THE EXCAVATION OF AN EARLY ROMANO-BRITISH SITE AND PLEISTOCENE LANDFORMS AT NEWHAVEN, SUSSEX

by Martin Bell with a paper on

ROMANO-BRITISH COARSE POTTERY

by C. M. Green

Rescue excavations carried out on three adjoining sites in the town centre of Newhaven are described. Natural was a Clay-with-Flints surface, upon which Pleistocene landforms had developed. These included ice wedge polygons, unsorted stone stripes and cryoturbations. Many such features had a fill of loess, which contained flint flakes as evidence of Palaeolithic occupation.

The Romano-British settlement was bounded by a ditch. Parts of five wooden and stone buildings have been excavated. First occupied in the second half of the first century, the whole site was systematically levelled in the Antonine period. Demolition horizons contained painted wall plaster, opus signinum, box flue tiles, window glass and abundant building stone. A small early villa evidently stood nearby and the structures examined are presumably its outbuildings. Pottery and artifacts are an interesting combination of local ultimate Iron Age and Roman types. Plough-marks were found outside the ditch and the floral and faunal remains suggest a mixed farming strategy. The Medieval and Post-Medieval archaeology and history of the site are discussed.

INTRODUCTION

Excavations in Newhaven were precipitated in 1971 by the construction of the southern section of the town's ring-road and by building development of adjoining land. No archaeological excavations had previously been undertaken in the town. Interest was stimulated in 1962 when an intact grey-ware pot and part of another pot were found when the playground wall of the Meeching County Primary School collapsed.[1] The vessels were in earth behind a retaining wall which abutted South Lane. A. S. Payne and John Norris of Newhaven reported the find to the writer and excavations were started when the site became available in September 1971. After a few days work it became clear that an interesting early Roman site lay largely in the area which was by that time being prepared for the new road and buildings. Thirty four weeks of excavation ensued between September 1971 and September 1974, by which time most of the undisturbed areas available had been excavated. The work was under the aegis of the Brighton and Hove Archaeological Society and financed in 1972-4 by the Department of the Environment (Ancient Monuments Inspectorate).

TOPOGRAPHY (Figures 1 and 2)

Three adjoining areas were excavated centred on TQ446013 near the town centre of Newhaven. They are 180m. S.W. of the new bridge over the Ouse (opened 1974) and 1.3km. upstream from the present mouth of the river. At this point the Chalk downs project slightly into the Ouse

[1] Vessels B.H. 1 and 2 in the pottery report (Fig. 37). These two vessels are housed in Barbican House Museum, Lewes.

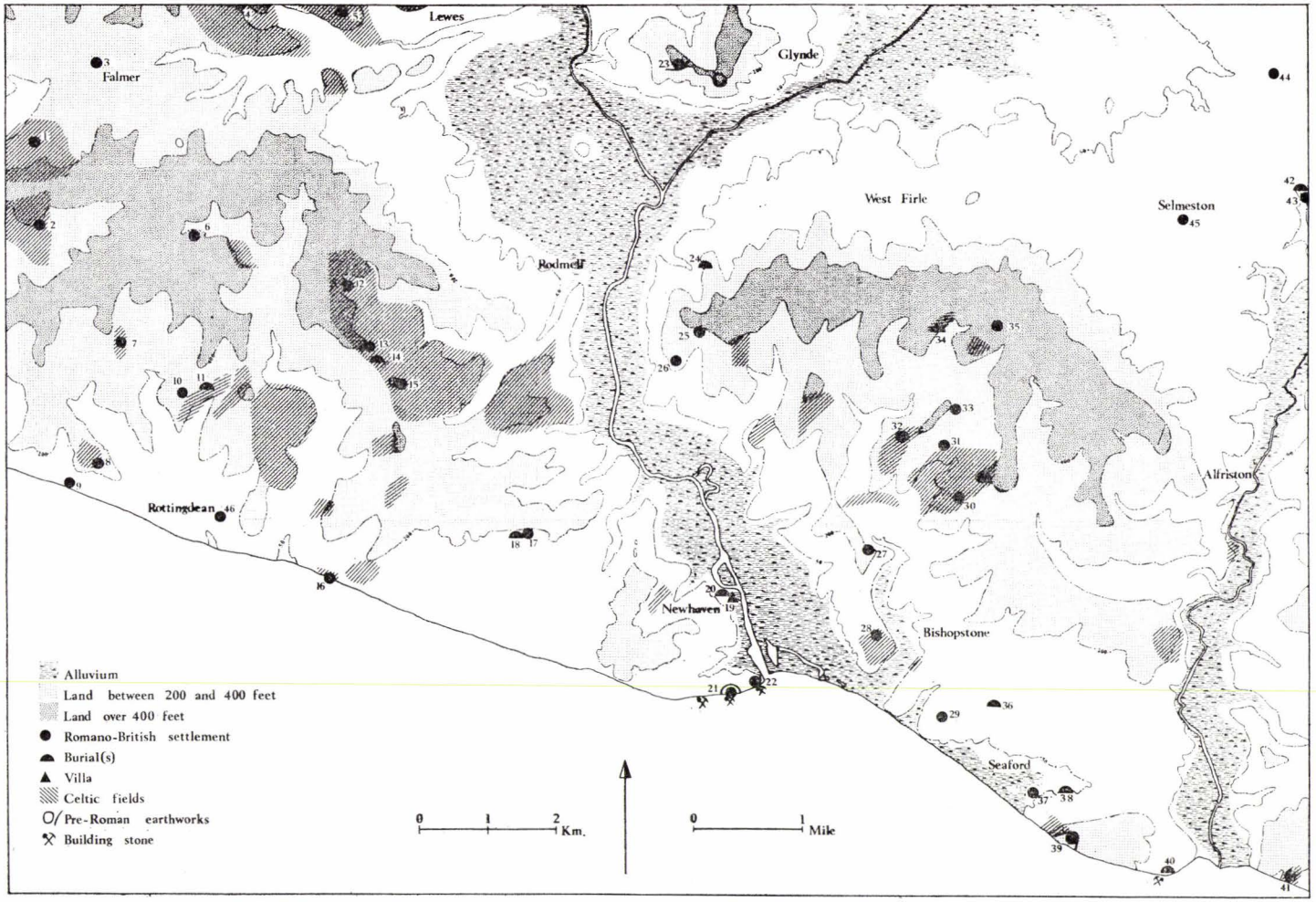

FIG. 1. The Lower Ouse Valley and its environs showing the situation of Newhaven and the Romano-British settlement pattern, contour heights in feet above O.D.

valley, making this a convenient crossing point exploited by a ferry, first recorded in 1332,[1] thence by the construction of a drawbridge in 1784.[2] According to Margary a Romano-British communication route from Newhaven to the Dicker crossed here.[3] The sites are between 3.5m. and 4.6m. O.D. on a Clay-with-Flints deposit overlying Chalk. Approximately 20m. east of the excavations Clay-with-Flints and Chalk give way to alluvium. This change seems to correspond to a break of slope along the west side of Chapel Street, with flood plain alluvium to the east and Clay-with-Flints rising to the downs on the west. A map of Newhaven made *c.* 1810-20 shows what appears to be a bush-covered bank on this line.[4] The bushes mark the edge of a dotted area representing the Ouse meadows. Probably this is the line of a river cliff which is visible elsewhere in the valley, but which has been totally obliterated in this vicinity by the modern town.

The alluvial flats of the Ouse (Fig. 1) mark what was once a flooded estuary. Boreholes 480m. N.E. of the site show that the alluvium is in a Pleistocene buried channel.[5] It was incised to a maximum depth of 25.87m below O.D., presumably during the last (Devensian) glaciation when the sea level is considered to have fallen by as much as 100m.[6] At the base of this channel are gravels of Pleistocene date, above them grey muds with a variable proportion of black organic matter laid down during the Flandrian rise in sea level. Where the valley widens out into the Vale of Brooks south of Lewes, peat was deposited in Atlantic times, only to be buried under accumulations of alluvium when the valley was again covered by open water about 1000 B.C.[7] Lower down the valley at Newhaven boreholes show no sign of Atlantic peat and the area was probably open water throughout prehistoric and early historic times. Alluvium was steadily accumulating until in the sixteenth century A.D. it reached a point when flooding was only periodic and drainage for agriculture became possible.[8] If this is accepted then the site excavated lay on a slight terrace beside open water of the former Ouse estuary.

THE EXCAVATIONS

(Figures 2 and 3, and Plate 2)

Trenches were opened on three sites: No. 1 formerly occupied by the Meeching County Primary Infants School, No. 5 the site of the Meeching County Junior School and No. 6 formerly occupied by Christchurch. These sites produced a Pleistocene surface and parts of an early Romano-British settlement. In addition contractors' trenches were observed on Sites 2, 3, 4 and 7 which were on the Ouse alluvium and did not produce any trace of Romano-British occupation. A good section of the alluvial deposits was observed on Site 7 where they contained inclusions of small pieces of daub, suggesting human activity in the vicinity while the alluvium was being deposited. Site 3 had two shallow Medieval pits cut into the alluvium. At the time of writing (July 1975) the south half of Site 1 and Sites 2-4 have been covered by the ring road, Southway. A Health Centre has been constructed on Site 7 and a Police Station on Site 6. The northern

[1] G. D. Johnston 'Ferries in Sussex' *Sussex Notes & Queries* (abbreviated hereafter to *S.N.Q.*) vol. 16 (1963-7), p. 278.
[2] T. W. Horsfield, *The history; antiquities and topography of the county of Sussex* (Lewes 1835), vol. 1, p. 194.
[3] I. D. Margary, *Roman ways in the Weald*, 3rd ed. (1956) pp. 185-6.
[4] East Sussex Record Office, Langridge M.S. 310.
[5] Details of boreholes kindly provided by East Sussex County Council.
[6] F. W. Shotton, 'The physical background of Britain in the Pleistocene' *Advancement of Science* vol. 19 (1962), p. 193.
[7] D. K. C. Jones, 'The Vale of Brooks' in R. Williams ed. '*A Guide to Sussex Excursions*,' *Instit. of Brit. Geographers Conference* 1971 (Falmer), p. 43.
[8] P. Brandon, 'The origin of Newhaven and the draining of the Lewes and Laughton Levels,' *Sussex Archaeological Collections* (abbreviated hereafter to *S.A.C.*), vol. 109 (1971), pp. 94-106.

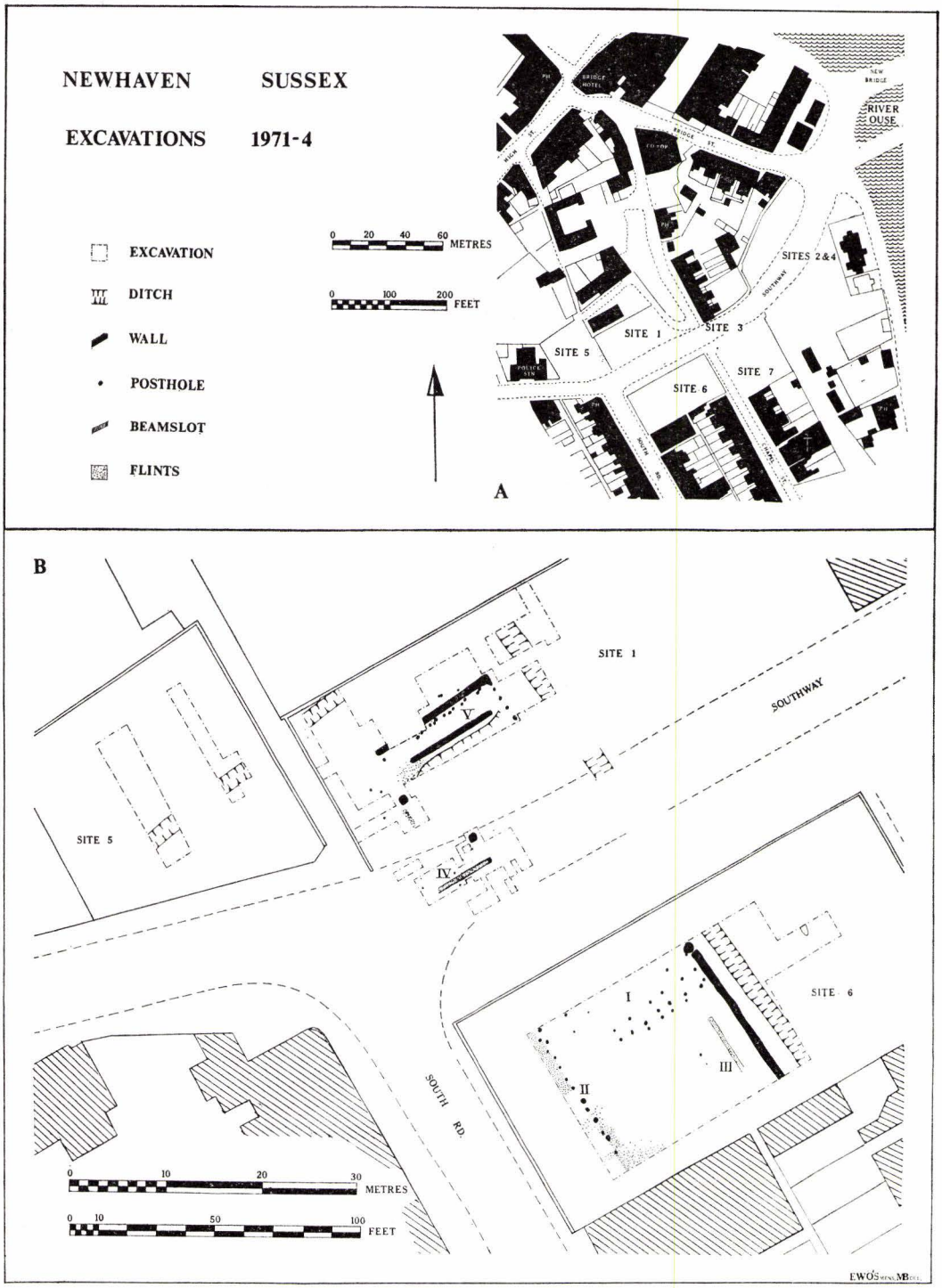

FIG. 2. Newhaven town centre showing (A) location of sites and (B) site plan

part of Site 1 is a carpark and Site 5 is open ground. The two last named areas will presumably be developed when the Newhaven town centre plan is settled.

This valley site has primarily been an environment of deposition. Sites 1, 5 and 6 had an essentially uniform stratigraphy which will be described with reference to a typical section (v-v). The underlying solid geology is Upper Chalk; its surface has been intensely frost shattered and involuted with overlying deposits of Clay-with-Flints. These are a metre thick with flints clearly zoned on the periphery of brodel pockets.[1] The Geological Survey sheet 334 shows this deposit as valley gravel. Particle size and mineralogical analyses (see below) show that it is a derivative of Eocene strata and the solution of chalk which would probably be equated with Clay-with-Flints *sensu stricto* as defined by Loveday.[2] It seems to have soliflucted down from an Eocene outcrop near the 150ft. contour. The next layer, an orange clay, was very localised and probably represents deposition in a small pool.

Then ensued a complete change in lithology, a yellow silt deposit largely preserved as the fills of periglacial landforms. Analytical work, reported below, leaves no doubt that this is a loess. It was on this thin disrupted cover of loess overlying Clay-with-Flints that the Holocene soil developed. Earthworms had been active and locally a stoneline was preserved at its base. This contained a few flint blades of Mesolithic type and three sherds of poorly fired pottery with calcined flint filler, probably Bronze Age. In certain areas the soil had been disturbed by Romano-British ploughing which had left grooves in the underlying loess. Romano-British occupation of the site was contemporary with this soil. Features such as postholes, ditches, etc., were cut from its surface into the underlying Pleistocene strata. The soil itself contained quantities of Romano-British pottery, tiles and artifacts. During the Medieval period the Romano-British soil horizon was buried below an accumulation of up to 1.30m. of ploughwash. Then the area reverted to pasture with intermittent occupation in the eighteenth and nineteenth centuries. Finally in the latter half of the nineteenth century the schools and church were constructed.

Once preliminary excavations had established this stratigraphic sequence it was possible to uncover large areas like Site 6 using mechanical excavators. They removed the Post-Medieval layers and Medieval ploughwash down to its bottom 20cm. Then the whole site was cleared down with a trowel. Romano-British features were detected in the buried soil. Following their excavation the soil was removed exposing the Pleistocene land surface.

THE PLEISTOCENE LAYERS[3]

Pleistocene archaeology has attracted surprisingly little attention in Sussex considering the large areas mantled by superficial deposits of that period. Sites are few, indeed the present paper deals with the only *in situ* Last Glacial (Devensian) assemblage known to the writer. The severe climatic regimes which obtained during the Ice Age produced specific types of landforms. They may be used as a guide to the environment of contemporary Palaeolithic man. Where the se-

[1] For explanation of this and other terms used in connection with Periglacial deposits see I. W. Cornwall, *The Ice Ages; their nature and effects* (1970), F. E. Zeuner, *The Pleistocene Period* (1959).

[2] J. Loveday, 'Plateau deposits of the south Chiltern Hills' in *Proc. Geologists Assoc.* vol. 73 (1962), p. 85.

[3] For a fuller discussion see M. Bell, 'Sediment analysis and Periglacial landforms as evidence of the environment of Southern England during the last Glaciation,' unpub. B.Sc. dissertation, Univ. of London (1975). Copies at Institute of Archaeology, London, and Barbican House, Lewes.

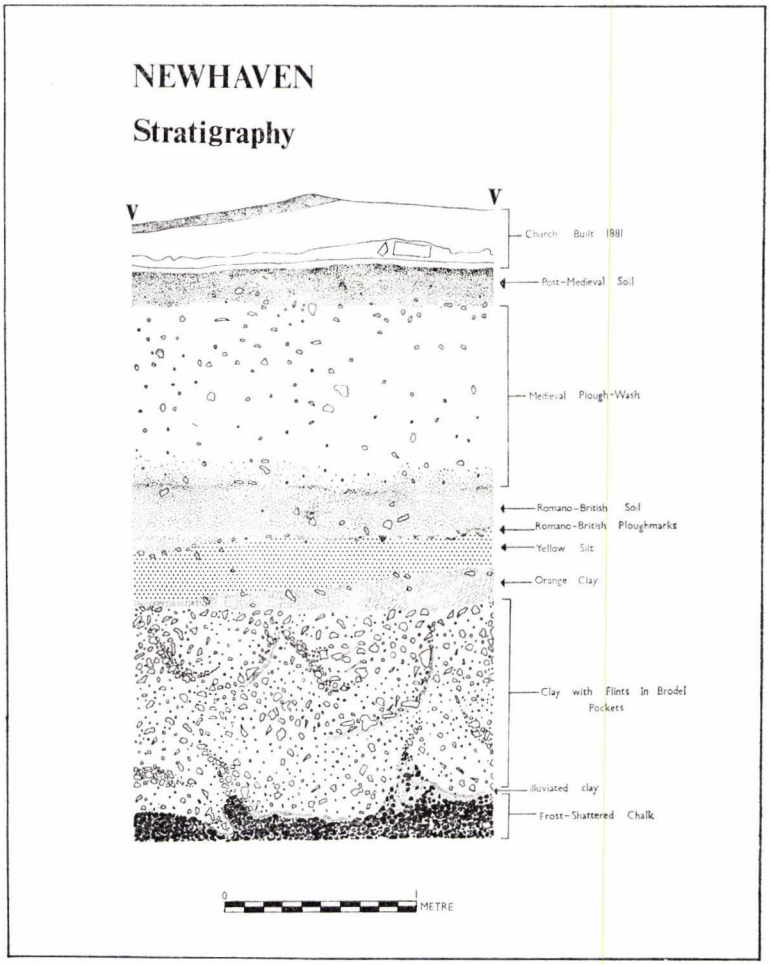

FIG. 3. A typical section of the sequence of sediments on Sites 1, 5 and 6. The lower 1.5m. are Upper Pleistocene periglacial deposits

quence of deposits is reasonably well established, as on the Sussex coast from Selsey to Eastbourne during the latter half of the Devensian, they are a useful guide in the dating of Palaeolithic remains. The configurations which Pleistocene landforms make in superficial deposits must also be well understood to avoid confusing them with man-made features, as has sometimes happened.

During the Newhaven excavations the Romano-British levels were totally removed and it was noticed that the underlying layers of Clay-with-Flints had a pattern of features, often no less distinct than the Roman features. They are however entirely natural in origin despite the fact that they contain Palaeolithic flakes.

