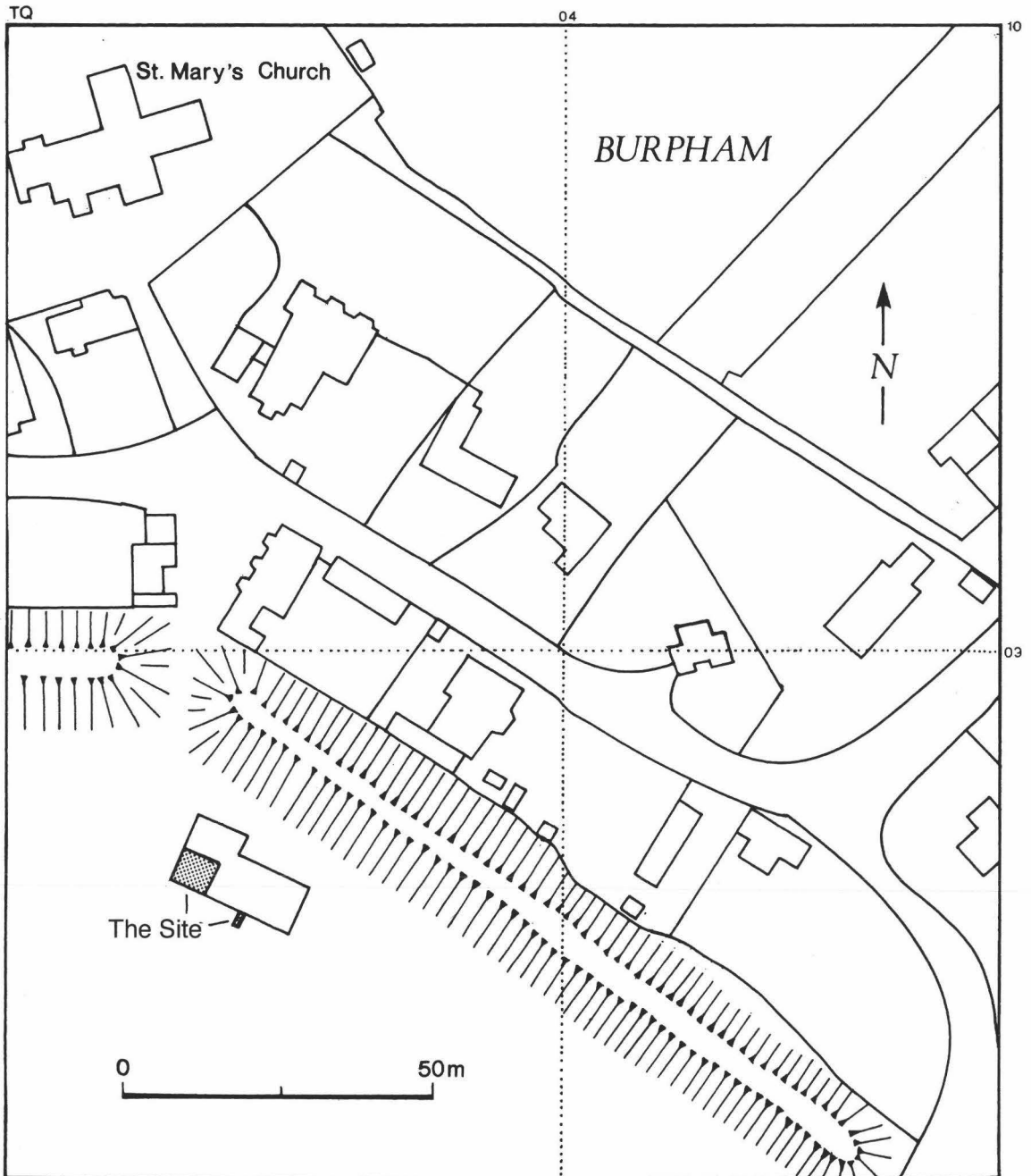


Fig. 1. Site location.

turn overlain by paving slabs. The second area measured 1.8 m × 1.0 m and was turfed, but again building rubble was found between the present ground surface and the natural chalk. In both areas an accumulation of *c.* 700 mm was removed revealing a number of features cut into the chalk.