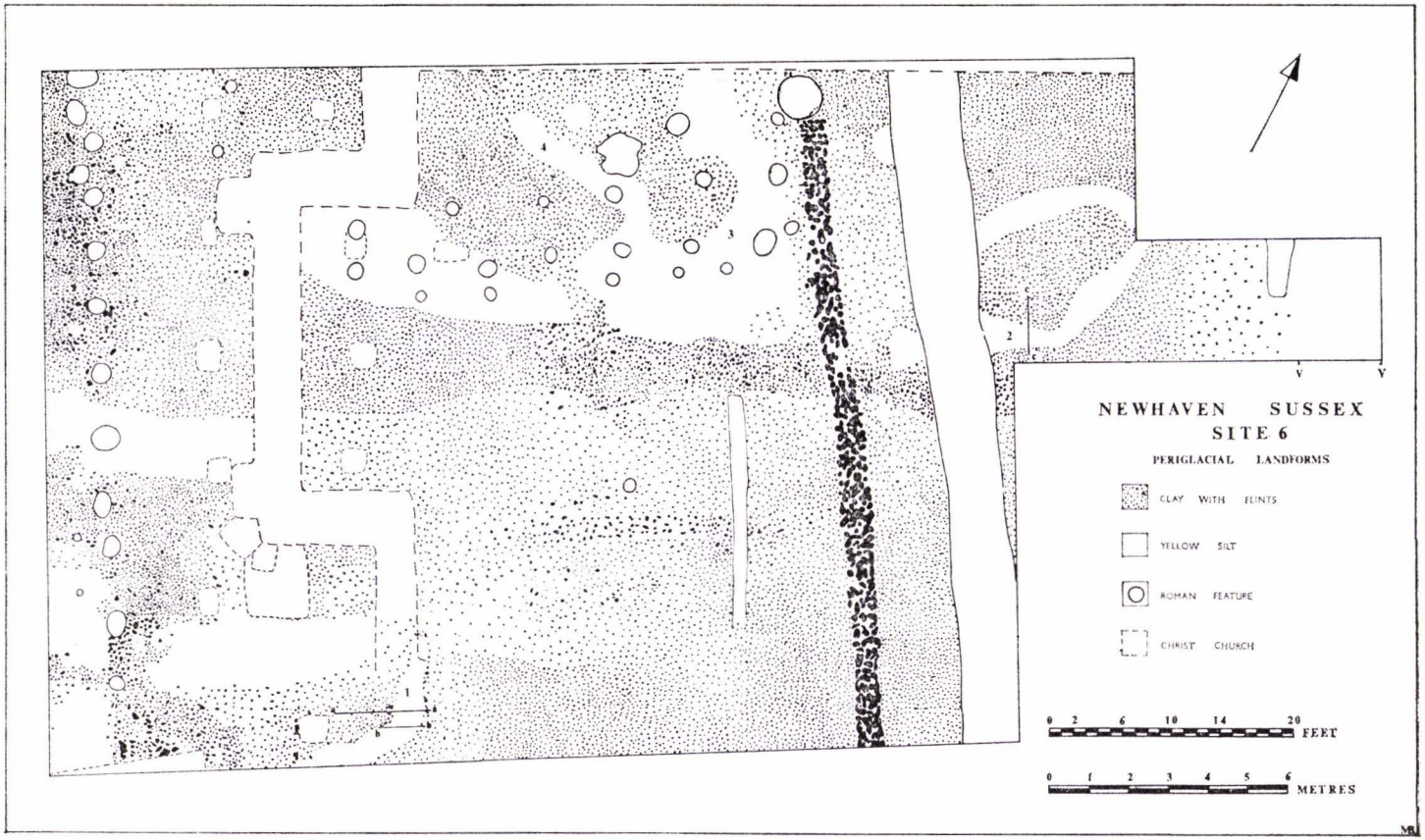

FIG. 4. Plan of the surface of the Clay-with-Flints on Site 6, showing polygonal and stone stripe features infilled with yellow silt. The thin line of large flints running from SSE. to NNW. is a Roman wall

PLATE I(a). Site 6, polygon 1, showing flint flakes nos. 13-16 to the right of the vertical scale. Horizontal scale 2ft.
(Photo: B. Westley)

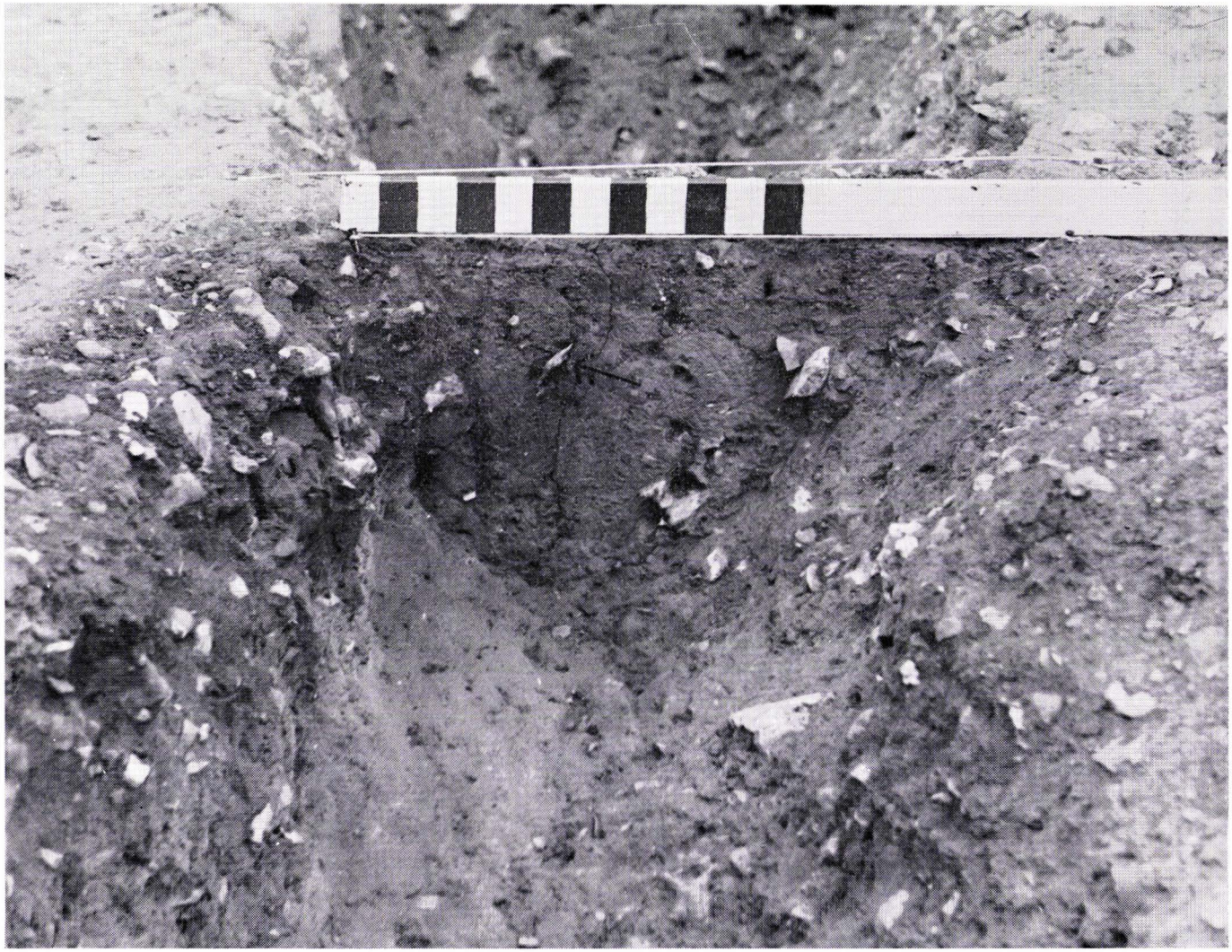

PLATE I(b). Site 6, polygon II showing silt fill within which flint flake no. 12 is arrowed. Scale inches. (Photo: B. Westley)

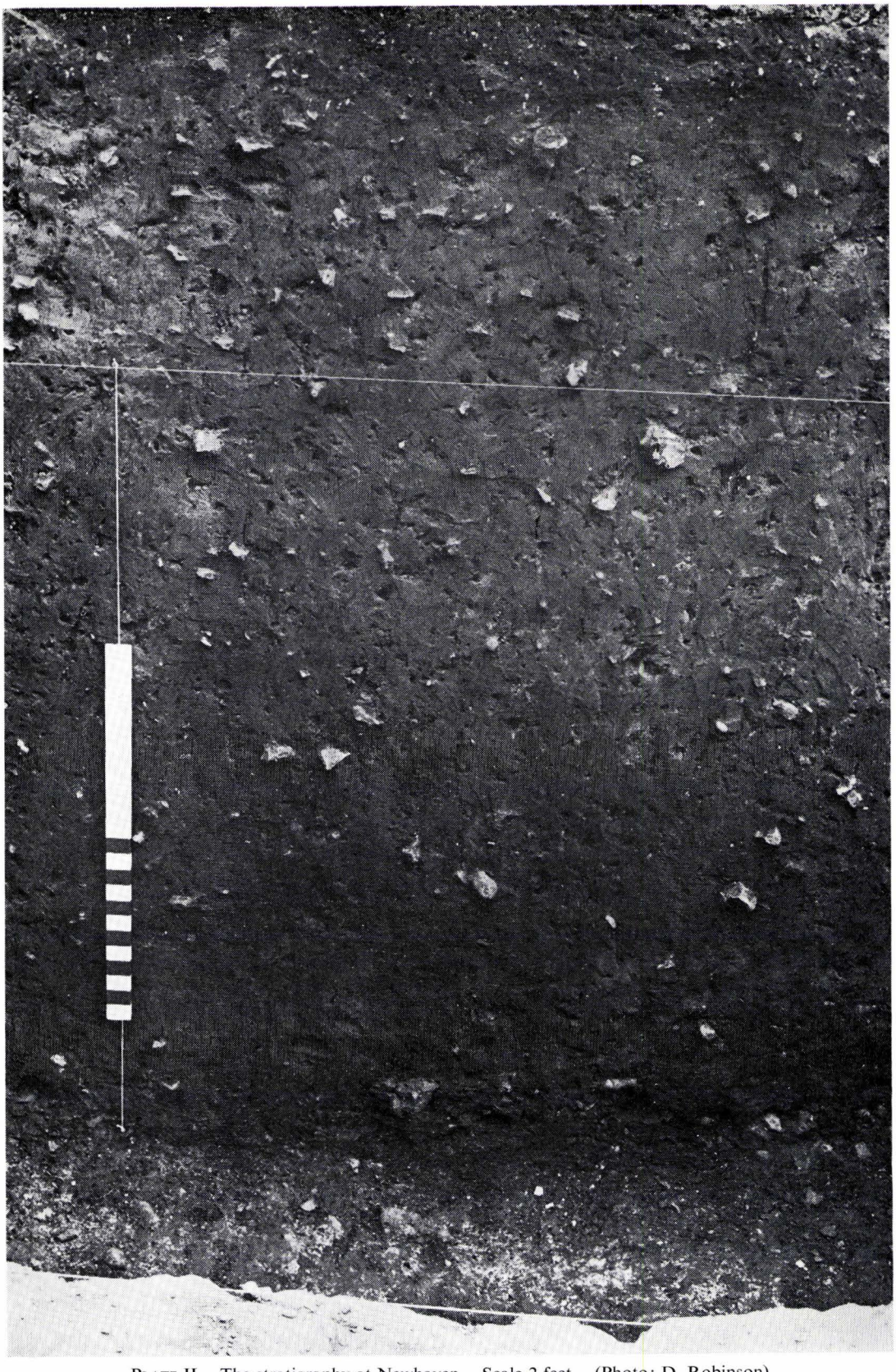

PLATE II. The stratigraphy at Newhaven. Scale 2 feet. (Photo: D. Robinson)

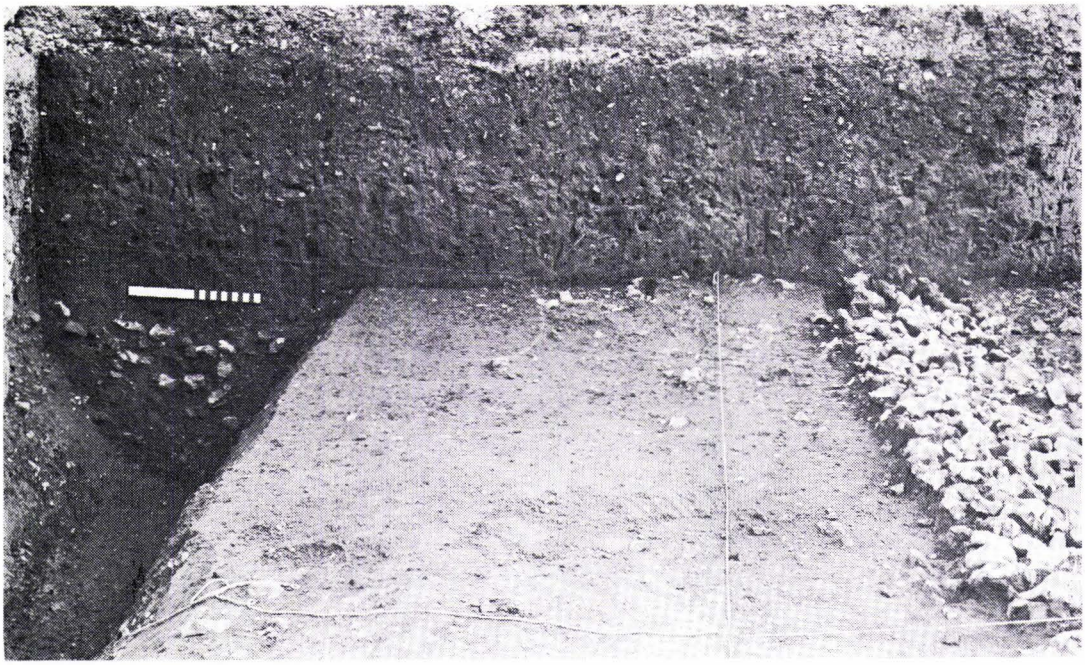

PLATE III(a). Section of the Romano-British ditch above which is Medieval hillwash and the Post-Medieval levels. Scale 2 feet. (Photo: B. Westley)

PLATE III(b). Pleistocene polygonal features (centre) and stone strips (left), overlain by Romano-British enclosure wall and Structure I (post holes not shown on Fig. 10 are dubious). Scale feet. (Photo: D. Robinson)

PLATE IV. Site 6, enclosure ditch and wall. Scale feet. (Photo: B. Westley)

PLATE V(a). Site 1, Structure V from the south, part of the north wall was removed during a previous season's excavations. Scale 2 metres. (Photo: B. Westley)

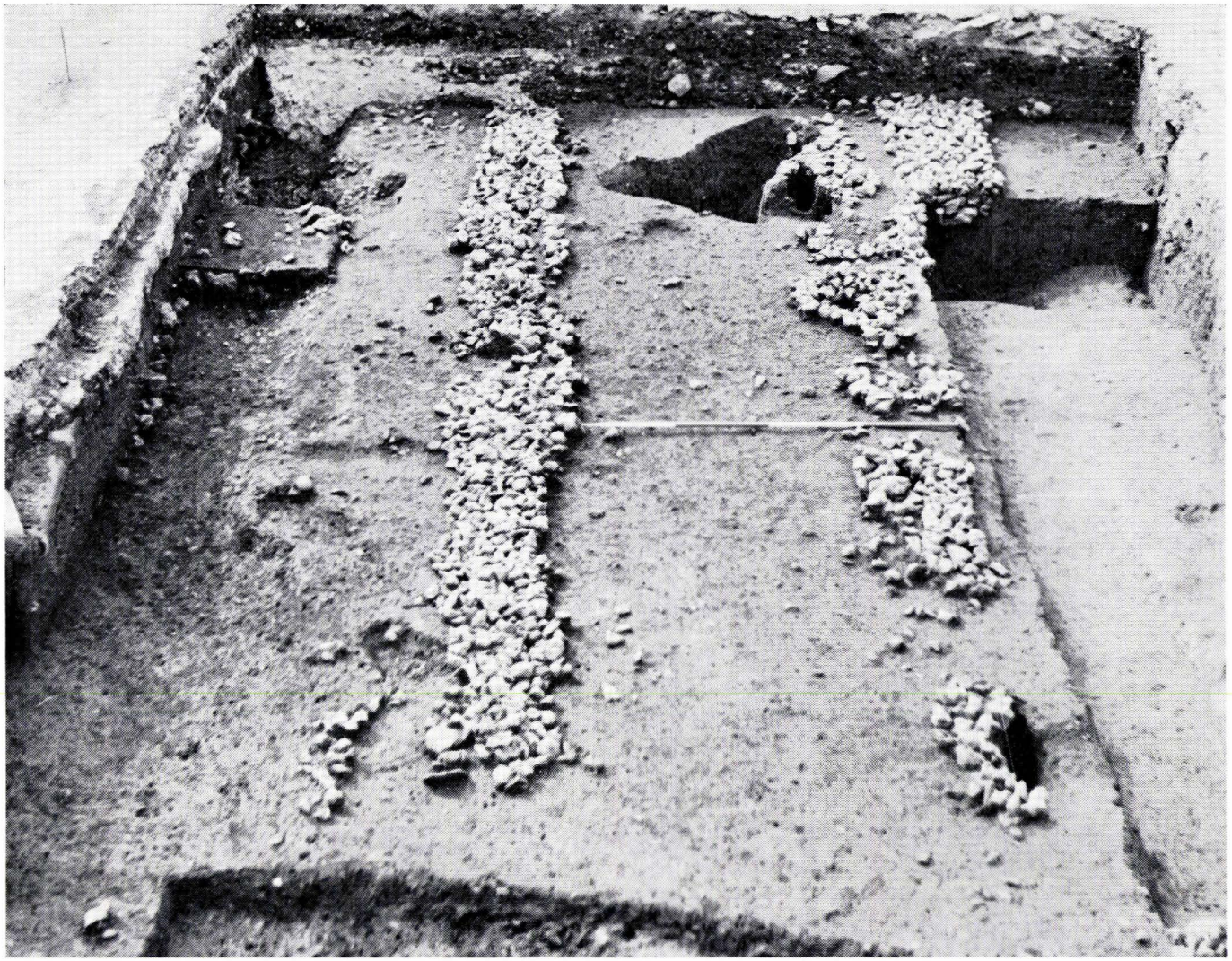

PLATE V(b). Site 1, Structure V from the east. Scale 2 metres. (Photo: B. Westley)

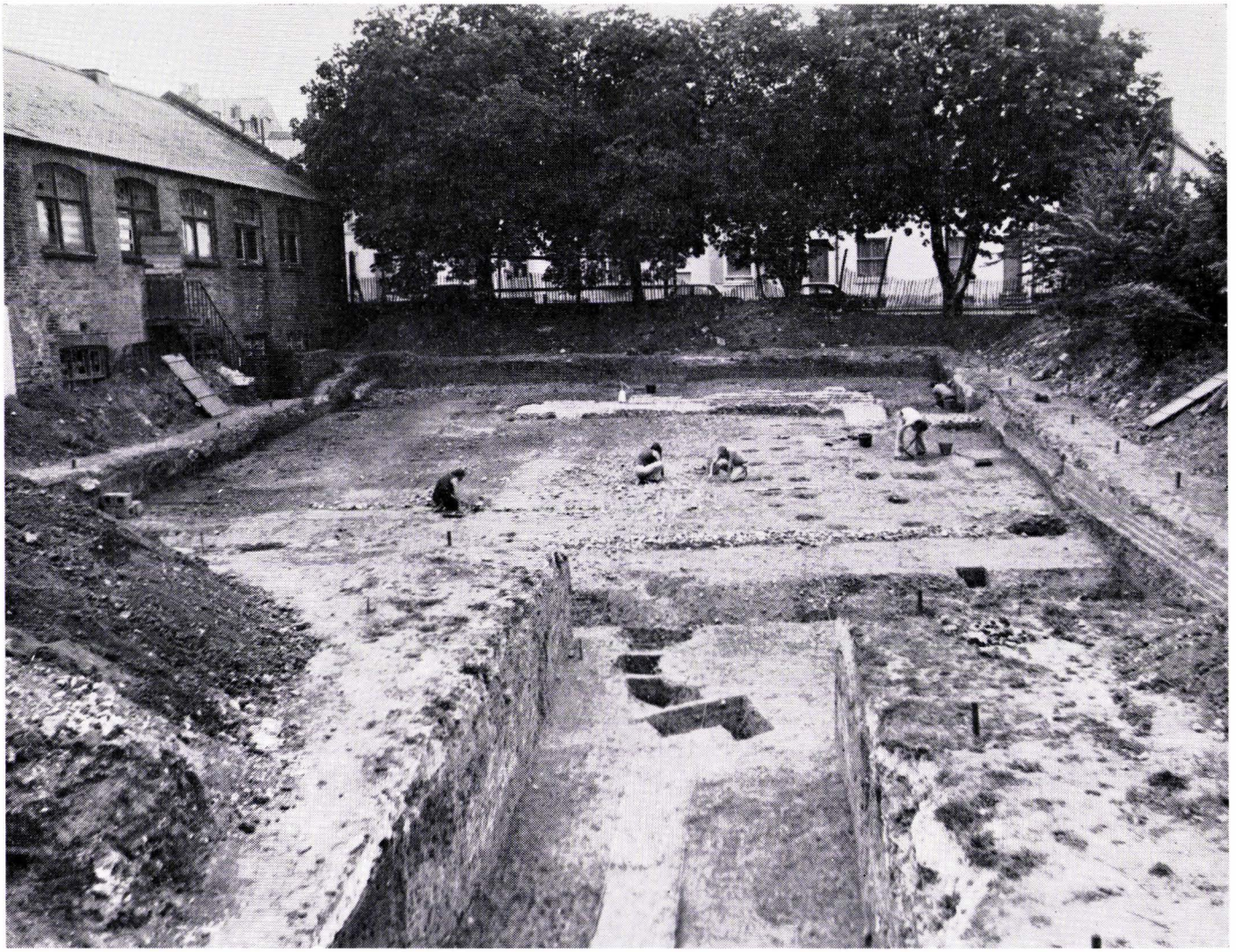

PLATE VI. Site 6 from the east. (Photo: B. Westley)

Polygonal Features (Figures 4 and 5, Plates 1a, 1b, 3b)

On Site 6 gullies filled with yellow silt were observed. These ran wholly or partly round areas of Clay-with-Flints. Their plan was polygonal with an overall diameter of between 3.5 and 6.5m. Nos. 1 and 2 were excavated. In plan polygon I was a silt filled gully 75cm. in diameter. In section (b-b) it was a 'V' shaped feature with one side practically vertical and the other side sloping at 30°. Its depth was 40cm. The near vertical edge was marked by flints thrust on end by ice action. Throughout the silt fill were groups of flint flakes in mint condition.

Polygon II was about 5½m. by 8m., the silt filled gully was 30cm. wide and completely surrounded by an 'island' of Clay-with-Flints. In common with the other polygonal features this was elongated in the direction of hill slope, that is E.-W. The average angle of slope is 4°. In some places the section was very similar to that of polygon I, in others (c-c and Plate 1b) the silt appeared to run under the Clay-with-Flints centre, but much more work would have been

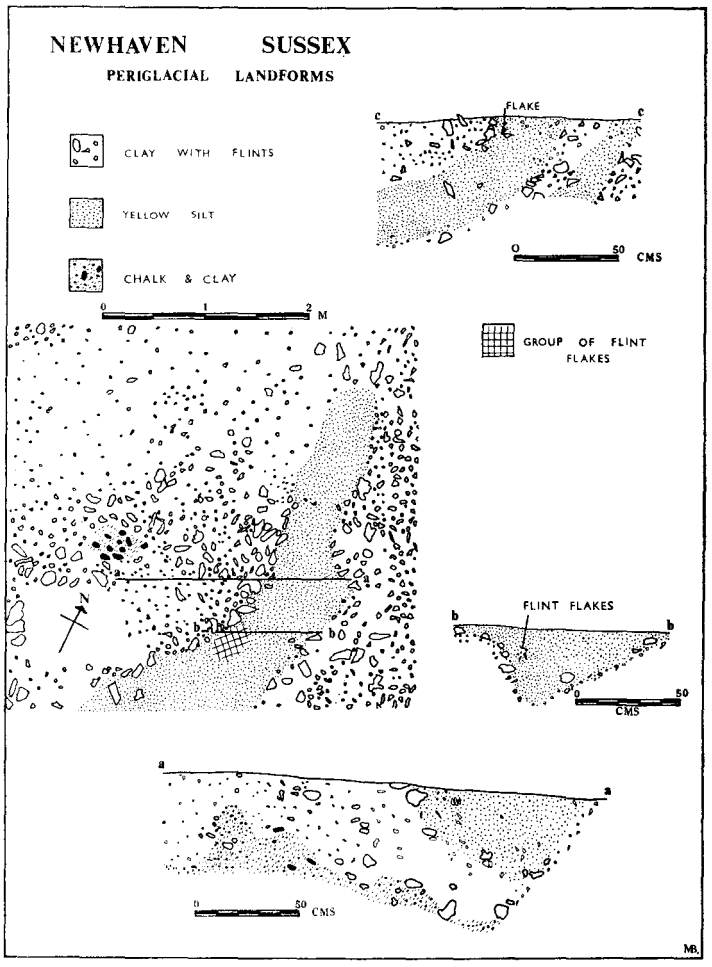

FIG. 5. Detailed plan of polygon 1 on Site 6 and sections of polygons 1 and 2

necessary to establish this with certainty. The inner edge of the silt gully was marked by large flints standing vertically. In the fill was a large bifacially flaked core and twenty two flakes which had been removed from it. Dr. M. Newcomer was able to join a number of the flakes. The fact that very thin edges and arêtes between flake surfaces remained perfectly intact makes it certain that the assemblage is *in situ*. The impression from distinct nuclei of conjoinable flakes is that they were found on the spot where the knapper had dropped his waste.

In polygon I flint flakes were found at all levels in the silt which must have accumulated in a very short time. The number of conjoinable flakes in mint condition show that at one time the features were open gullies. The most probable explanation is that they are fossil ice wedge polygons. Severe cold causes the development of ground surface cracks which, like those on drying mud, form a polygonal pattern. The cracks retain moisture, fill with ice and continue to grow. Compared to published fossil ice wedge polygons the Newhaven features are remarkably small and shallow.[1] Smaller polygons could reflect differences in climate or be polygonal infrastructures which are known to exist within much larger polygons. There can be no doubt that originally the ' wedges ' were deeper. Flint flakes were abundant in the silt fills of Pleistocene landforms but virtually absent from the Holocene soil. The Palaeolithic ground surface must have been totally removed by erosion. At the time of occupation ice must have disappeared leaving a thermokarst environment. When the ice melted the fissures would have served as passages for running water which may have modified their shape.[2] Settlement took place on the thermo--karst surface and waste flakes dropped into open wedges to be covered by yellow silt which was probably being laid down at the time. A second possibility is that the silt was deposited on Clay-with-Flints, then subjected to ice wedging. On thaw the artifacts were deposited and buried by silt weathered from the sides of the wedges. The first hypothesis is more plausible since in the silt stripes flakes seem to have been dropped whilst the silt was being deposited. Subsequently the Palaeolithic living floor was eroded and the polygons truncated.

Stone and silt stripes (Figures 4, 6, Plate 3b)

The pattern of polygonal features seems to have been superimposed on an underlying pattern of stripes of very flinty material. These run from ESE to WNW, which is the direction of hill slope. A prominent stripe 1.5m. wide runs across the centre of Site 6. Three metres to its south was a stripe of very large flints, most of which stood vertically. One stripe on Site 1 was planned and sectioned (Fig. 6). Here the basic Pleistocene stratigraphy described in connection with section v-v had been the subject of intense active layer phenomena.[3] In the south part of the section Clay-with-Flints and Chalk were involuted. At one point the Chalk and clay appeared to have overfolded a layer of Clay-with-Flints in the fashion of a nappe structure. To one side of this a layer of Clay-with-Flints dipped down for 80cm. at an angle of 60°, it then levelled out and rose gently. The trough so formed was a linear feature with a width of about 6m. It was filled with yellow silt containing individual flint flakes some of which were certainly

[1] G. W. Dimbleby, ' Pleistocene ice wedges in North East Yorkshire,' in *Journal of Soil Science*, vol. 3 (1952), pp. 1-19. J. G. Evans ' Ice wedge casts at Broome Heath, Norfolk,' in G. J. Wainwright, ' The Excavation of a Neolithic settlement on Broome Heath, Ditchingham, Norfolk, England,' *Proc. Prehistoric Society*, vol. 38 (1972), pp. 77-86.

[2] J. Dylik, ' Problems of ice wedge structure and frost fissure polygons,' *Biuletyn Peryglacjalny*, vol. 15 (1966), p. 241.

[3] Found under Periglacial conditions—the area subjected to repeated seasonal freeze/thaw.

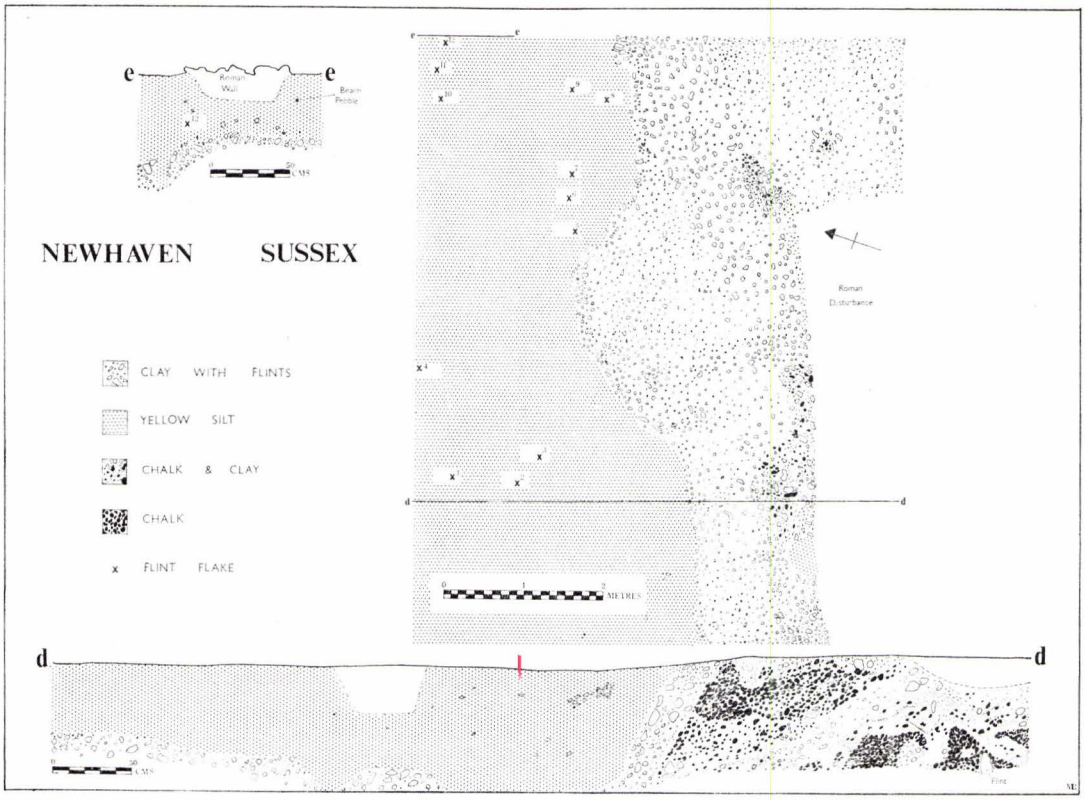

FIG. 6. Plan and section of stone stripe on Site 1

in mint condition, and some of which showed very clear signs of wear. The positions of flakes are shown in Fig. 6 by crosses beside which are numbers.

Section d-d shows that the origin of the stripe feature is intimately connected with large scale involution prominent in the stony areas. As a result of active layer phenomena the superimposed layers would expand differentially, according to the lithology and water-holding capacity of their sediments. In this way the lobes of Chalk could have been forced up through Clay-with-Flints. On a large scale this could have the effect of forcing the ground surface into a series of ridges and troughs running down the slope. Whilst this process was going on the troughs were filled with yellow silt. Unsorted stripes on the Breckland are thought to have formed in a similar way.[1] The formation of ice wedge features appears to have been contemporary with the formation of the stripes, as is shown by the narrow silt filled wedge at the base of section e, but such a feature could also be the product of involution.[2]

The sediments from Pleistocene landforms (Fig. 7)

A detailed study of the particle size and mineralogy of the sediments was made and is only briefly reported here. Particle size analyses were carried out and the results are expressed

[1] R. B. G. Williams, 'Fossil patterned ground in eastern England,' in *Biuletyn Peryglacjalny*, vol. 14, (1964), pp. 337-49.

[2] An hypothesis rejected for the 'wedges' on Site 6 because of their *in situ* nucleations of flakes.

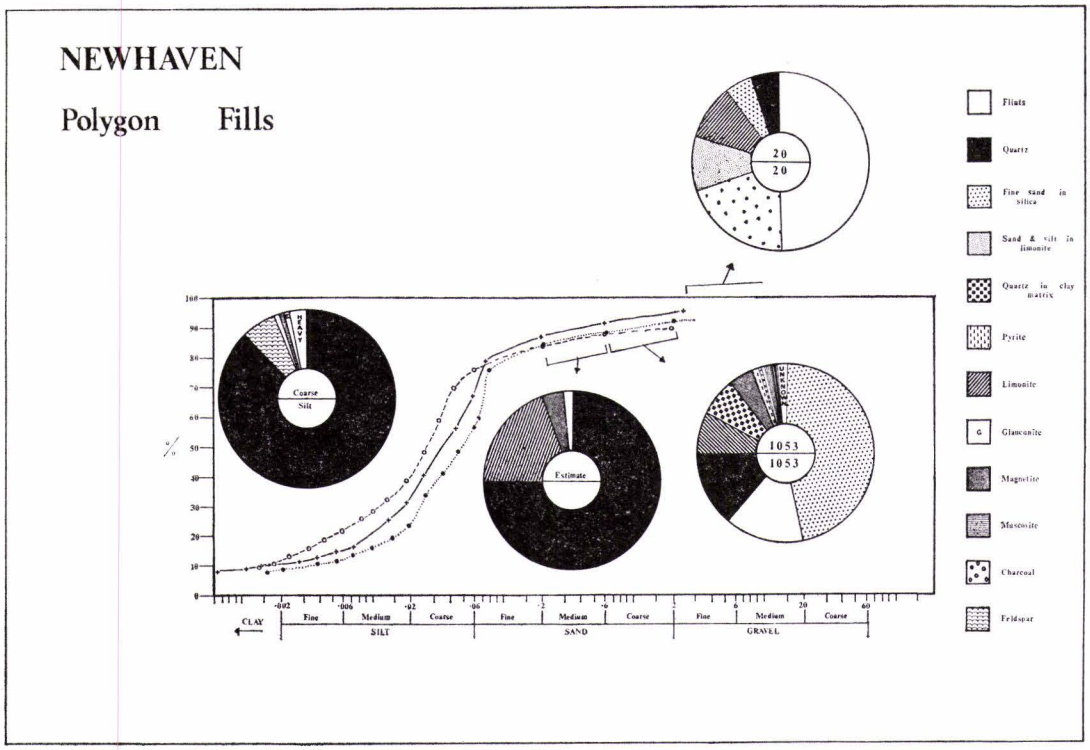

FIG. 7. The particle size distribution and mineralogy of the fill of polygon II from Site 6. Pie graphs represent the mineralogy of the sample represented by the dotted line, they are arrowed to the portion of the cumulative graph which they represent.

logarithmically in a cumulative graph.[1] In the course of making this and other graphs four sand and gravel fractions were separated by sieving. Each was examined under the binocular microscope. Minerals and aggregates were separated into 33 categories and these were then identified. A visual summary of identifications is provided by pie graphs arrowed to the pro-tions of the cumulative graph which they represent.[2]

The ice wedge pseudomorphs and troughs that separated stone stripes were filled with a fine yellow silt which occurred elsewhere as a discontinuous cover over Clay-with-Flints. The fill of polygon II consisted of 11% clay, 56% silt, 28% sand and 5% gravel. The mineralogy of material above 0.2mm. compares well with samples taken from Clay-with-Flints. It contains abundant silt grade quartz in a siliceous matrix, flint, limonite and magnetite. There are smaller quantities of pyrite, lignite, epidote and sand in limonite. Material in the medium sand grade and above is evidently locally derived from the underlying Clay-with-Flints.

[1] Archaeological applications and basic method discussed by I. W. Cornwall, *Soils for the archaeologist* (1958), pp. 123-132.

[2] Based on figures in M. G. Bell, 1975, op. cit., Table III, p. 57.

Mineralogy of the coarse silt by Dr. John Catt (Table 1)

Particle size analysis showed silt to be an important component of the sediments and suggested that they have been deposited largely by wind. Loess deposits throughout England have a reasonably uniform mineralogy suggesting that they are derived from a common source,[1] and the Newhaven samples are broadly comparable with the average composition of loess from various sites in Berkshire and Sussex. There are some significant differences indicating that even the silt fractions are contaminated with sediment other than loess. The sample from polygon II

	Berkshire Average of three samples	*Sussex* Average of four samples	*Newhaven* Polygon Fill	*Newhaven* Silt Stripe	*Saltdean* Silt Stripe
Light Fraction					
Quartz %	84	83	88	85	85
Alkali Felspar %	13	14	9	12	13
Muscovite %	1	1	1	1	1
Flint %	1	1	1	2	1
Glauconite %	1	1	1	<1	<1
Heavy Fraction			3.1%	1.6%	1.8%
Epidote % o	360	376	300	237	336
Zoisite % o	23	18	20	20	18
Zircon % o	140	155	213	232	134
Tourmaline % o	46	38	38	29	35
Chlorite % o	182	150	131	248	169
Biotite % o	7	13	3	10	4
Green Hornblende	76	82	130	67	140
Tremolite/Actinoilite	23	27	21	21	34
Brown Hornblende	5	7	4	3	5
Garnet	44	36	26	31	47
Yellow Rutile	37	35	64	46	34
Brown Rutile	16	14	12	9	5
Red Rutile	2	5	—	—	—
Anatase	20	28	27	32	25
Brookite	5	4	4	6	1
Staivolite	9	6	7	8	7
Kyanite	5	4	1	2	6
Augite	—	1	—	—	—
Apatite	—	1	—	—	—

TABLE I. Mineralogical composition of coarse silt, excluding opaque iron ore minerals, comparing samples from Newhaven polygon and silt stripe fills with the mean averages of samples from Berkshire and Sussex, and with a sample from similar stripes at Saltdean. Table drawn up by Dr. J. Catt.

[1] J. A. Catt, ' Loess deposits in southern England,' *Discussion group in Archaeology and related subjects* held at Inst. of Archaeology, 10 December, 1974.

contained less felspar, epidote, and perhaps garnet and chlorite, than would have been expected, but more zircon, green hornblende and yellow rutile. This sample probably includes 20-25% of a non-loessic sediment, which is quartz rich, has little or no felspar and contains some zircon and rutile, but probably little or no epidote. It is likely that this contaminating sediment is also represented in the graph (Fig. 7) by the very fine sand grade smaller than 0.08mm., and from its mineralogical composition probably originates from the Reading Beds. The sample from the silt trough is more like the mean of Sussex loess samples, and probably contains only a few per cent of other components, which again are probably derived ultimately from the Reading Beds. However, the non-loessic component in these samples could equally well be Clay-with-Flints, which in this area is derived largely from Reading Beds.[1] The fact that more loess is present in this sample should not necessarily be taken to mean that the loess in polygon II is redeposited; the most likely origin of this extraneous material is mixing from the underlying Clay-with-Flints layer by cryoturbation.

The dating and correlation of deposits

The Newhaven stratigraphy shows a sequence of sediments with soliflucted Clay-with-Flints overlain by loess. Field surveys were conducted to see whether that sequence could be related to other sites in Sussex. Sixteen sites with a Late Pleistocene stratigraphy have been examined between Selsey and Eastbourne. Generally speaking they show the same overall stratigraphic sequence of periglacial deposits.[2] This sequence corresponds fairly closely to sequences already advanced for Kent and Wiltshire.[3] The Sussex sequence is based partly on ten dry valleys studied in cliff sections between Black Rock and Eastbourne. In each case the basal deposit is Coombe Rock soliflucted into the valleys in a moist period of intense frost weathering. The last major phase of Coombe Rock deposition and solifluction was in Pleniglacial Stadial A which ended about 28,000 B.P. It was probably at this time that the Clay-with-Flints deposits at Newhaven soliflucted into the valley and were subject to cryoturbation. This eventually led to a ridge and trough formation of unsorted stone stripes. Whilst they were forming a series of polygonal features developed, probably as a result of ice wedging.