The larger of the areas contained two square post-holes and a total of 51 stake-holes (Fig. 2). The post-holes, which were each nearly 0.5 m deep contained the same material which made up the overlying rubble, suggesting the features had been backfilled in the early 1970s. The stake-holes

contained no datable material, so the relationship between the two sets of features is difficult to ascertain, but some of the stake-holes appear to cluster near to one of the post-holes, while another set show a linear pattern which runs through the second post-hole, perhaps indicating a fence-line. The post-holes themselves were both larger and deeper than those recorded by Sutermeister (1976) and no stake-holes were recorded in the 1970s excavation.

The smaller area contained only one stake-hole and was heavily disturbed by modern foundations. No artefacts were recovered either from the rubble or from the fully excavated features. The complete absence of dating evidence makes interpretation of the cut-features difficult. The surface of the chalk was heavily scored by plough furrows; it was under cultivation in 1911 when the site was recorded by the Rev. Downman (British Library, Add. MS. 38601, f. 24r.). In fact none of the features encountered on the site can be dated with any level of confidence, and the dating of the possible fence-line to Saxon occupation of the 10th century would be speculative in the extreme.

No firm conclusions can be drawn from the excavations at Burpham village hall, but it is interesting to note that Sutermeister (1976) also found no trace of structures in the southern part of her original site. The two 'post-holes' remain enigmatic, and it is unfortunate that no archive of the 1970s excavation has survived, as a comparison of the original plans with those produced by the present work might have proved informative. However, the excavation did establish that no major archaeological remains were to be destroyed by the construction of a new village hall.

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A drawing of the Long Man of Wilmington, East Sussex, by the Revd D. T. Powell

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Two further pieces of evidence on the Long Man have come to light since I published a 1710 drawing of this chalk hill figure at Wilmington, East Sussex (TQ 542034) and reviewed all the then known documentary evidence for its history.¹

The first is in the same archive as the 1710 drawing, in which I have now found one (and one only) textual reference to the Long Man. In 1765 the Lady of the Manor's officials were negotiating the terms of a new lease for Wilmington Court Farm. The steward asked a neighbouring farmer to make a valuation. This he evidently did from his own observation and knowledge, rather than by amending one of the existing surveys, because the names, sizes and order of the fields differ from earlier lists in the estate records. In place of Court Laine, nearly 64 acres of arable in 1649 and 1682, and lumped in

with Sheep Down at 145 acres in 1710 and 1725, the farmer identified Middle Laine, 28 acres of seeds and tares, the Longman Laine, 28 acres of barley, and the Old Dencher, 9 acres of pasture.² This is the earliest textual reference to the figure, predating Burrell's description of 1781. It confirms W. D. Parish's statement in 1873/4 that the Long Man was the name used locally — which had first appeared in print only in 1858.³ Evidence of the name Long Man being used orally in 1765, but almost invisible in the ossified written record, underlines how unsound it is to draw any inference as to the figure's date from the silence of the documents.

The second piece of new evidence is a drawing of the Long Man in the Society's Library (Fig. 1) which gives the opportunity to publish reference to an uncatalogued collection of antiquarian notes and to a neglected antiquary.⁴ The Reverend David Thomas Powell was born in 1772 or 3, the son of Thomas Powell, esq., of Westminster and the Chestnuts, Tottenham. His obituary, reporting his death on 7 June 1848, records:⁵

In early life, he was a Lieutenant in the 14th Light Dragoons; and an account of his campaign in Cork, Flanders, and Brabant in the year 1794, was an autograph manuscript sold among his library.⁶ He afterwards became a member of Magdalene hall, Oxford [matriculating in March 1798], at which university he received the degree of B.C.L., 12 June 1805.