It has been established that the silt fills of Pleistocene landforms at Newhaven are a loess broadly comparable in mineralogy to other English loess deposits. The mineralogical uniformity of English loesses indicates that they were deposited at roughly the same time. Dr. Catt suggests that most English loess dates from between 26,000 and 18,000 B.P.[4] That is during Pleniglacial Stadial B, a period of intense cold and dry conditions. Such conditions are necessary for the formation of ice wedge polygons, as they only form under permafrost and require a temperature under –6°C for their formation.[5] Flint flakes were dropped after the ice in these wedges had melted, but the distribution of mint condition flakes at all levels in the silt stripes makes it difficult to escape the conclusion that human groups visited the site at a time when, for part of the year at least, loess was being deposited. Certainly occupation seems to have been in Pleniglacial Stadial B between the dates 28,000 and 14,000 B.P.

[1] J. M. Hodgson, J. A. Catt and A. H. Weir, 'The origin and development of Clay-with-Flints and associated soil horizons on the South Downs,' *Journal of Soil Science* vol. 18 (1967), pp. 85-102.

[2] M. G. Bell, 1975, op. cit., Table I.

[3] M. P. Kerney, 'Weichselian deposits on the Isle of Thanet, East Kent,' *Proc. Geologists' Association* vol. 76 (1965), pp. 269-74; J. G. Evans, 'Periglacial deposits on the Chalk of Wiltshire,' *Wiltshire Archaeological and Natural History Magazine*, vol. 63 (1968), pp. 12-26.

[4] J. A. Catt, 1974, op. cit., p. 4.

[5] C. Embleton and A. M. C. King, *Glacial and Periglacial Geomorphology* (1968), pp. 458-481.

Flint artifacts from the Pleistocene levels[1] (Figure 8)

A total of 157 flint flakes found in the loessic fills of polygons and stripes had clear positive or negative bulbs of percussion. They showed no sign of crushing or rolling and were definitely products of débitage. The thinnest and most fragile edges were perfectly preserved, and in the case of Polygons one and two the flints lay in distinct concentrations. One such group can be seen projecting from the section to the right of the vertical scale in Plate Ia. Groups with similar coloured flint or cortex were clearly struck from the same block of raw material. In several instances Dr. M. H. Newcomer and the writer were able to join flakes so proving this point, and showing that débitage took place on the spot or at least very nearby.

Where cortex was present on the waste it invariably showed the raw material to be large boulders, the protruding angles of which were heavily battered in the fashion of river rolled boulders. Boreholes show a layer of medium dense coarse gravel at between -15 and -22m. in the buried Ouse channel. This deposit obviously dates from a cold phase of the Devensian and was probably the raw material source. A few flakes had a deep orange stained cortex, and are derived from the Clay-with-Flints.

Polygon II. A large bifacially flaked core weighing 890 grams, with removals all round the perimeter and no cortex remaining (1), nearly circular in plan with an almond-shaped longitudinal section. At the thicker end removals had been less regular, and several flakes have ended in hinge fractures, possibly leading to the core's abandonment. Twenty five flakes were found grouped with the core in an area of diameter about 30cm. They are of an identical light grey flint with white speckles. Nine of the flakes could be joined in groups of three (3-11). One flake (2) joined the core as did one of the groups of three (3-5). Groups 3-5 and 9-11 had cortex on their dorsal surface showing that the core had been worked down from a river boulder. There are negative bulbs on the core left by the removal of some twenty six flakes. Judging by the conjoinable flakes and proportion of those with traces of cortex (9/25), it probably took the removal of about fifty flakes to reduce the core to its present state. Flake 12 is the only possible tool from the stratified assemblage. It is shown *in situ* in Plate Ib just below the scale. The flint is similar in colour and appearance to the above core, but the surface is more shiny and the ridges between flake surfaces are more rounded. The slight polish could have been acquired by the movement of loess or fine sand across the artifact at a time when it was lying on the Pleistocene land surface; polish formed by utilisation would not be so uniform over the surface. Round the margins of this flake are small areas of retouch which are alternating on the right edge in keeping with a possible natural origin for this retouch; polishing followed retouch.

A flint nodule had been slightly worked on one face. Four flakes were removed to make a platform, and from this at least seven small flakes or blades had been struck before it was abandoned. Débitage from a third presumed core is fifteen flakes in a dark black flint with occasional whitish flakes. The flint is poor quality permeated in places by a deep orange brown cortex found on twelve of the flakes. There were four other flakes and seven fire-cracked flints. A small fragment of charcoal, insufficiently large for a C^{14} date, has been tentatively identified by Miss C. R. Cartwright as *Quercus* sp. (oak). It could however have been introduced into the feature down an earthworm burrow.

[1] I am grateful to Dr. M. H. Newcomer, who gave helpful advice on this section.

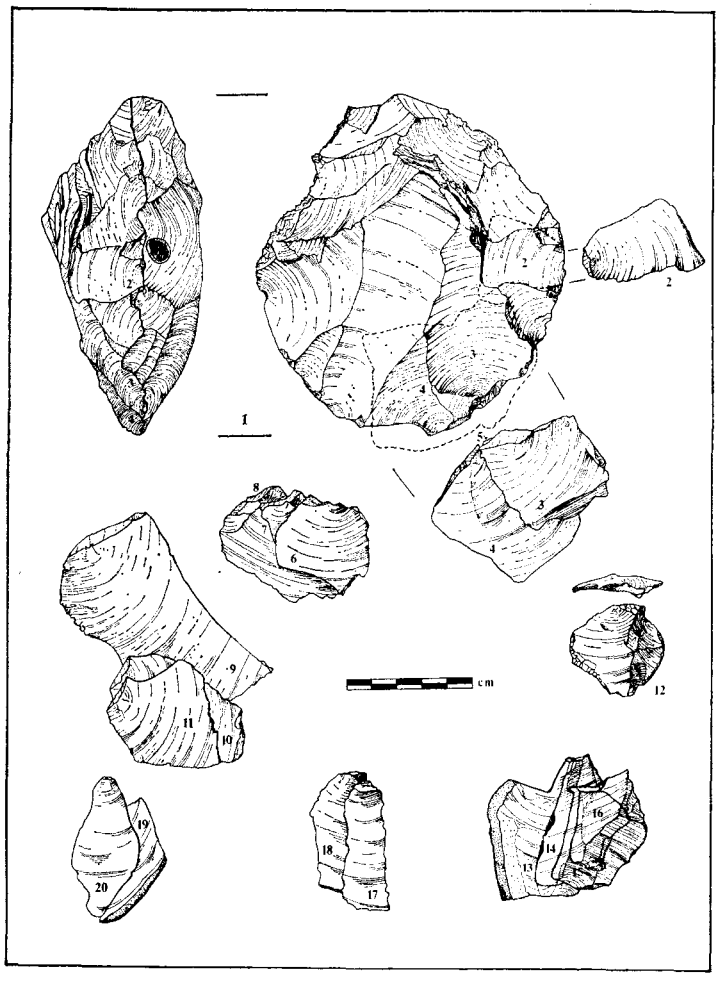

FIG. 8. Flint artifacts from Pleistocene layers

Polygon I. A group of forty four flint flakes were found in a small area shown hatched in Fig. 5. They are in a grey/white flint with brown cortex speckled with pin-prick sized dots of black. Eight of the flakes were joined in one group of four (13-16), and two groups of two (17 and 18, 19 and 20). Débitage from a fifth block of raw material is represented by twenty seven flakes of which twenty three had areas of a light orange cortex on the dorsal surface; the flint itself was a dark black. Eleven flakes had been removed from a sixth piece of raw material, characterised by a dark black flint with brown/yellow cortex on which were areas of black staining.

Silt Stripe. Flakes were noted at all levels in the silt stripe on Site 1, only part of which was excavated. The flakes were evenly distributed as shown by the crosses on Fig. 6; no concentrations were noticed and none of the eleven humanly-struck flakes joined. They were in mint condition, similar in appearance to those from the polygons.

Discussion

From the 156 pieces of waste and one possible tool identified, six groups of material were recognised on the basis of concentrations in the features and the appearance of the original raw material. 80% of the flakes belonged to these six groups, indicating perhaps that only a few blocks of flint were worked down during a short term occupation of the site. No definite tool types have been recognised, and it is not possible to assign this waste material to any specific industry or cultural group.

Most, but not all, of the flakes have very small bulbs consistent with the use of a soft hammer. The technology seems to have involved working down boulders by the bifacial removal of flakes. This could equally have been aimed at obtaining flakes or producing core tools. The core (1) showed no signs of utilisation. The other, poorly worked, core from Polygon II was presumably worked to obtain blades or flakes, then abandoned. Such an assemblage is important because its conjoinable groups of flakes demonstrate débitage on site, apparently in the Upper Palaeolithic. Other Sussex river valley locations may equally contain *in situ* assemblages and would repay fieldwork.

THE EARLY ROMANO-BRITISH SITE

The Romano-British Settlement pattern and previous discoveries (Figure 1)

The Newhaven excavations, and those conducted simultaneously at Bishopstone, have been accompanied by field surveys designed to relate the sites to their contemporary pattern of settlement. Figure 1 provides a summary of results for the Romano-British period. The area west of the Ouse was covered by G. A. Holleyman's pioneering field survey of 1935-8.[1] He found nine sites and ten have been found since. The whole area mapped as Figure 1 contains 46 Romano-British sites (36 settlements and 10 burial sites) in an area of 76 square miles, giving a density of one settlement site every 2.17 square miles (518 hectares). Some areas, notably beside the Cuckmere Valley, have not been surveyed in sufficient detail and some sites must await discovery.

Over three-quarters of these sites are on spurs of downland, generally facing south and between 100 and 400 feet O.D. Three such settlements, Highdole, Telscombe—Site 15: Charleston Brow—Site 35: and Rookery Hill, Bishopstone—Site 28, have been partly excavated.[2] No stone buildings were found and tiles were little used, huts were apparently of wood or turf. The pattern of spur-top farmsteads surrounded by Celtic fields was established at Bishopstone in the Early Iron Age. The Newhaven site—No. 19, is distinguished in this settlement pattern by its low-lying position in the river valley. We may anticipate the conclusions of this paper by noting that it is also distinguished by stone buildings, probably those of a villa. Other buildings which are not of the basic downland type are Nos. 42-5 on the clays and sandstones of the Weald, and 29 and 37 on low ground beside the Ouse valley at Seaford. Of these: No. 43 appears to have been a stone building, possibly a small villa, and No. 29 has produced quantities of roof tiles. Number 37 is a fairly large settlement associated with the nearby Seaford Golf Course

[1] G. A. Holleyman, 'The Celtic field-system in south Britain: a survey of the Brighton District,' *Antiquity* vol. 9 (1935), pp. 443-54.

[2] G. A. Holleyman, 'An early British agricultural village site on Highdole Hill near Telscombe,' *S.A.C.* vol. 77 (1936), pp. 202-21. W. J. Parsons and E. C. Curwen 'An agricultural settlement on Charleston Brow near Firle Beacon,' *S.A.C.* vol. 74 (1933), pp. 164-180.
M. G. Bell, '*Bishopstone excavations 1968-1971—An interim report*,' University of Sussex Archaeological Society (Falmer 1972).

Roman cemetery—Site 38.[1] This is the only major Romano-British cemetery in the area. The distribution of the nine other burials or small groups of burials shows quite clearly that they were associated with specific settlements.

Newhaven parish has produced a number of finds of Romano-British material, most of them from the vicinity of the Iron Age hillfort on Castle Hill.[2] In 1852 the remains of a Roman stone building were found ' whilst cutting a drain across an upland meadow on the estate of W. Elphick, Esq., of Newhaven.'[3] No more precise location is given, and the Tithe Award for Newhaven dated 1841 shows that William Elphick owned several fields.[4] They included part of the site of the recent excavations. However, with an average elevation above O.D. of 5m. this can hardly be considered an upland meadow. Furthermore of the three coins found in 1852 two are outside the date range of our site. Apart from this the small number of finds discussed in the 1852 report are consistent with those from the present excavation. Drain diggers in the nineteenth century may have hit on part of the same site if it extends further uphill, or alternatively their find may represent a second Roman stone building in the parish.

THE EXCAVATIONS

On the Romano-British ground surface all features and flints forming structures were planned in detail. Each feature was sectioned and the sections are illustrated. Over most of Site 6 and the undisturbed parts of Site 1 finds such as nails, tiles, slag and window glass were individually planned (Fig. 13), in the hope that their distribution would provide additional data for the interpretation of activity areas or buildings. The finds were not plotted in the part of Fig. 13 shaded; here excavations took place before the period allowed for our work was extended. Despite this gap the distribution of nails on Site 6 does show an interesting correspondence with the other structural elements planned in Fig. 10. The distribution of artifacts on Site 1 is not figured here, it reflects a pattern of systematic clearance during the Antonine period, and is discussed below under Structure V.

The late nineteenth century buildings on Sites 1, 5 and 6 were on flat terraces made by cutting back into the hillside, with the result that on the west side of Sites 1 and 5 the Medieval ploughwash and Romano-British soil was totally removed, leaving only the bases of deep truncated features. Less terracing had been necessary on Site 6 where the Medieval ploughwash and Roman soil was preserved.

The enclosure ditch and wall

The Romano-British features appeared to be bounded to the north and east by a ditch, two straight lengths of which were found at right angles. They had the same basic stratigraphy and pottery sequence, and it is likely that they formed adjacent sides of a rectangular enclosure. The ditch had a V-shaped profile, splayed towards the top and with a gently rounded base. Its average width was 1.60m. and depth 1m. cut through the cover of Clay-with-Flints, and

[1] Site 37—V. G. Smith, 'An Iron Age and Romano-British site at Seaford,' in *S.A.C.* vol. 80 (1939), pp. 293-305.
Site 38—J. E. Price, ' On excavations in the camp, the tumulus and the Romano-British cemetery, Seaford, Sussex,' *S.A.C.* vol. 32 (1882), pp. 167-200.

[2] L. Field and C. F. C. Hawkes, ' Castle Hill' Newhaven,' *S.A.C.* vol. 80 (1939), p. 292; *V.C.H., Sussex*, vol. 3 (1935), p. 61; *S.A.C.*, vol. 112 (1974), p. 154.

[3] F. Spurrell, ' Roman remains discovered at Newhaven in 1852,' *S.A.C.* vol. 5 (1852), pp. 263-66.

[4] In East Sussex Record Office.

an average of 30cm. into the underlying Chalk. A dual function as boundary and drainage ditch is implied. Description is under site headings as stratigraphy and artifact content showed interesting variations on the three sites.

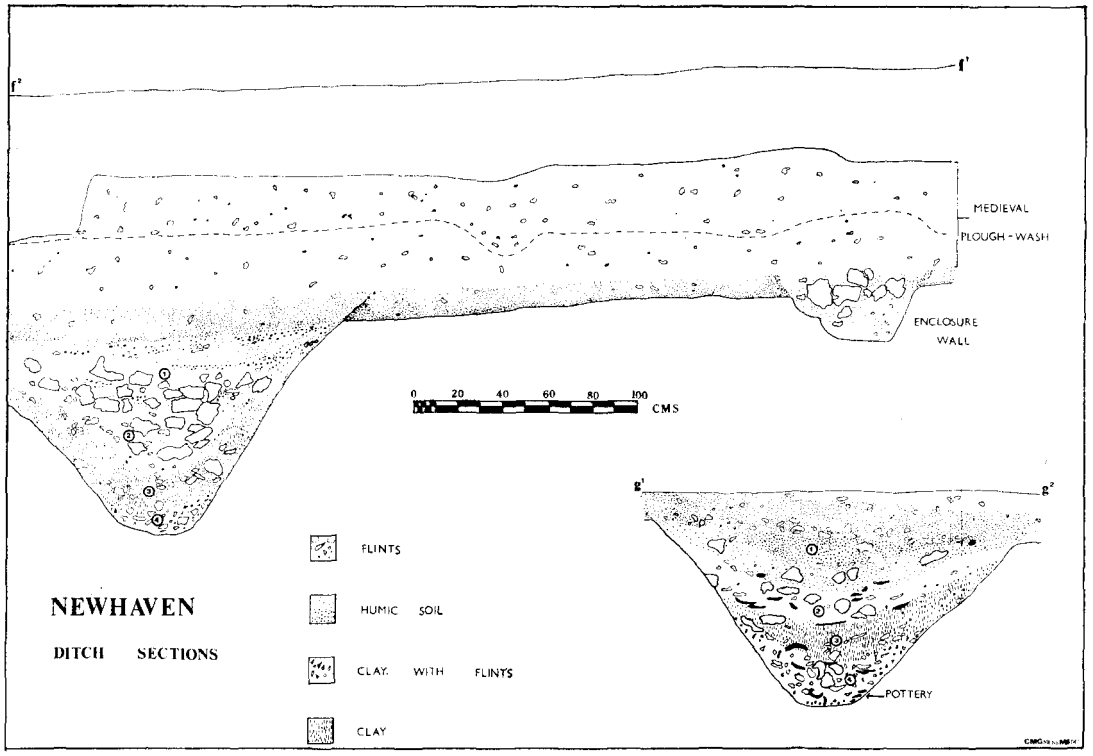

FIG. 9. Sections of the Romano-British enclosure ditch on Site 6. Pottery sherds are shown in solid black

The East Ditch on Site 6 (Figures 2, 9 and Plates IIIa and IV).

The primary fill, layer 4, was of Clay-with-Flints which had weathered from the ditch sides, most probably in the first few winters after it was originally dug. Generally speaking the primary silt contained few finds, but the northern 6 metres were exceptionally rich in large fragments of pot from which several vessels could be wholly or partly reconstructed. Overlying this was Layer 3, a brown clay soil containing flints and chalk. Probably this material was originally dug from the ditch and scattered back in from an adjoining bank of which no trace remained.

Layers 3 and 4 do not appear to be separated by any great period of time, sherds from both layers join and are considered as Pottery group i, for which Mr. Green suggests a Neronian-early Flavian date (60-80 A.D.). Associated samian ware suggests that the latest vessels in the group are of Trajanic or Hadrianic date. Layer 3 contained several sherds of a fluted glass bowl with rolled rim (Fig. 39.1); a triangular clay loom weight (Fig. 44.1), and several lumps of unfired Reading Beds clay.

Layer 3 was truncated by a recut of the ditch, the primary fill of which was Layer 2, a light brown soil with some flints. Near the north-west baulk this contained a high proportion of fired and unfired clay. The pottery is in Group iii (vessels 85-97). Mr. Green suggests that the recut is not substantially later than the initial fill and probably dates from the last quarter of the first century. The only small finds were two fragments of worked stone (Fig. 41.5 and 6).

The final ditch fill, Layer 1, accumulated in a depression of depth 20cm. in the top of Layer 2. Deposition had taken place at a time when the ditch was largely silted up, thus the rate of natural silting would, by this time, have been very slow, and material in Layer 1 may be somewhat later than that in Layer 2. Layer 1 is a dark black humic soil with a high content of charcoal and daub. This soil filled the interstices between lumps of flint and limonite concretions which had traces of mortar adhering to them, and were derived from the demolition of a building. In the northern 6m. of the ditch was a particular concentration of mortar, *opus signinum*, and painted plaster of Group 2 (Fig. 43). It is argued below that these were derived from the demolition of a bath house. The layer was particularly rich in tiles, 293 fragments (including all the pieces of roller stamped box tile), compared with 1 fragment from Layer 2 and 12 fragments from Layer 3. The pottery is discussed under Group viii for which Mr. Green suggests an Antonine date, which is supported by the samian evidence. This Antonine destruction horizon is also found in the ditch on Site 1, and in Structure V. It appears to represent demolition and levelling of the site prior to its abandonment.

The Enclosure Wall on Site 6 (Figs. 10 and 9, Plates IIIb, IV and VI).

Parallel with the enclosure ditch and 2m. to its south west was the foundation of a flint wall. It ran almost the length of the ditch but stopped 1.2m. from the north baulk. At its end was a large post hole, Feature 44. The wall was of carefully picked flints, average size 13 by 8cm. Beach shingle representing decayed mortar occurred in small quantities between the flints but the foundation was primarily of dry stone. Its foundation trench cut through post holes 18 and 38 of Structure I, which had evidently been levelled before the wall was built. Feature 44 was 1.05m. in diameter and 80cm. deep, it had taken a massive timber 53cm. in diameter packed with flints and broken tile. When the site was abandoned this valuable timber was removed and several more pieces of tile were deposited in the post cast.

The 16m. length of wall, with no directly associated structural remains except for Feature 44, seems certain to be an enclosure or courtyard wall. The massive timber at its terminus is likely to represent an entrance. A similar plan is seen, for instance, in the courtyard wall and entrance to the villa of Hambledon, Buckinghamshire.[1] An entrance in this position would explain the fact that in each of the four layers of the enclosure ditch by far the greatest quantity of finds came from the northernmost six metres. Tipping of rubbish is likely to have taken place on either side of an entrance. If this reasoning is correct, then the entrance was in this vicinity before the making of the enclosure wall, which appears to have been built when the ditch had silted to the top of Layer 3, and had ceased to serve as a boundary. Such a combination of enclosure ditch and wall is known surrounding the early villa at Ditchley, Oxfordshire.[2]

[1] A. H. Cocks, 'A Romano-British homestead in the Hambledon valley, Bucks,' *Archaeologia*, vol. 71 (1921), p. 141, plate XIII.

[2] C. A. Raleigh Radford, 'The Roman villa at Ditchley, Oxon.,' *Oxoniensia*, vol. 1 (1936), p. 24.

The East Ditch on Site 1 (Figs. 2 and 14).

The basic stratigraphy was similar to that on Site 6. The primary silt, Layer 4, contained pottery of Group ii (vessels Nos. 79-83) dated to the second half of the 1st century A.D. The primary fill of the recut ditch (Layer 2) was distinguished by quantities of white floor cement. The final fill was identical to the destruction level on Site 6. A short length of the ditch was uncovered by a contractor's trench for the north retaining wall of Southway. In this was found painted wall plaster of Group I. It was a plain cream plaster upon which three fragments had red lines and two other fragments had a black line and green dots respectively (Fig. 43). This group is perhaps from domestic living rooms in contrast to the possible bath house group from Layer 1 on Site 6. The coarse pottery, which is Antonine in date, is discussed under Group viii. Small finds included a bone spatula (Fig. 40.4), a fragment of bone pin, two pieces of lead waste, pieces of furnace lining, iron forging slag, and fragments of Mayen lava quern. Cut into the final fill of this ditch was a post hole, No. 72.

The North Ditch on Sites 1 and 5 (Figs. 2 and 14).

The ditch was truncated by terraces made for Victorian buildings, but where the profile was fairly complete it was similar to the east ditch. The primary fill of Clay-with-Flints contained only one illustrated sherd, No. 84. Overlying this layer was orange Clay-with-Flints and Chalk which evidently corresponds to Layer 3 of the east ditch; it contained pottery in Group iv (vessels 98-104). It could not be established with certainty whether the north ditch had been recut. The impression was that a thicker and homogeneous Layer 3 was directly overlain by a final fill very similar to that of the east ditch. The top layer did however contain rather less building stone. All layers became progressively less rich in finds towards the west, suggesting that in this direction we were moving away from the main area of dumping, and perhaps occupation. Pottery in the final fill is in Group viii. Finds included a coin of Antoninus Pius; an iron bucket handle (Fig. 40.7), and hobnails in the outline of a boot (Fig. 41.4).

THE BUILDINGS

SITE 6

Structure I (Figs. 10, 11, 13 and Plate IIIb)

A nucleation of 22 post holes (Nos. 17-38), of roughly comparable dimensions, covering an area of 4.3m. by 12m. and in four roughly straight and parallel lines, called one to four from south to north. Line one consisted of only four posts placed symmetrically with respect to the central four posts of the longer line two. The outer holes, 27 and 21, in line one were less massive than posts 25 and 23. Lines two and three converged slightly to the west. They consisted of roughly paired posts, except that posts 26 and 28 in line two were paired by post 31 in line three, post 17 had no pair. The fourth so-called line consists of only two posts forming a line parallel to lines one, two and three. Many of the post holes had casts of the original circular timbers of average diameter 15cm. The sections show that the post holes became shallower to the west. One cannot be certain that the original extent of Structure I has been found, any continuation to the west would have been removed by the foundations of Christchurch. Elsewhere holes may not have penetrated the Clay-with-Flints or have been obscured by an under-lying complex of Pleistocene landforms.

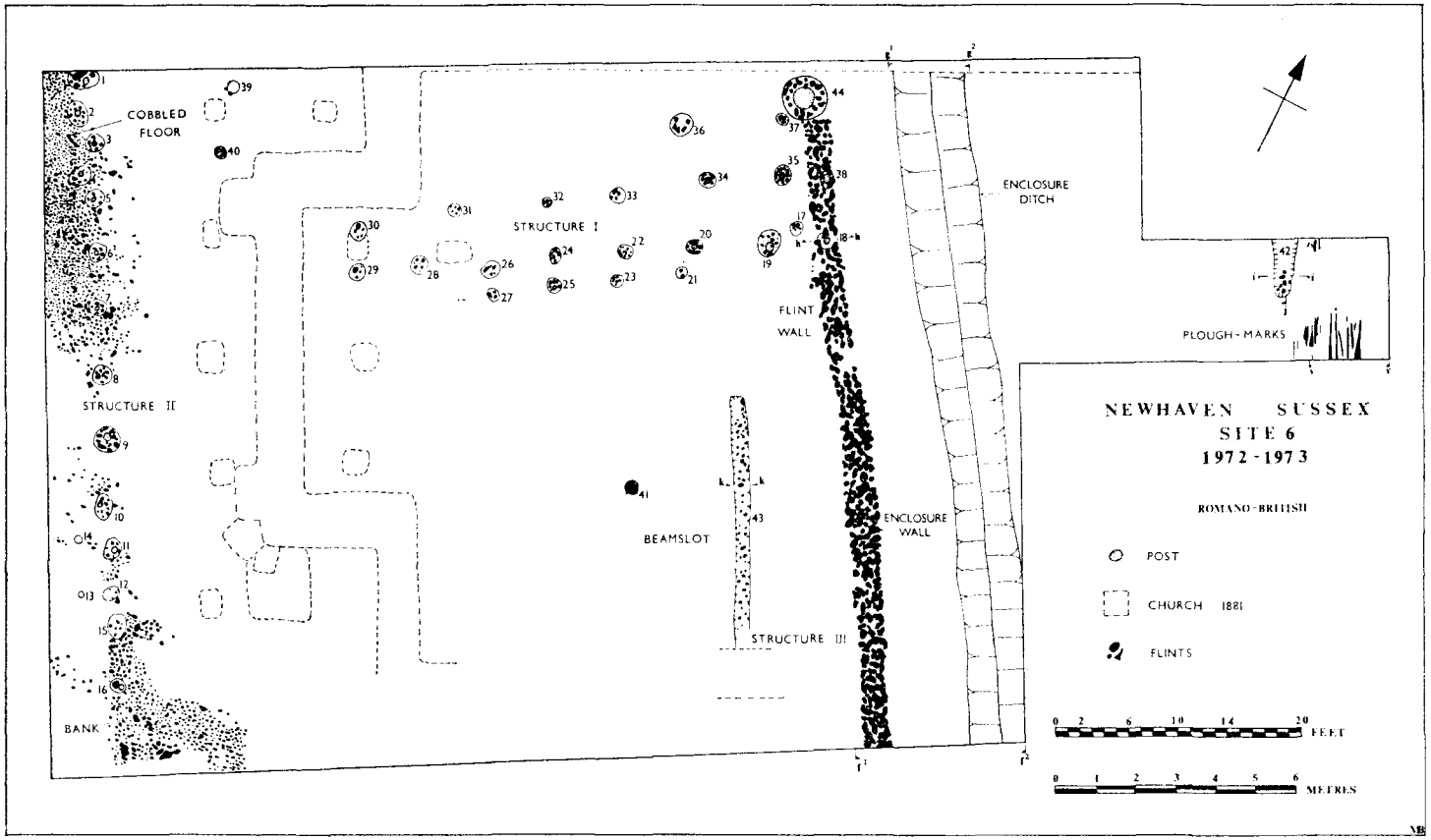

FIG. 10. Plan of Romano-British features on Site 6. Modern disturbances are shown by a broken line

Dating evidence rests on post holes 18 and 38 which were cut through by the shallow foundation trench of the enclosure wall (Section h). It was assumed above that the primary digging of the enclosure ditch was as a boundary which pre-dated the wall. Construction of the wall was after the ditch ceased as an effective boundary, but before the deposition of Layer 1. If this dating is accepted then Structure I belongs to the first phase of occupation on this site contemporary with the primary digging of the enclosure ditch, and dated to the Flavian and Neronian periods by coarse pottery from the ditch. The post holes themselves contained little to aid dating, sherds in Cooking Jar Fabric were found in holes 19, 24, 25, 30 and 34. A bronze plate, most probably a fitting from a box, was in the top fill of post hole 34 (Fig. 39.6). The west half of Structure I shows a clear nucleation of nails corresponding to that of post holes. No such nucleation was seen in the distribution of pottery, charcoal or daub, indicating Structure I did not have a domestic function.

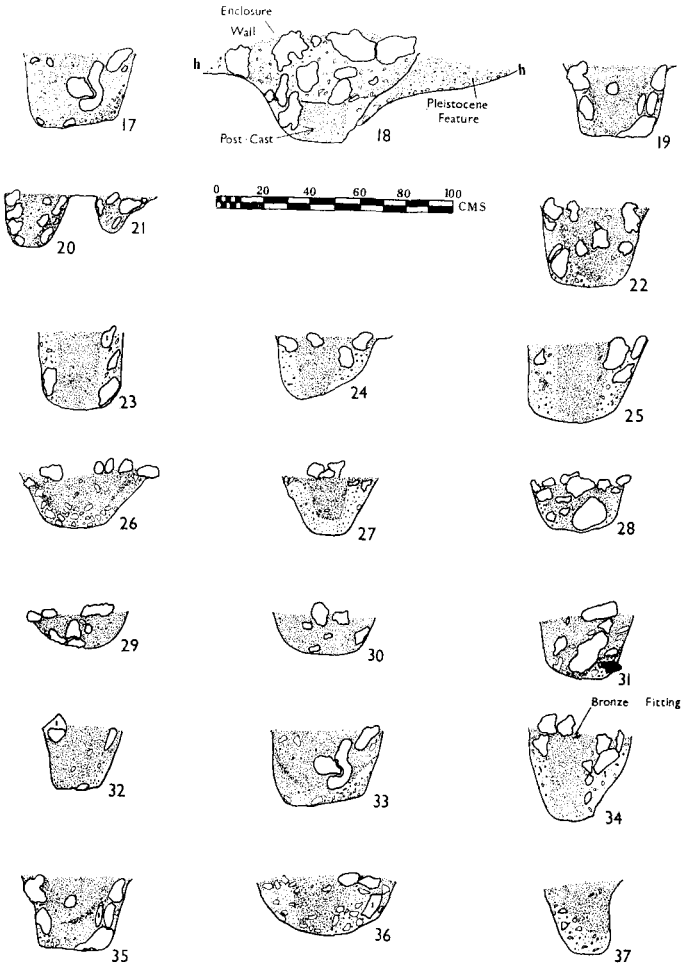

FIG. 11. Sections of post holes 17-37, all are members of Structure 1
See Fig. 12 for a key to feature fills

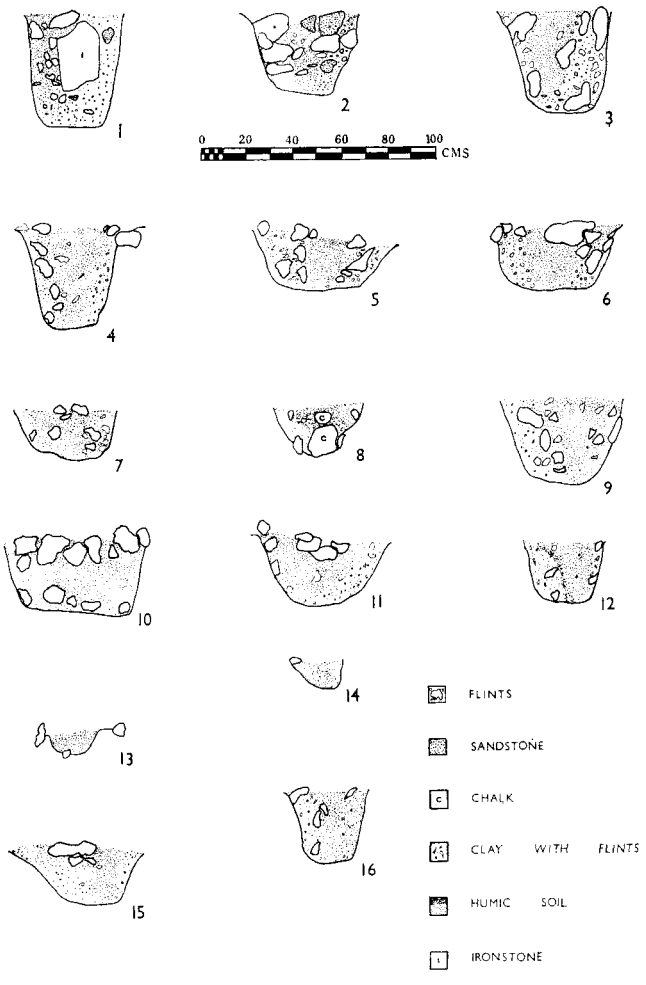

FIG. 12. Sections of post holes 1-16 which are all members of Structure II. The key is applicable to all other sections

Interpretation of Structure I must depend on whether the post holes planned represent the whole of the original building. If they do then it is perhaps a small wooden shed with the principles taken by the two central rows of paired posts. An alternative explanation assumes that some post holes have been lost or missed, and the structure could be a raised granary. That would account for the close spacing of sizeable timbers. Raised granaries with post holes rather than trench or stone wall foundations are known at Fishbourne[1] from the presumed military supply base of Claudian date, and at Hod Hill in the Claudian fort.[2] The Newhaven example is smaller than both and the post holes are less regularly arranged. If Structure I is a raised granary it must surely be a native copy.

[1] B. W. Cunliffe, *Excavations at Fishbourne*, vol. 1 (1971), p. 41.

[2] I. A. Richmond, *Hod Hill*, vol. 2 (1968), p.84, Fig. 46A.

Structure II (Figures 10, 12 and 13)

A line of fourteen post holes on the south west edge of Site 6 was exactly parallel to the enclosure wall and ditch. The line was 17.80m. long with no end or corner within the excavation. In most cases clear post casts showed the positions of timbers between 13 and 18cm. in diameter. The post casts are in a zig-zag line so placed that an intervening wall, perhaps of planks, could be inserted between alternate posts. Post 6 had a D-shaped section of diameter 13cm. and radius 9cm. The timber, presumably a split trunk, had its flat side inwards against the postulated plank wall. Further evidence for the wall supported by this line of post holes is the distribution of flints and artifacts. The northern 7.20m. of the line forms the edge of an area of laid flints interpreted as a cobbled floor. On the southern part of the wall line, flints are absent to the west but abundant to the east where they form a clear edge along the line of the wall. These flints were certainly not laid and are best explained as a low bank of soil and rubble which had been built up against the southern 7m. of the wall. The distribution of finds (Fig. 13) shows a nucleation of 71 nails in the area of the supposed bank, indicating that it may have been associated with some wooden structure of which no other trace remains. The virtual absence of nails over the northern area and west of the wall indicates that they were not used in the construction of the wall, which seems reasonable in view of the proposed method of construction. The two small post holes 13 and 14 west of the wall may be supports inserted where it had become unstable. Most of Structure II obviously lies outside the area excavated. The cobbled area in the northern part might be the interior floor of a large building, but the method of construction and the bank against its southern end are perhaps more in keeping with a fence or stockade.

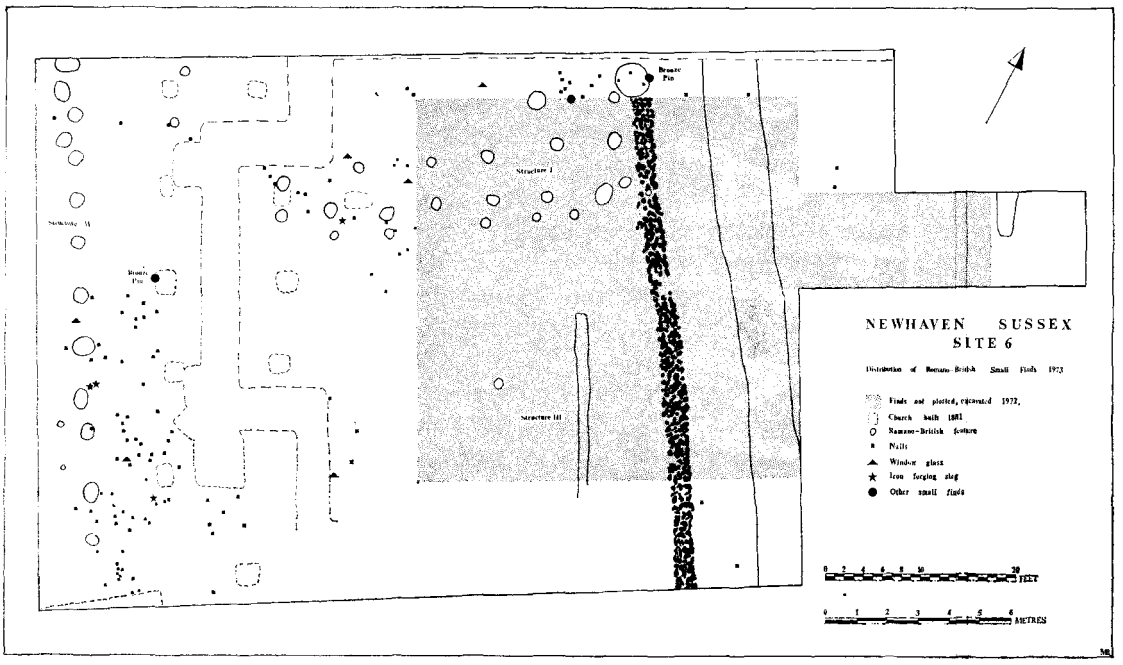

FIG. 13. The distribution of iron nails, tiles, window glass and other small finds on the Romano-British ground surface on Site 6. Positions were not recorded in the shaded area

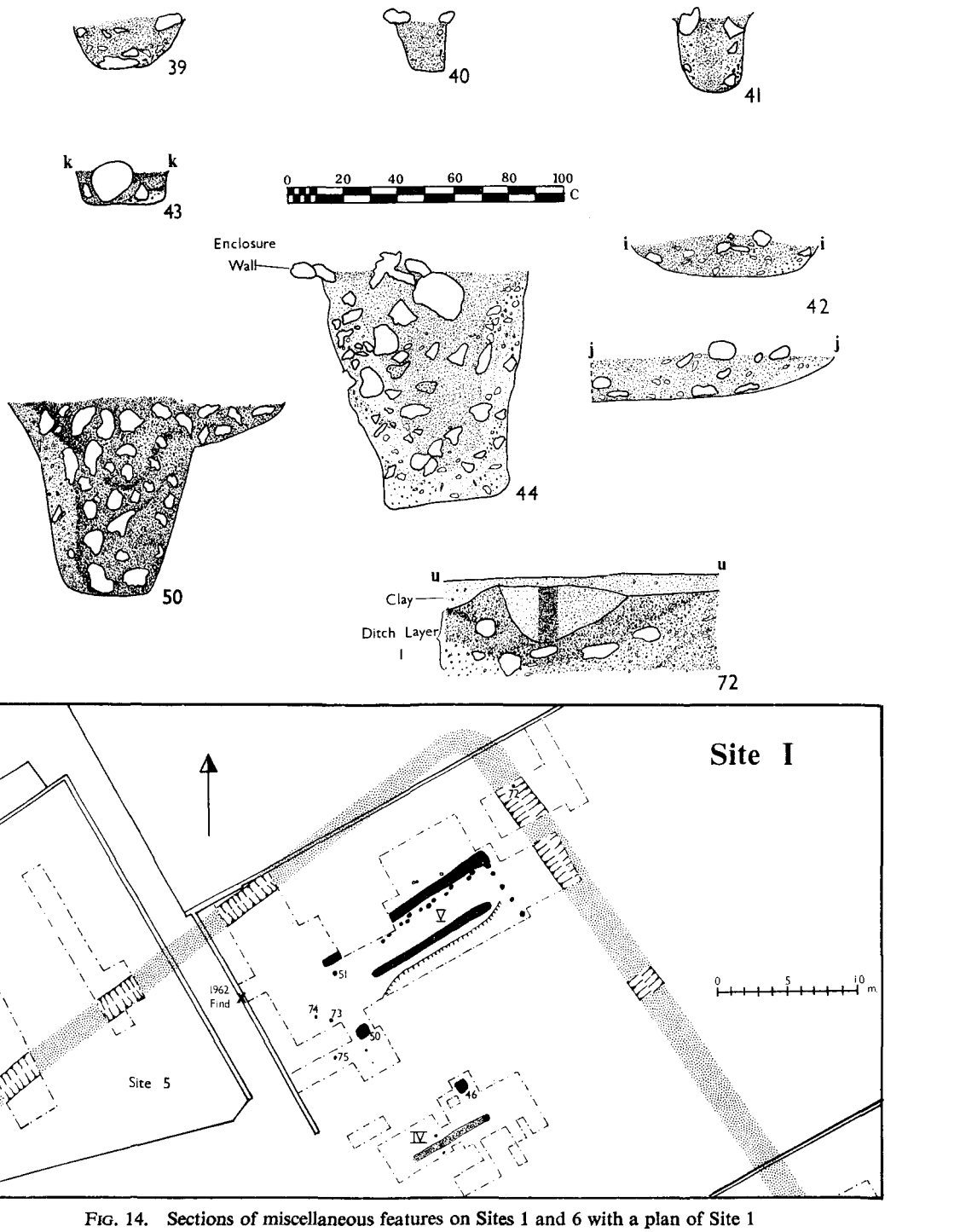

FIG. 14. Sections of miscellaneous features on Sites 1 and 6 with a plan of Site 1

Structure III and miscellaneous features on Site 6 (Fig. 10, 14 and Plate IV)

Structure III is represented by a beamslot, Feature 43; this had a rectangular cross section (k), and contained several flints. It was preserved for a length of 6.20m., but was obliterated at its southern end by Christchurch. The only finds were two pieces of tile and three body sherds in Cooking Jar Fabric. We can only assume that it represents part of a beamslot building which has left no other recognisable trace in natural. 2.40m. from the beamslot was post hole 41, which took a timber 10.5cm. in diameter, it had no clear associations. Similarly unassociated were post holes 39 and 40 in the north west corner of the site.