He was devotedly attached to the study of heraldry and genealogy; and, though we are not aware of his having appeared as an author on those subjects, he spent much time in collecting manuscript materials, and in the continuation of the standard works, of which he possessed an excellent library, as well as in forming collections connected with the history of most of the English counties. All these stores were dispersed by auction by Messrs. Puttick and Simpson of Piccadilly, in the week commencing the 31st of July last . . . Mr. Powell had latterly lived [in Tottenham] in the greatest retirement.

His expertise in heraldry brought him to the notice of Sir Frederic Madden, Keeper of Manuscripts at the British Museum, in 1824, and they established a friendship, discovering that they were distantly related. A letter of 1833 amply confirms the obituary. Powell was adamant that Madden should not acknowledge his assistance in a forthcoming article: 'I have an unaccountable aversion to have my name handed to the public in matters of this sort . . . I think it beneath the dignity of an Ecclesiastic to instruct the public in such matters.'⁷ To the remark, ' . . . one like me who is totally unknown among antiquaries & men of letters and science, whose means are so confin'd', Madden added in the margin, years later: 'This miserly fellow when he died in 1848 left about £30,000 in hard cash to a Hospital.' What Powell did spend on was medieval armorials and church service books, which were among the choice items at the sale of Powell's 'very curious and valuable library'. Madden had hoped to buy some for the nation. But he was outbid by Sir Thomas Phillipps who was buying voraciously for his huge library and with whom any suggestion that he should stand aside for the national library never carried any weight.⁸

Also in the sale were 42 lots of Powell's 'Heraldic and Antiquarian Collections' for English counties and one for Wales. All but eight were bought by Phillipps, Rodd or Thorpe. Nearly all Rodd's purchases Madden bought later in the year