One feature, No. 42, has been found east of the enclosure ditch. This was a shallow gully 68cm. wide and 15cm. deep (Sections i and j). It contained some fragments of coarse pottery and a number of flints. One such flint projected well into the Romano-British soil and showed by heavy abrasion on its upper surface that the feature pre-dated the phase of ploughing represented by grooves in the surrounding loess (Fig. 18).

SITE 1

Structure IV (Figure 15)

This was in part of the site which had been considerably disturbed by Victorian terracing and school foundations. All that remained between two areas of disturbance was 11.07m. of wall trench (of which 3.68m. were badly disturbed) and some associated post holes. The trench was roughly rectangular in cross section (1-1), 56cm. wide by 15cm. deep. In plan the well preserved part of the trench is divisible into two distinct lengths. Post holes 45 and 47 were sunk respectively 30cm. and 20cm. below the base of the trench. Between them it had flints along its edges and had presumably taken a horizontal sleeper beam some 50cm. wide. West of post 47 the flints were more randomly arranged, and along one side of the trench was a series

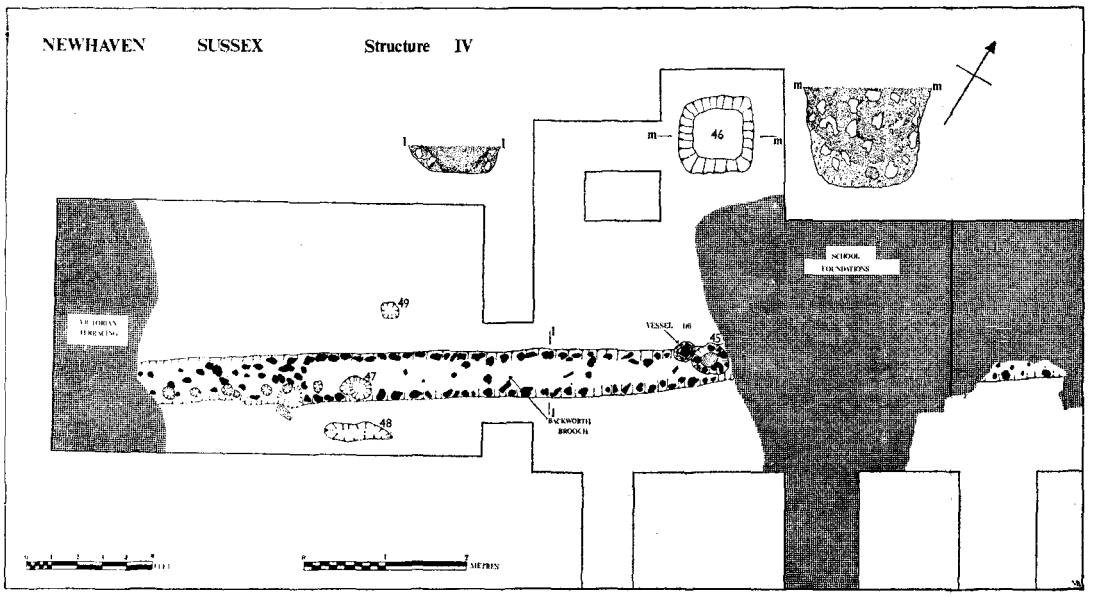

FIG. 15. Plan and sections of Structure IV and feature 46. Modern disturbances are shown by heavy shading

of stakeholes cut in its base. They were 15cm. in diameter, between 3 and 10cm. deep, and spaced at 30cm. intervals. Presumably they represent the vertical elements of a wattle and daub framework. The fact that these stakeholes were displaced to one side of the trench may imply that room was left for a horizontal sleeper beam of width 20cm. on the north side. Post holes 49 and 48 were respectively 9 and 15cm. deep, and are probably associated with the building.

Two different constructional techniques are used in Structure IV, wattling set in a trench and sleeper beams; both are common in early Romano-British wooden buildings.[1] That two techniques were used may perhaps be simply explained by the fact that an entrance lay between post 45 and 47 where there was a sole plate below a door. In any case the main structural elements of the building were vertical posts which supported the roof, and between which was an infilling of wattle and daub. A similar method of construction is seen at Fishbourne in the period 1B, buildings 4 and 5.[2]

Despite the fact that little of the Romano-British ground surface remained in this area a surprising amount of domestic debris was associated with Structure IV. Pottery Group v came from the trench, and included vessel 110 found crushed beside post hole 45. The coarse ware is of Late Flavian or Trajanic date and a blue enamelled brooch of Backworth type (Fig. 39.3) is dated by Hull to the late 1st or early 2nd centuries A.D. The samian is of mid-second century date and indicates that the building may have been demolished at the end of the first phase.

Structure V (Figs. 16 and 17 and Plates Va and Vb)

This was the most substantial of the structures excavated, even so all that was preserved was the north east corner of a building which may have been much larger. Features on the west side of the site had been truncated or obliterated by terracing to make a school playground, and the southern part of the structure was removed by contractors before it was possible to excavate.

Sealed by tread on the floor of Structure V was an irregular shaped hole 2.5m. by 1.7m. and 18cm. deep. It is probably a hole left by the removal of a tree or shrub when the site was being cleared. Postdating this are ploughmarks of Area I discussed below.

The building erected on this site was a curious marriage of stone and wooden architecture. The north wall had a row of vertical posts that would have supported the roof but outside this was a stone wall. The east wall is entirely of timber, and an internal wall has a foundation of flint. The line of post holes inside the north wall took vertical timbers of diameter 15-20cm., buried an average of 40cm., and well packed with flints. Two phases are represented by the line, the post casts of the earlier timbers are often somewhat obscured by the packing of the later post holes (e.g. 60 and 61). The earlier line was of posts 52, 54, 56, 58, 60, 61 and 63. They were replaced by a line consisting of posts 53, 55, 57, 59, 62 and 63, the latter occurring in both series. As this was the corner post a replacement may have been in the same hole. In addition No. 55 was of two phases, suggesting the replacement of an individual timber at some time.

[1] I. A. Richmond, ' Roman timber buildings ' in E. M. Jope ed., *Studies in building history*, (1961), p. 21, Fig. 1.3.

[2] B. W. Cunliffe (1971), op. cit., p. 47, Fig. 12.

Twenty centimetres outside this line of posts was a well-built stone foundation, 80cm. wide (Sections r and q). The foundation consisted of three courses each one flint thick, separated by a thin band of soil. Geological materials used in the construction of this wall and in the post packings are discussed in a separate section below. All the indications were that the wall was contemporary with the later line of posts. Post hole 63 was in an L-shaped continuation of the wall (Section p^1-p^2), but this relationship was somewhat obscured by a Post-Medieval feature which had removed its east side. Post 62 was connected with the wall by a shallow trench which indicated that the wall trench and post pits had been cut as part of a single scheme.

The west wall consisted only of holes for timber verticals. It showed no sign of the reconstruction noted in the north wall, unless the two smaller timbers, 64 and 66, were replaced by the larger timbers 65 and 67. 2.2m. from the north wall was an interior wall 50cm. wide (Section s). In places only a single course of flints was preserved and this wall was less well constructed than the exterior wall. It petered out to the west where it was obliterated by recent terracing. The internal wall terminated 1.2m. from the east wall, presumably for a doorway. Beside this was Feature 70, a shallow post seating, one side of which was formed by a body sherd of an amphora lying at 45°. A narrow, poorly founded, wall such as this can scarcely have been carried up to any great height. Probably it was a dwarf wall upon which was a timber framed partition. The verticals in this framework were carried down to post emplacements like 69.

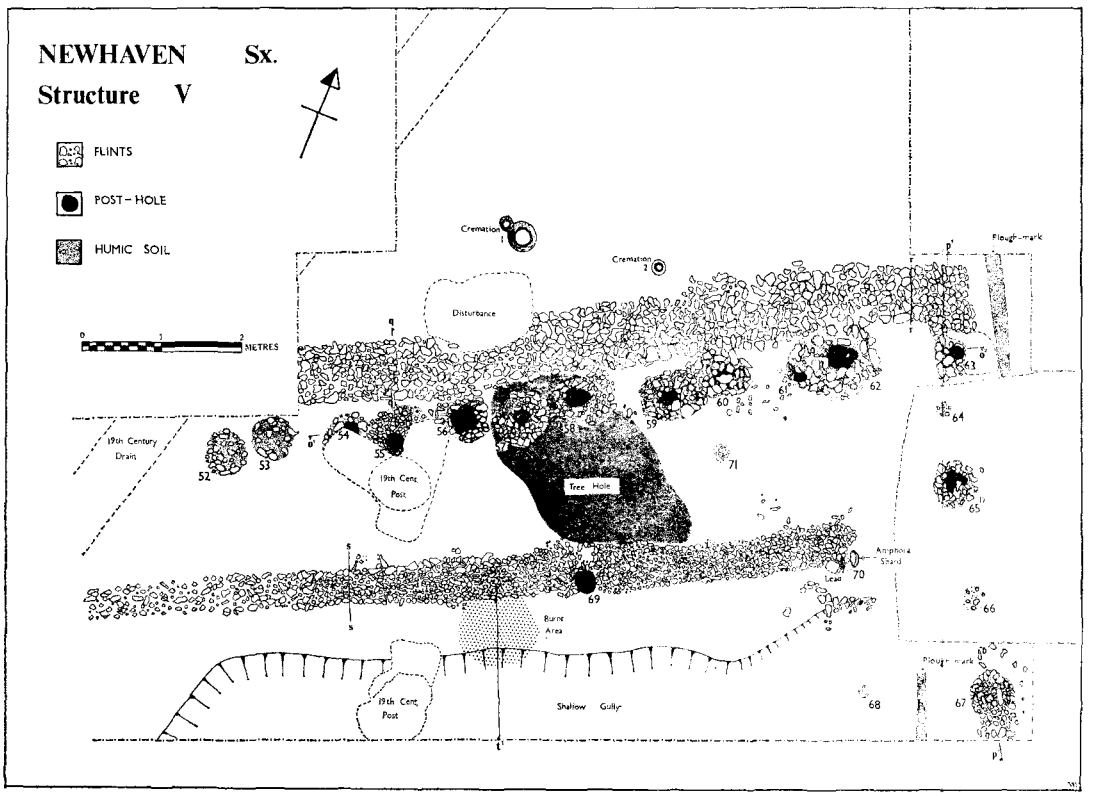

FIG. 16. Plan of Structure V

Inside Structure V was a gully 30cm. deep which appears to have been in use during the life of the building. It was filled with dark earth, flints, limonite concretions, cement, tiles, daub, charcoal and domestic debris probably from the demolition of this and adjoining buildings. A red enamelled flat brooch and a bronze ring (Fig. 39.4 and 8) lay among the demolition debris. Overlying the gully fill and the interior wall was an area of burnt clay and charcoal (Section t). It coincided with a circular nucleation of 24 nails and fragments of iron forging slag. The area probably represents the site of a bonfire made during the systematic clearance of the site. Alternatively it may represent a period of activity, perhaps iron forging which post dated Structure V.

All the features which can positively be assigned to the Structure V complex are shown in Fig. 16. In the badly disturbed area to the west (Fig. 14) there were two features, post hole 51 and a short adjoining length of wall; these are probably a continuation of the north wall of Structure V. If so the wall was at least 14.6m. long.

Interpretation of the structural remains hinges on the character of the north wall. It has been suggested that the line of posts is contemporary with the wall, but it is difficult to see why both should have been required, or what form the external wall would have taken. Two hypotheses may be considered. The first assumes that despite observations to the contrary

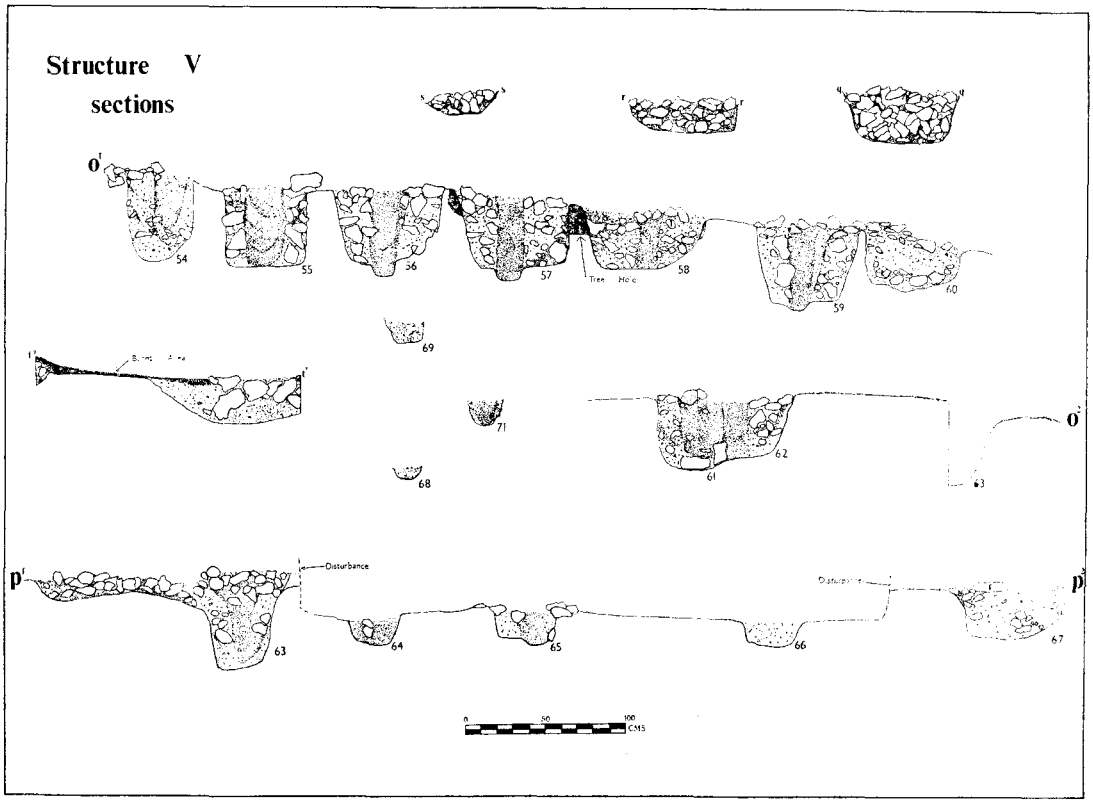

FIG. 17. Sections of post holes and walls from Structure V

the two phases of post holes and the wall represent successive phases of a building on an almost identical plan. The second possibility, which takes best account of observations made on site, is that a first phase, entirely timber building, is represented by the earlier line of posts. In a second phase the same basic structure was rebuilt, using the later line of post holes, and the stone wall was added to the north side. The relationship of the north wall to the enclosure ditch suggests that the former may be a continuation of the courtyard wall found on Site 6, in which case it may have been added in a rebuilding of Structure V which coincided with the making of the enclosure wall. It is quite usual to find that auxiliary buildings in villa courtyards are constructed against the courtyard wall, which often forms one of the walls of the building.[1] The internal wall made the north part of Structure V into an unusually long narrow room, somewhat reminiscent of the ' corridor ' made on building C at Gadebridge Park.[2]

Functionally Structure V is presumably an auxiliary agricultural building. It had a dirt floor and the shallow gully is probably an internal drain such as would be expected in a cattle byre. The floor of the gully slopes downhill to the east and fans out to discharge through an opening in the east end of the building into the enclosure ditch beyond. The building in its various phases seems likely to have stood for the duration of occupation on the site. Thus the primary, entirely wooden phase, is contemporary with Layers 2-4 of the enclosure ditch. The second phase was associated with the making of the enclosure wall. Fortunately the wall trench contained a small quantity of pottery (Group vi) which included a large fragment of stamped mortarium, parallels for which are in the date range 110-150 A.D. The destruction level in the gully is dated by coarse pottery (Group vii) and samian ware to the late Antonine period contemporary with Layer 1 of the enclosure ditch.

The Cremations (Fig. 37)

Just north of the outer wall of Structure V were two inurned cremations. Both were in shallow holes just large enough to take the urns. The Structure V destruction level appeared to postdate Cremation 1. This was in a hole cut through the Romano-British soil and 15cm. into Clay-with-Flints. It consisted of two vessels (Fig. 37, 1a and b). In both cases they were broken and only the bases remained, the rim and part of the body had been removed earlier this century by a water pipe trench. The cremated bones were in a larger vessel, with it was a subsidiary vessel, a small grey ware jar, which did not contain any bones.

Cremation 2 was 1.4m. from the first in a single intact pot. This was a spherical poppy-head beaker (Fig. 37, 2a). In addition to the cremated bones it contained a melon bead in blue glass and an annular dark green bead (Fig. 37, 2b and c). The two vessels found in 1962, which led to the discovery of this site, are also likely to have come from a cremation. Their findspot is approximately 14m. west-south-west of the above cremations (Fig. 14). The five cremation vessels are discussed at the end of the pottery report below.

The dating and stratigraphic position of these cremations suggests that they are part of a small cremation area associated with the settlement. It has already been noted that the distribution of Romano-British burials on the downland shows them to be related to specific nearby downland farmsteads (Fig. 1).

[1] R. Hanworth, ' The Roman villa at Rapsley, Ewhurst,' in *Surrey Archaeological Collections* vol. 65 (1968), Building II, p. 23, Fig. 3.
D. S. Neal, ' *The excavation of the Roman villa, Gadebridge Park, Hemel Hempstead 1963-8* (1974), Buildings B and C, Figs. 20 and 22.

[2] D. S. Neal, 1974, op. cit., Fig. 22, p. 35.

The Cremated Individuals by H. B. A. Ratcliffe Densham, M.B., B.S., B.Sc., M.R.C.S., L.R.C.P., F.S.A.

Cremation 1. The cremation had been moderately efficient but the fragments of bone had been badly broken when they were packed into the urn. Forty pieces were identifiable, but were mostly too small and disturbed to convey much information. A single individual was represented, a young adult, very probably male.[1] No surviving fragment of joint surfaces showed any wear or pathology. The individual was not very big boned.