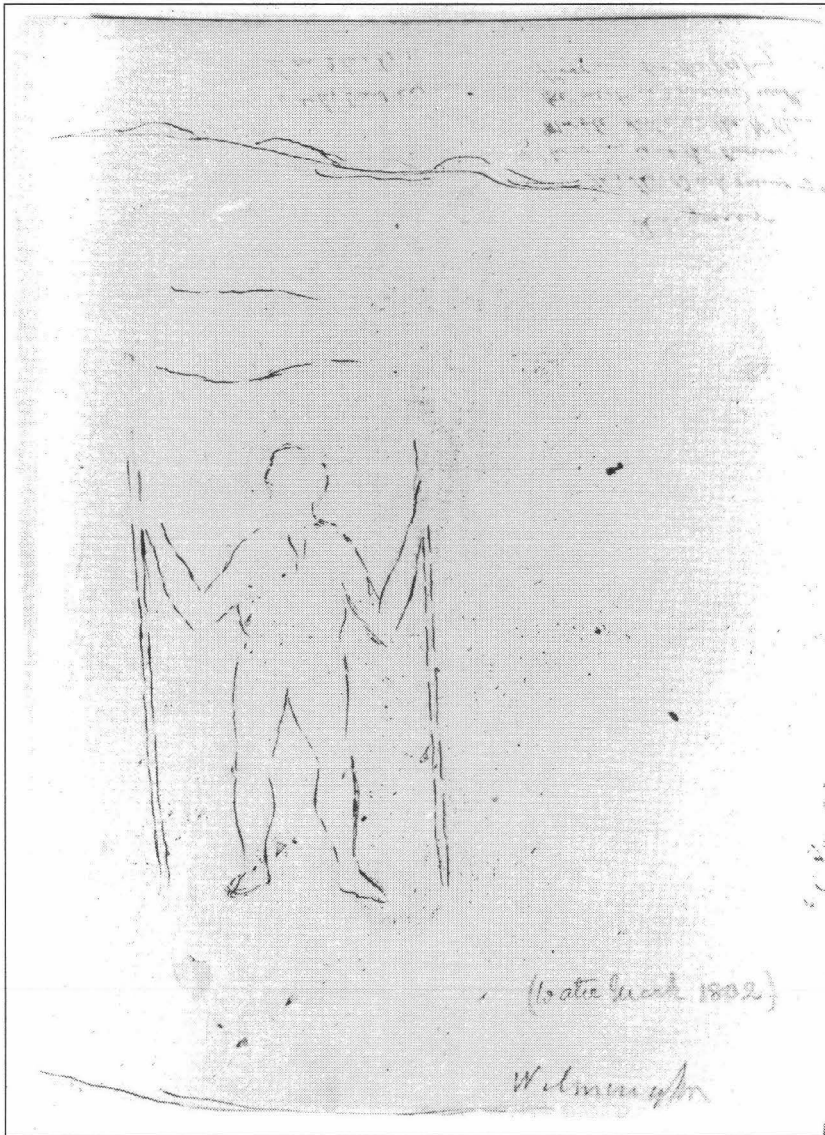


Fig. 1. The Long Man in about 1807 by the Revd David Thomas Powell (Sussex Archaeological Society Library, Accession 9087).

for the Museum, and several more were acquired later, so that the British Library now has 22 of the lots.⁹ For the Sussex lot, no. 840, Phillipps paid £26, far more than any other of these lots fetched. Although the Sussex collection was among the larger, it was not exceptional; there was more material on, for example, Berkshire and Essex, but they went for just over £5 each. Someone else must have been keen to secure it.

The 17 lots which Phillipps bought presumably were sold when his library was dispersed in this century; single lots are known now to be Cardiff Central Library, the Minet Library, Lambeth and the Society's Library. As Phillipps MS 29862, the

Sussex collection was bought from one of the inter-war auctions by W. H. B. Fletcher of Aldwick Manor, Bognor, who died in 1941 when his executors sold it to A. W. F. Fuller.¹⁰ Fuller's widow presented it to the Society in 1970. The collection now comprises five volumes: two small notebooks and three volumes (one probably formed by Fletcher or Fuller, the other two in the 1970s) in which single sheets and small gatherings have been mounted.¹¹

In the letter of 1833, Powell said that 'All the value that I can pretend to in the subjects of architecture, heraldry, sculpture & records arises from my own personal inspections

of all the objects themselves almost all over England & Wales & then giving to and taking from the best authors.' The earliest date I have noticed in his work is May 1800, at Canterbury.¹² The Sussex collection shows how he added to and recopied his original observations over many years, for dated entries range from 1802 to 1842, and one sheet is watermarked 1843. The two small notebooks seem to be the earliest materials, because they contain field notes, mainly entered in the order in which they were made, whereas the other volumes comprise consolidated, fair copy, notes. The subject matter is overwhelmingly churches and their tombs, though castles receive some attention. The Long Man is the only field monument recorded. On the cover of the relevant notebook, he wrote that he made the notes while he was curate to the Revd James Capper, vicar of Wilmington. Powell signed the marriage register for Wilmington only once, in January 1807: at most of the three or four marriages a year Capper officiated, and other clergy figure only in 1804 and 1812.¹³ Powell, so he noted, was curate at Ninfield in 1811. The drawing (Fig. 1) of the Long Man is on paper watermarked 1802 and tipped into the notebook. It may therefore be dated to about 1807.

The accompanying text reads:

On the side of one of the vast hills facing and full in view is a very remarkable figure of a naked man holding a staff in each hand parallel which they say is a scyth & a rake. 'Tis 240 feet in height & some (as I think ignorantly) suppose it done by the convent of Wilmington but I conceive it of a much more remote antiquity. There are certainly signs of masterly drawing when viewed at a proper distance. [Added at a later date:] The above account is confirmed in Topographer vol. III, 376 which add 'it is formed by a pavement of bricks underneath the turf which gives it this difference of colour. In time of snow it is still more visible'. Though we frequently made observation on this extraordinary monument I never heard an item about this brick pavement. I fancy it is [an] utterly fanciful account. [I] mention a fact well worthy of relation, that at the summit of the hill over the figure & in a line with the left arm is a tumulus & for what I know there may be or have been others about it.

To the previous paragraph Powell added that 'now 1831' Capper was still the vicar, so the extra note on the Long Man may be of that date; it is taken from Stebbing Shaw's excursion from Lewes to Eastbourne which was printed in *The Topographer* (1791) and quoted in my previous article. Powell's earlier description of the Long Man was almost identical to Shaw's, no doubt because Capper pointed the figure out to both of them. Powell — who was at least briefly a local resident — rejected the notion of the brick pavement advanced by Shaw — the visitor for a couple of days.

Other drawings show Powell to have been a competent draughtsman (and as an army officer he may have been trained

to record accurately what he saw). His sketch of the Long Man may be compared with those of 1710 (by Rowley) and 1781 (by Burrell), reproduced in my previous article, and those of 1850 and 1873 redrawn by Holden.¹⁴ Powell's positioning of the feet, each pointing outwards, is the same as in the earlier drawings, but different from the 1873/4 restoration seen today in which both feet point to the figure's right. The two later drawings do not show feet but suggest that the left leg is slightly forward of the right, as if the figure is stepping down the hill, and in this respect are similar to Powell's sketch. Both Burrell and Powell drew a 'V' on the upper chest, while the irregularity of the shape of the head which Rowley depicted Powell also hinted at. Powell gave the figure hips which are lacking in the rotund figure depicted in the 18th century and which constitute the most significant evolution in his representation of the Long Man towards that in the restoration.

NOTES

- 1 J. H. Farrant, 'The Long Man of Wilmington, East Sussex: the documentary evidence reviewed', *Sussex Archaeological Collections* **131** (1993), 129–38.
- 2 Devonshire Collections at Chatsworth House, Compton Place Papers P/20/8. Earlier surveys: 1649, Sussex Archaeological Society Library, Budgen Papers **107**; 1682, East Sussex Record Office, SAS/CP 237, and, 1725, AMS 5879/4; 1710, Devonshire Collections, Map 4108.
- 3 [R. J. King], *Handbook for Travellers in Kent and Sussex* (1858), 282. Sussex Archaeological Society Library, MS. notebook, W. D. Parish, 'Wilmington — the Giant 1873'.
- 4 I am grateful to John Bleach for discovering the drawing.
- 5 *Gentleman's Magazine* n.s. **30** (1848), 438–9. J. Venn, *Alumni Oxonienses 1715–1886* (Oxford, c. 1890), 1136.
- 6 Now National Library of Ireland, MS. 1577.
- 7 British Library (hereafter BL), Egerton MS. 2840, f. 44; other letters in MSS. 2837–41.
- 8 A. N. L. Munby, *The Formation of the Phillipps Library from 1841 to 1872* (Cambridge, 1956), 16–17.
- 9 Auction catalogue in BL, Printed Books, S.-C. P. 7(12); Powell's notes in Add. MSS. 17,456–63, 17,694, 17,733 and 19,915. Oxfordshire, bought by Thorpe, is now in the Bodleian Library, MS. Top. Oxon. b. 256.
- 10 *Sussex Archaeological Collections* **83** (1942–43), vii.
- 11 Sussex Archaeological Society Library, Accessions 9087 (including the two notebooks), 9088 and 9089. It should be possible to reconstruct roughly the original order of the material from Powell's digest of 1843 in BL, Add. MS. 22505, ff. 39–42.
- 12 BL, Add. MS. 17733, f. 77.
- 13 East Sussex Record Office, PAR 510/1/1/4.
- 14 E. W. Holden, 'Some notes on the Long Man of Wilmington', *Sussex Archaeological Collections* **109** (1971), 45.

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Notes: Alphabetization is word-by-word. A reference preceded by M indicates a page of microfiche. A page reference in italics indicates an illustration. A page reference containing n indicates a note: e.g. 239n22 refers to note 22 on page 239.

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