Cremation 2. Tiny fragments of cremated bone belonging to a human infant. Only a few pieces of skull, rib and unspecified shaft of long bone could be identified. An almost complete milk molar tooth, apparently on the point of eruption was probably a ' d ' two year old one. In this case the child was probably eighteen months to two years old at death. It is possible that the large beads might have been swallowed by a teething child and contributed to its demise by choking it.

Miscellaneous Features on Site 1 (Fig. 14).

The features discussed in this section are individual post holes which cannot be related with certainty to any specific structure. With the exception of Feature 72 they were all truncated by recent terracing, and in areas badly disturbed by Post-Medieval buildings.

Feature 46. A large square post pit of sides 76cm. and depth 58cm. It contained vessels 125 and 126 and a lead offcut (Fig. 40.1).

Feature 50. A large square post hole of sides 60cm. and depth 83cm., carefully packed with large flints round the post cast.

Features 46 and 50 are similar and may belong to the same building, however so little remains that it would be unwise to say more about its nature.

Feature 73. A small post hole packed with flints which had taken a timber of diameter 14cm.

Feature 74. A small post hole with a post cast of diameter 10cm.

Feature 75. A post hole with a post cast of diameter 15cm. After removal of the post seven fragments of coarse ware had fallen into the hole.

Feature 72. The only feature from the excavations which can be dated as later than the Antonine destruction level. This post hole was cut into the top layer of the enclosure ditch. The post pit was a neat rectangle, and in its centre was the hollow cast of a timber 13 by 9cm. The hole was sealed by 10cm. of stiff orange clay above which was Medieval hill wash (Section u).

THE PLOUGHMARKS

(Figure 18)

In two areas of the site plough grooves were visible on the surface of natural. In both cases they ran in one direction only. The two areas originated separately and their marks are of different dimensions.

Area I: This was outside the enclosure ditch on Site 6. The grooves were visible at the base of the Romano-British soil where they cut into underlying Pleistocene loess (Fig. 3). Groove width varied from 2.5cm. to 15cm., but it was often impossible to distinguish a single wide groove from an agglomeration of smaller grooves. The majority were about 5cm. wide. In section they appeared to be U-shaped with a flat bottom. Assuming that the marks were cut from the top of the Romano-British soil, the plough reached a total depth of about 25cm. The visible marks, which are illustrated, only represent points at which the plough cut deep enough to penetrate the loess, their plan suggests that they are part of a palimpsest produced by numerous ploughings. At least one groove had a sharply pointed V-shaped end, presumably the point at which the share was raised from, or pressed down into, the subsoil.[2]

The ploughmarks are considered to be contemporary with the latter part of the Romano-British occupation on the site for the following reasons:—

(i) The groove fill contained specks of daub, charcoal and shingle, suggesting a date contemporary with or later than the Romano-British site.

1 Calvaria 5.7-7.5mm. thick, all surviving sutures open. One tooth root broken off in life. Two with canals closed at tips. Femoral shaft 5.5-7mm. thick and not pilastered. Humeral shaft 4mm. thick. Tibial shaft 5-7mm. thick, strongly platymetric and not much bowed.

2 V. Nielsen, ' Iron Age ploughmarks in Store Vildmose, North Jutland,' *Tools and Tillage*, vol. 1 (1970), p. 153.

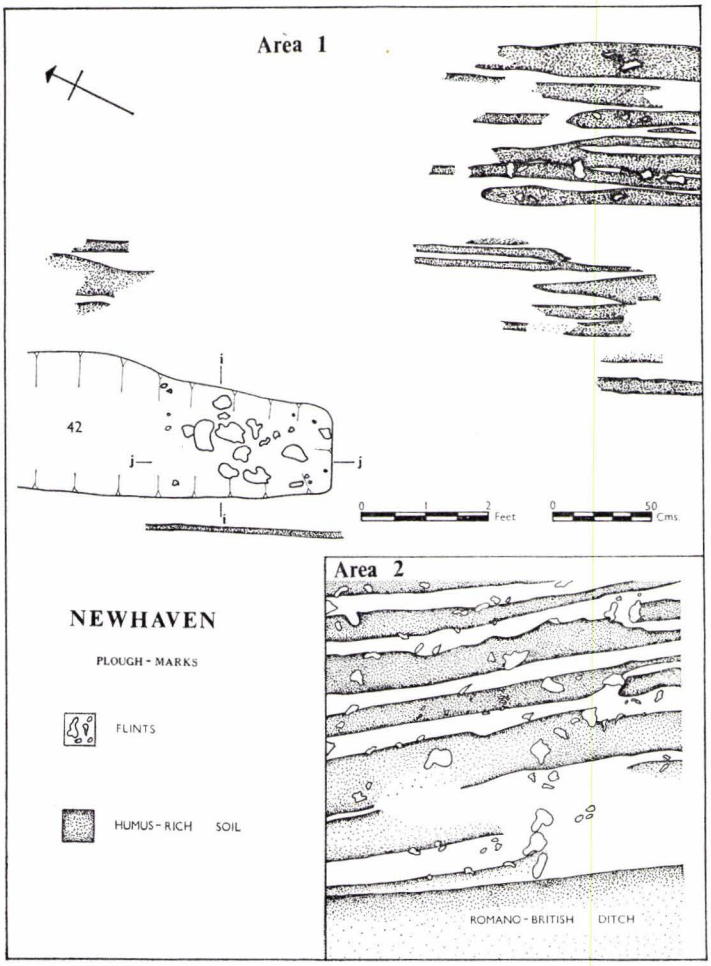

FIG. 18. Plough-marks. Area 1 is on Site 6 and of Romano-British date. Area 2 is on Site 1 in a Pre-Roman or Early Romano-British context

(ii) They were not found west of the enclosure ditch, suggesting that the ditch was the boundary of cultivated land around the settlement.

(iii) A flint projecting from feature 42 showed, on its upper surface, signs of intense wear as a result of the repeated passage of the plough.

(iv) Medieval ploughing, responsible for the burial of much of the site below 1m. of plough-wash, did not penetrate to the base of the Romano-British soil. Walls in that soil showed no signs of dragging or disturbance.

Accordingly the conclusion must be that the marks are contemporary with the enclosure, and that the area ploughed was a narrow strip between the enclosure and the Ouse river cliff. Observed sections and nineteenth century cartographic evidence (see above) have fixed the position of that cliff on the west side of Chapel Street, giving a field width of between 20 and 25m.

Area II: This was on Site 1 in the north east corner of the Romano-British enclosure. A small area 2m. square was well preserved, but slight traces of other marks were noted during the excavation of nearby Structure V (Fig. 16). These demonstrated that the marks pre-dated the building of Structure V probably in the first century A.D. These marks had an average width of 15cm. They were incised an average of 4cm. into the loess apparently with a U profile and flat bottom. Some of the marks planned may have been composed of several separate grooves which had run together.

Discussion. Both areas of ploughmarks run in only one direction, which is approximately along the contours. Similar small areas of single directional grooves are known from Romano-British contexts at Latimer[1] and Gadebridge Park,[2] both villa sites. Such marks are in contrast to areas of cross-ploughmarks known in contexts ranging from Neolithic to Romano-British.[3]

GENERAL DISCUSSION OF THE ROMANO-BRITISH SITE

(Figure 2)

Dating evidence from pottery and artifacts is in general agreement that the site was occupied throughout the second century A.D. The extensive coarseware assemblage suggests a beginning in the Neronian/Early Flavian period. Only a small number of samian vessels reached the site in the first century and, as Mr. Detsicas points out, the presence of only two South Gaulish sherds would tend to indicate a beginning during the closing years of the first century. Until we have detailed studies of other contemporary coarse and samian ware assemblages from the area, all that can safely be concluded is that occupation began some time during the second half of the first century.

The primary phase of occupation is represented by material in Layers 3 and 4 of the ditch. The latter is likely to have surrounded a rectangular enclosure within which there were buildings. Structure I, a possible granary, Structure IV, and the first phase of Structure V, are of this period; so also may be Structures II and III, which lack clear dating evidence or stratigraphic associations. A nucleation of pottery in the ditch on the north edge of Site 6 is taken as indicating an entrance hereabouts. The first century pottery assemblage is an interesting combination of manufactured Romano-British wares, developed Belgic forms, and local ultimate Iron Age types. There is no evidence that the latter two are any earlier than the Romano-British material with which they were found, they are certainly no more abraded. Numerous joining fragments of " South Eastern B " type vessels leave no doubt that these were in use at this period.

A second phase is tentatively dated to the first half of the second century A.D. It is marked by the demolition of Structures I and IV, and the building of an enclosure wall over the east end of Structure I. This wall was parallel to the ditch, and 2m. from it. By this time the ditch was silted to the top of Layer 3, and the wall replaced it as an enclosure round the site. A large post-hole at the east end of the enclosure wall marks the entrance already noted in the primary phase. Probably contemporary with the building of the enclosure wall was the second phase of Structure V. Information about other structures of the second phase comes in the

[1] K. Branigan, *Latimer*, Chess Valley Archaeological and Historical Society (1971), p. 60.
[2] D. S. Neal, 1974, op. cit. p. 42.
[3] P. J. Fowler and J. G. Evans, ' Plough marks, lynchets and early fields,' *Antiquity*, vol. 41 (1967), pp. 289-301.

form of building rubble from a later destruction horizon. A bath-house is indicated by waterproof plaster of Group II, four fragments of which are from an apsidal plunge bath. Box flue tiles, presumably from this building, include roller-stamped examples, known elsewhere from early second century contexts (see Tiles below). It is likely therefore that the building of the bathhouse coincided with that of the enclosure wall and the second phase of Structure V. Demolition debris probably derived from a main dwelling house includes painted wall plaster of Group I. Either the bathhouse or the dwelling house could have produced the roof and floor tiles, window glass, floor and ceiling cement. Quantities of building stone, bearing traces of mortar, show that parts at least of these buildings were of stone.

It is on the basis of this demolition debris, the buildings excavated and the evidence of economic activities discussed below that the site is identified as a small early villa. The finding of an entrance does enable us to speculate about the overall plan of the site and the location of the main dwelling. The entrance is likely to have been in the centre of one side of the rectangular enclosure, and the main dwelling house probably stood opposite. If this is the case then it lies in the backyards of The Volunteer Inn and other premises on the west side of South Road. Elsewhere around the periphery of the enclosure were located auxiliary buildings of which Structures I-V appear to be examples.

Throughout the period of occupation the same basic plan was adhered to. There is no evidence of dramatic changes in the economy or status of the site, despite the fact that the stone buildings, and most of the samian ware, are of second century date. The conclusion must be that the small villa, for which we have clear evidence in the second century, began life during the second half of the first century. This is not surprising in view of the fact that Sussex is an area unusually rich in first century villas, presumably as a result of the favourable political and economic climate in the client kingdom of the Regni.[1]

In the late second century A.D. all the buildings were systematically demolished and their rubble was used to in-fill features such as the enclosure ditch, and the gully in Structure V. After this the site was abandoned, and only a few sherds of pottery found their way on to the site during the third century. It may be that occupation shifted to the 'upland meadow' where traces of a villa were found in 1881.

THE SITE'S ECONOMY

General Discussion (Figure 19)

Economic activities are evidenced by the remains of crops grown, and animals raised; the interpretation of the structures and artifacts and an appraisal of the agricultural potential of the site's environs. On the analogy of Medieval farms and villages in the locality it is reasonable to assume that the site had an immediate catchment area of radius some 2km.[2]

Arable agriculture took place prior to the laying out of the enclosure in the Neronian/Flavian period, as shown by ploughmarks of Group 2 pre-dating Structure V. The ploughmarks of Group 1 appear to represent a field outside the enclosure, suggesting that it may have

[1] B. W. Cunliffe, *The Regni* (1973), p. 74.

[2] A. Ellison and J. Harriss, *Settlement and land use in the prehistory and early history of southern England—A Study Based on Locational Models*, in D. L. Clarke, ed., *Models in Archaeology* (1972), pp. 911-962.

been surrounded by arable land. Carbonised seeds show that the crops grown were bread wheat, spelt, barley and perhaps rye. Structure I has been tentatively interpreted as a raised granary, indicating that considerable quantities of grain may have been stored on site. The most fertile arable lands are the chalk downland soils which occur on the periphery of the site's likely catchment. The ploughmarks show that Clay-with-Flints soils in the immediate vicinity were also tilled, but this probably does not apply to the much heavier and poorly drained Eocene clay soils.

Pastoral activities are indicated by Structure V, interpreted as a byre for cattle, and by the fence, Structure II, which is probably part of a stock compound. The animals represented were, in order of decreasing importance, cattle, sheep, pig, dog, horse, domestic hen, deer and cat. The minimum number of animals is 76, and the percentage of that number represented by each species is shown graphically in Figure 19. It is compared with results from downland farm sites at Bishopstone and Slonk Hill, Shoreham.[1] The predominance of cattle at Newhaven is in contrast to the downland sites where sheep were more numerous. The waterless downs were better suited to sheep, whereas a villa situated in a river valley, and provided with byre accommodation, was capable of supporting a larger head of cattle. It is likely that the Eocene clays were exploited as a source of rather poor quality pasture.

Agricultural produce was supplemented by molluscs collected on the seashore and in the estuary. Some at least of the sheep were presumably kept for wool, and the loomweight shows that weaving was practised. A smithy produced iron objects worked from blooms that are likely to have been smelted in the vicinity from a local outcrop of ironstone. Vessels in ' Cooking Jar Fabric ' were probably made locally, but their bonfire firing need have left no recoverable trace. Basic productive activities like smithing, weaving and potting were undertaken on a small scale at Newhaven and on the downland farms. They probably met a demand generated within the sites themselves rather than providing a tradeable surplus. The chief commodities for the external market appear to have been grain and perhaps meat.

It is an enigma that the villa is situated in one of the least potentially fertile parts of the area mapped in Figure 1. To the east is the flooded and marshy Ouse valley, and the hill to the west is capped by an outcrop of tenaceous Eocene Clay. So infertile and poorly drained is the latter that even today large areas are covered with gorse and scrub. Though the settlement was first and foremost a farm, proximity to the Ouse estuary and mouth seems to have been the major factor governing the choice of site. This offered the potential for communication both within the Ouse basin (see geological resources below) and with external markets. We may speculate that such a site served as something of a centre for the numerous small downland farms located in its more fertile hinterland.

The economic and environmental evidence

During excavation a specific attempt was made to obtain a range of floral and faunal samples which could be used as a guide to economy and environment. Samples of carbonised grain, charcoal, molluscs and small bones were extracted from soil samples with a water sieving device.[2]

[1] I am grateful to Mr. R. Hartridge for permission to quote the Slonk Hill data; the animal bone report was by Mrs. P. Sheppard.

[2] This was built by W. H. C. Bell, to whom I am grateful. For a similar sieve see: D. H. French, ' An experiment in water sieving,' *Anatolian Studies*, vol. 21 (1971), p. 59.

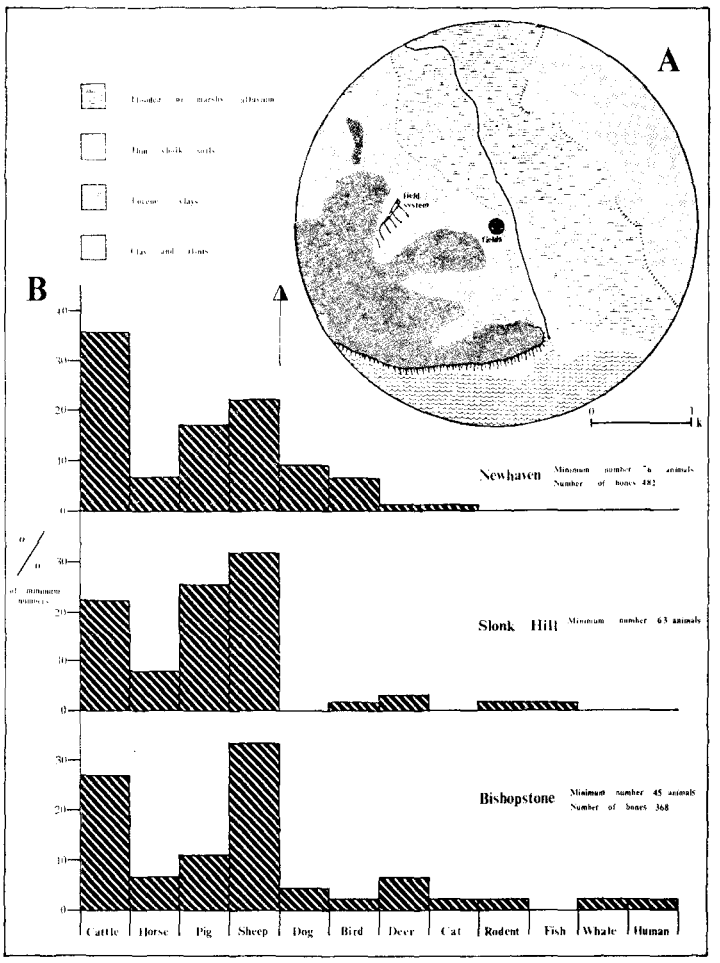

FIG. 19. The site's economy and environment. (A), Soils within a radius of 2km. (B), Histograms of animals present expressed as a percentage of minimum numbers. Newhaven is compared to Slonk Hill and Bishopstone

The mesh size used was 1mm. The sieve enabled large samples of soil to be run during the excavations. The material was sorted, packed and dispatched to specialists whilst digging was in progress. Plant remains from soil samples are seeds, preserved by carbonisation, which were lying on the ground surface at the time when the layer which contained them was deposited. Plant remains were also encountered in tiles and pottery; in the former they were deliberate inclusions as a temper, in the latter case they seem generally to have been accidental. Impressions and remains in tiles and in some pots, not made on the site, should not be regarded as evidence of this site's economy. All the animal bones (482) were saved and analysed; larger scale sieving for small bones would perhaps have produced greater numbers of birds, fish and small mammals.

The animal bones.[1] (Figure 19 and Table II) by Alison Gebbels, B.Sc.

Table II. Frequency chart of animal bones, prepared by Alison Gebbels.

Newhaven	Cattle	Horse	Pig	Sheep	Dog	Bird	Deer	Cat	Total
skull	—	1	1	2	6	—	—	—	10
mandible	28	—	13	22	3	—	—	1	67
vertebrae	13	1	1	11	11	1 coracoid	—	2	40
pelvis	3	2	—	4	5	—	—	1	15
humerus	10	—	1	1	2	—	—	1	15
radius	3	—	—	5	3	3	—	—	14
ulna	3	—	—	2	5	4	—	2	16
scapula	12	6	4	2	3	1	—	—	28
metacarpal	6	1	1	3	—	2	—	—	13
carpals	—	—	—	—	—	—	—	—	—
femur	4	1	—	—	7	1	—	1	14
fibula	—	—	—	—	1	—	—	—	1
tibia	6	3	1	11	3	6	—	1	31
patella	—	—	—	1	—	—	—	—	1
metatarsal	20	4	—	4	1	6	—	—	35
talus	1	1	—	—	—	—	—	—	2
calcaneum	1	—	—	—	1	—	4	—	6
phalanges	20	5	—	12	11	—	1	10	59
ribs	16	1	8	1	—	—	—	3	29
U. incisors	6	1	—	4	—	—	—	—	11
canines	—	—	—	2	2	—	—	—	4
premolars	8	—	1	5	—	—	—	—	14
molars	15	—	1	10	—	—	—	—	26
L. incisors	1	3	1	—	—	—	—	—	5
canines	—	—	—	—	2	—	—	—	2
premolars	—	—	1	5	—	—	—	—	6
molars	2	—	1	12	—	—	—	—	15
astragalus	1	—	—	—	—	—	—	—	1
horn core	2	—	—	—	—	—	—	—	2
	181	30	35	119	66	24	5	22	482
% excluding ribs	36.42	6.40	5.96	26.04	14.56	5.29	1.10	4.19	99.96
Min. no.	27	5	13	17	7	5	1	1	76
% based on min. no.	35.52	6.57	17.10	22.36	9.21	6.57	1.31	1.31	99.95

GROUP I—From layers two to four of the enclosure ditch and the postholes of Structure I:—

Minimum numbers	Cattle	Sheep	Pig	Horse	Dog	Bird	Deer	Cat
	20	15	11	4	3	3	1	1

CATTLE—The age structure was calculated from the mandibles and showed a predominance of young adults approximately two years old. Two individuals showed considerable tooth wear and were at least four years old. One individual was 1-2 years and there was a calf. The major long bones were mostly represented, astragali were absent and there were few loose teeth despite the fact that the latter were well represented in sheep. No particular selection of joints seems to have been operative. Some metatarsals showed signs of cutting, just leaving the distal or less often, the proximal ends. This appears to indicate both butchering and consumption of the carcases on site.

SHEEP—The age structure indicates animals of about two years, young adults at their most productive meat value. Long bones were not fully represented in this group; however a proportion of lambs killed were represented by long bones indicating their home consumption. Where long bones are present they are mainly shafts left after the removal of marrow.

PIG—The age structure included an adult of two to three years, a juvenile under two years, and five individuals showing full dentition but with little tooth wear, therefore about two years old. Also present was an aged individual over five years, another about one year and a piglet of a few months. Few parts of the post-cranial skeleton were present in comparison with mandibles and teeth, suggesting that some meat was exported from the site.

[1] For a fuller discussion see: A. Gebbels '*Analysis of animal bones from Bishopstone and Newhaven in relation to the economy of Iron Age and Roman Sussex*,' (unpub. B.Sc. dissertation, Univ. of London, 1974. Copy at Institute of Archaeology, London).

HORSE—Was mainly represented by scapulae in this phase, only one major long bone was present. This may suggest that horse was being used for purposes of traction only.
DOG—One adult individual is well represented, also two young animals including a puppy of four to five months.
BIRD—Only represented by long bones, due either to selection or preservation conditions. One individual was identified as domestic hen.
DEER—One individual, represented by a single phalanx, was tentatively recognised.
CAT—A young adult found in a posthole was represented by a good proportion of the skeleton including mandible, pelvis, ulna, tibia; the humerus and femur were unfused at the distal end.

A number of rodent bones were ignored as they are likely to be intrusive.

GROUP II. From layer one of the enclosure ditch and Structure V demolition levels:—

Minimum numbers—	Cattle	Dog	Sheep	Pig	Bird	Horse
	7	5	2	2	2	1

CATTLE—The age structure was varied but none of the individuals were over about four years, three were aged three to four years, two individuals were one to two years, one was a year and a calf was aged a few months. Metatarsals were well represented and frequently cut as at Bishopstone,[1] some fragments had been burnt.
DOG—The minimum number was based on differing femur sizes. Two individuals were adult. The distal end of a femur was bent.
SHEEP—Two young adults, one with full permanent dentition showing little wear, therefore about two years old. Long bones except the femur and humerus were represented. These were also absent in Group I suggesting some selection of joints. Some bones, including a horn core, were burnt. Others were broken as a result of butchering.
PIG—One mandible of an individual approximately one year, some loose teeth and a humerus.
BIRD—Domestic chicken was present, one other individual could not be identified down to species.
HORSE—One individual represented by a fragment of acetabulum, a metacarpal and two phalanges.

Minimum numbers of two groups combined:—

Cattle	Sheep	Pig	Dog	Horse	Bird	Deer	Cat
27	17	13	7	5	5	1	1

Cattle predominate over sheep in both the number of bones and the minimum number of animals represented. The importance of cattle suggests the site may have been of commercial importance, cattle being more specialised in their requirements than sheep. The frequency chart (Table 2) shows selection operative in cattle, with mandibles, humeri, scapulae and metapodials being the most numerous. Sheep are mostly represented by mandibles and tibiae whilst pig was largely represented by mandibles with very little of the post-cranial skeleton. Horse was largely absent except for scapulae. The age structure of sheep, pig, cattle and horse indicates that overwintering was no problem. The measurements of the cattle bones suggests a size diversity in the Roman period,[2] with a Celtic ox and a larger more slender breed like the present day Chillingham type.[3]

The plant remains by J. R. B. Arthur, F.L.S.

(a) From soil samples.

Enclosure Ditch Layer 4:
Triticum spelta (Spelt wheat)—3 grains, 3 grain pieces and glume fragments.
Atriplex patula L. (Orache)—1 seed, a common weed of arable land.
Deschampsia cespitosa (L) (Tussock Grass)—2 seeds, weed of upland pasture, wet meadow and arable land.

Enclosure Ditch Layer 1:
Triticum spelta L. (Spelt wheat)—11 grains.
Triticum aestivum L. (Common or bread wheat)—8 grains.
Hordeum vulgare L. (Barley)—1 grain.
Cuscuta sp. (Dodder)—2 seeds, heaths and grassy places.
Euphorbia amygdaloides L. (Wood Spurge)—1 seed, found in woods and scrub.
Anthemis cotula L. (Stinking Mayweed)—2 achenes, common weed of arable land formerly more common than now, especially in the stiff sods of Southern England.
Galeopsis tetrahit Mill. (Common Hemp-Nettle)—1 nutlet, weed of cornfield and arable land.

(b) Inclusion in ceramic—In the Roman period these are not necessarily evidence of plants present on site.
Tritcum sp.—abundant in tiles from the enclosure ditch layer I.
Tritcum spelta (Spelt wheat)—1 grain in a crude everted, possibly Anglo-Saxon rim sherd, from the Romano-British ground surface.
Secale cereale (Rye)—abundant in tiles from the enclosure ditch layer 1, very abundant in tiles from posthole 44.
Pteridium aquilinum (L.) (Bracken) Fragment of the pinnule in daub from Site 6 Enclosure Ditch layer 3—Weed of rough pasture and moderately acid grassland.

Bread wheat, spelt, barley and possibly rye represent crops grown and accidently carbonised. Some weed seeds, i.e., Orache, Stinking Mayweed and Common Hemp-Nettle are common weeds of the cornfield and are likely to have been brought to the site in crops. Others may represent weeds that grew in the enclosure.

1 A. Gebbels, 1974, op. cit., p. 30.
2 For figures see A. Gebbels 1974, op. cit., Appendix C—measurements.
3 P. A. Jewell, 'Changes in size and type of cattle from Prehistoric to Medieval times in Britain,' in *Zeitschrift fur Tierzuchtung und Zuchtungsbiologie*, vol. 77, .2 (1962), pp. 159-167.

The charcoals by C. R. Cartwright, M.A.

A large number of samples were collected but only ten have been identified. These were all macroscopic fragments from postholes and other features. The samples were taken to ascertain what timbers were used in specific buildings rather than to obtain random samples as evidence of local ecology. In view of the distance travelled by some specimens of the other building materials (e.g. stone—see below) these timbers cannot necessarily be used as a guide to the contemporary flora of the lower Ouse valley.

Samples 1-3 *Quercus sp.* (Oak) Just outside the north wall of Structure V was an area of burnt clay and charcoal fragments. It appeared to represent part of a wooden frame with daub filled panels of a half-timbered building.
Samples 4-5 *Quercus sp.* (Oak) Charcoal amongst demolition debris in the ditch layer 1.
Sample 6. *Fraxinus sp.* (Ash) From layer 4 of the enclosure ditch.
Sample 7. *Quercus sp.* (Oak) Carbonised timber in posthole 51 which is probably part of Structure V.
Sample 8. Probably *Quercus sp.* (Oak). Carbonised timber in posthole 6, Structure II.
Sample 9. *Quercus sp.* (Oak) Carbonised timber in posthole 4, Structure II.
Sample 10 *Fagus sp.* (Beech) Carbonised timber in posthole 19, Structure I.
Oak was evidently used for most structural purposes.

The mollusca

No attempt was made to obtain random or total samples of molluscs. Those identified are simply those collected by excavators, certainly a small proportion of the total present. After the species identifications are the numbers of shells (gastropods) or valves (lamellibranchs) identified, these may give some idea of the relative importance of each species. The edible mussel is likely to be somewhat underrepresented; its shells were less well preserved.

Dr. K. D. Thomas kindly advised on some identifications.

Marine

Ostrea edulis L. (Edible oyster) 58 valves of a wide variety of sizes; estuarine and coastal.
Family *Anomidea* 1 valve, non estuarine.
Patella vulgata L. (Common limpet) 34 shells; abundant between tidemarks on rocky shores.
Mytilus edulis L. (Edible mussel) 10 valves, marine and estuarine.
Venerupis pullastria (Mont.) (Pullet Carpet shell) 6 valves; non-estuarine, between tidemarks.
Cardium edule L. (Common Cockle) 2 valves; low water mark to a few fathoms.
Littorina littorea L. (Common Periwinkle) 36 shells; common between tidemarks.
Buccinum undatum L. (Common Whelk) 1 shell; coastal low water mark to 1,200 fathoms.

Land

Helix aspersa Müller. (Garden Snail) 1 shell.

Most of the above are still common articles of diet. *Venerupis pullastria* (Mont.) is not generally eaten but E. Step noted that it was ' eaten in Sussex and probably in other parts of the country.'[1] The member of the family *Anomidea* was probably not eaten. *Helix aspersa*, which was eaten by the Romans, is believed by J. G. Evans to have been introduced in the 1st century A.D.[2] This example came from layer 1 of the Enclosure Ditch, it is therefore of Antonine date. Marine mollusca appear to have been collected from both the rocky coast and the tidal estuarine flats of the Ouse.

THE ROMANO-BRITISH FINDS

An attempt was made to recover and save all macrosopically visible artifactual remains. Sieving was only used extensively for the recovery of environmental or economic data. All the finds have been marked with a code recording their original context. The various landowners listed under ' Acknowledgements ' have kindly donated the material to Brighton Museum, where it is accessible for further study. Housed with the material are site notebooks, plans and full specialist reports.

The coarse pottery by C. M. Green.

Introduction

The excavated area of the Romano-British villa enclosure at Newhaven seems to have been occupied for a relatively short period spanning, very roughly, the second half of the first and much of the second century A.D. All the R-B material found *in situ* comes either from the main enclosure ditch, features representing buildings or other structures, or from the generally rather thin contemporary ground surface (layer 3) which immediately overlies Clay-with-Flints.

1 E. Step, *Shell Life* (1945), p. 137.

2 J. G. Evans, ' *Land snails in archaeology*,' (1972), pp. 175-6.

No pits of R-B date were discovered, and the well developed stratigraphy characteristic of urban settlements is lacking. Hence the nature of the site has not, in general, allowed the isolation of a securely stratified ceramic series. The major exception to this statement is Group i, from the initial fill of the enclosure ditch on Site 6, but in all subsequent recuttings of the ditch, and in post-hole and wall features, the risk of contamination by redeposited sherds is of course much greater. Even so, the other major assemblage, from the final fill of the enclosure ditch (Group viii) should as a whole, reliably represent a single ceramic group. Material associated with the buildings within the enclosure is published as Groups v-vii, but the association can only be treated as reasonably certain where sherds have been found in wall footings themselves. Sherds from the R-B ground surface (Group ix) include a few sherds dating to the third and probably the fourth centuries A.D.—outside the presumed settlement period for the excavated area. They are generally fragmentary and/or abraded, and are published here together with sherds from post-Roman layers, and significant but insecurely sealed post-hole material. Sherds from these poorly associated sources have not usually been reported where similar types are better represented from Groups i-viii.

With these *caveats*, the aim has been to describe, and illustrate where possible, all the ceramic types, including the bonfire-made burnished black ' native ' vessels which form such a large proportion of local first and second century assemblages. It is hoped that further publication of such vessels from other sites will give a more comprehensive picture of the extent (and perhaps the limitations) of the resources of regions and individual sites, and eventually supplement the evidence for kiln production of 'Roman' wheel thrown fabrics (See below, 'Cooking Jar Fabric').

Dating evidence for the Newhaven pottery rests on assumptions about the date range of vessels found on other local sites, and on Samian associations. With the exception of the Backworth fibula for Group v, dateable metal objects were disappointingly rare at Newhaven, and did not occur in close association with pottery groups. Dating parallels from other sites have only been used where the evidence of stratigraphy or associated objects seems reliable; it is now generally recognised that many early reports were too optimistic about the possibility of closely dating coarse pottery. Reference to sites followed by numerals, unless otherwise stated, refer to the vessel or form number (e.g. *Chichester St. Pancras* 23c; *Crayford* p.161, 7). Sussex sites to which reference is made are shown on Fig. 20.

Where possible, vessels have been grouped on the basis of similarity in fabric rather than form or function, although no Sussex R-B kiln sites have been adequately published to date, and positive identification of production centres is rarely possible. Only one definite waster sherd was found at Newhaven (135) and this doubtless from a usable vessel.

Unless otherwise stated, vessels are thrown and finished on the wheel, undecorated, of medium hardness, and self-coloured (i.e. all surfaces are the colour of the fabric in fracture). Sometimes a colour description has been supplemented by a reading from the Colour Chart prepared by the Study Group for R-B Coarse Pottery (1974)—e.g. ' cf. Yellow/Brown 7A '; these descriptions do not coincide with everyday terminology or other colour charts. All the vessels are illustrated at a $\frac{1}{4}$ scale, with the exception of 60 and 61 ($\frac{1}{2}$). The pottery has been deposited with all the other finds in Brighton Museum. Two vessels (BH1 and BH2) found before the 1971-4 excavations are in Barbican House Museum, Lewes (Box 63/47). Pottery most usefully studied in the Society's collection at Barbican House is suffixed (BH).[1]

[1] I am grateful to Simon Garrett for his help with the Barbican House collections.

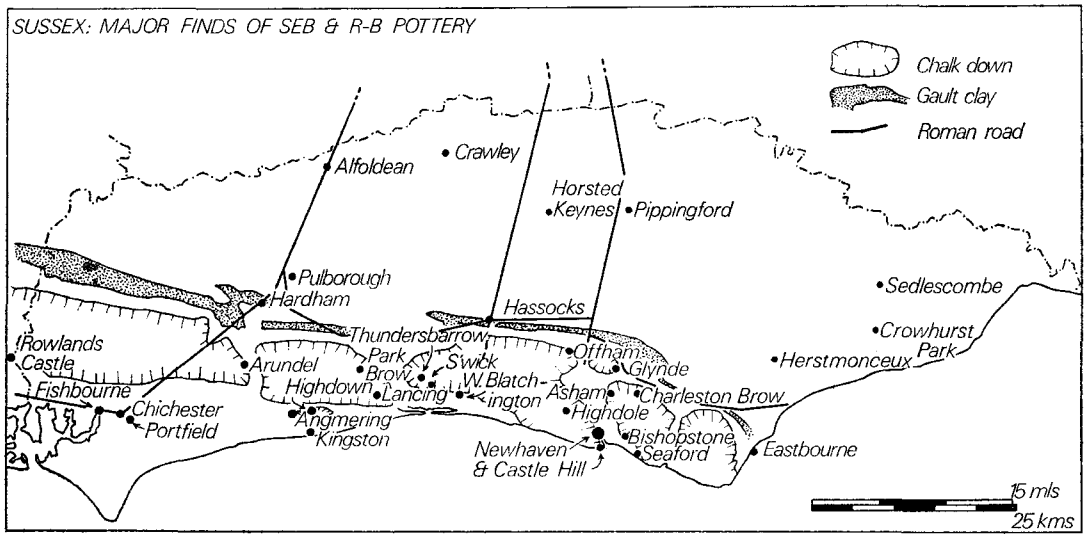

FIG. 20. Major finds of 'South Eastern B' and Romano-British pottery in Sussex.

'Cooking Jar Fabric' (CJF).[1]

Many of the Newhaven vessels are 'native' wares in fundamentally similar fabrics, although individual pots can differ quite noticeably in hardness, colour, and the proportions and grain size of the filler. Since first and second century types do not obviously differ in these respects, all have been designated as varieties of 'Cooking Jar Fabric' (CJF) for brevity. No identity of source is implied, although the technique of clay preparation is obviously similar. CJF vessels were invariably hand built and normally hand finished before bonfire-firing; surface colour is generally dark grey or soot black. They are not to be confused with Black-burnished ware[2] (Vessels 187, 188 and 257) which is a mass-produced sandy fabric. CJF pots could conceivably have been made in the near vicinity; bonfire-firing might leave little trace at Newhaven and the process need produce only a few waste pieces.[3]

CJF is a coarse fabric, usually rather liberally filled with rounded grains of discoloured chalk, crushed oyster shell, ironstone and natural flint grits in a grey to black matrix. Small cavities result from the combustion of organic particles, and, perhaps, the slaking of burnt chalk on the surfaces. Crushed calcined flint filler often occurs, though grog is less frequently recognisable. Any one of these ingredients may predominate, and large inclusions are frequent. A 'soapy' feel is characteristic of CJF, unless it has been highly fired; fracture is rough/corky. Highly fired CJF vessels are light grey, more open-bodied, hard, brittle, and have crackled exteriors; all these features may occur on unevenly fired black vessels (e.g. 132), and SEB vessels are often highly fired (1-10 etc.). CJF pots usually have part of their surface horizontally burnished—around the foot and from the girth or shoulder over the rim for jars. The burnished zones are indicated in the drawings.

[1] In the forthcoming Bishopstone report this fabric has been renamed 'East Sussex Ware'.

[2] R. A. H. Farrar, 'The techniques and sources of Romano-British black-burnished ware' in A. P. Detsicas, ed., 'Current Research in R-B Coarse Pottery,' *CBA Research Report 10* (1973), pp. 67-103.

[3] R. A. H. Farrar (1973), op. cit.

The distribution and affinities of CJF are uncertain and will remain so until the publication of further coarse vessels from Sussex sites. However CJF vessels appear to be common throughout Sussex, although the published evidence would suggest a concentration in East Sussex. To the west the fourth century ' Hampshire Grog-tempered ware ' is the closest visually similar type, and elsewhere in Southern England black soapy cooking pot fabrics are well known, if little understood. Possibly most are essentially local products, confirmation must await thin sectioning and heavy mineral analysis.

Major Place References. (See Fig. 20 for location of Sussex sites).

Angmering 1938. L. Scott. ' The Roman villa at Angmering,' *S.A.C.* vol. 79 (1938), pp. 3-44.
Angmering 1947. A. E. Wilson, ' Angmering Roman villa,' *S.A.C.* vol. 86 (1947), pp. 1-21.
Bishopstone. M. G. Bell, ' Bishopstone excavations 1968-71, an interim report,' University of Sussex Archaeological Society, Falmer (1972), pp. 1-24.
Charleston Brow. W. J. Parsons and E. C. Curwen, ' An agricultural settlement on Charleston Brow, near Firle Beacon,' *S.A.C.* vol. 74 (1933), pp. 164-80.
Chichester, St. Pancras. A. Down, ' The Roman cemetery at St. Pancras,' in A. Down and M. Rule *Chichester Excavations I* (1971), pp. 53-126.
Crowhurst Park. C. M. Piggott, ' The non-Roman pottery from Crowhurst Park,' *S.A.C.* vol. 79 (1938), pp. 229-232.
Fishbourne. B. W. Cunliffe, *Excavations at Fishbourne*, vol. II (1971).
Hardham. S. E. Winbolt, ' Excavations at Hardham Camp near Pulborough April, 1926 ' *S.A.C.* vol. 68 (1927), pp. 89-132.
Herstmonceux. N. E. S. Norris, ' Miscellaneous researches 1949-56 ,' *S.A.C.* vol. 94 (1956), pp. 4-5.
London, Aldgate. H. Chapman and T. Johnson, ' Excavations at Aldgate and Bush Lane House, London,' *Transactions of London and Middlesex Archaeological Society*, vol. 24 (1973) pp. 1-73.
Newhaven Castle Hill. C. F. C. Hawkes, ' The pottery from Castle Hill, Newhaven,' *S.A.C.* vol. 80 (1939), pp. 269-292.
Richborough III. J. P. Bushe-Fox, ' Third report on the excavation of the Roman fort at Richborough, Kent,' *Society of Antiquaries Research Report X* (1932).
Seaford. V. G. Smith, ' Iron Age and Romano-British site at Seaford,' *S.A.C.* vol. 80 (1939), pp. 293-305.
Sedlescombe. E. Chown, ' Painted Iron Age pottery at Sedlescombe ' *S.N.Q.* XI (1947), pp. 148-51.
West Blatchington. N. E. S. Norris and G. P. Burstow, ' A prehistoric and Romano-British site at West Blatchington, Hove,' *S.A.C.* vol. 90 (1952), pp. 221-240.

The Pottery

Group i (1-78) Pottery from the initial fill of the enclosure ditch on Site 6. Neronian-Flavian.

This assemblage was found in layers 3 and 4 of the ditch, and largely in the northernmost 6m. to be excavated. The generally fresh nature of the sherds (which were often large) suggests accumulation over a short period.

1-10 are recognisably in the locally common ' South Eastern B ' (SEB) tradition of the ultimate pre-Roman Iron Age. ' SEB,' although a category of the now largely obsolete ' ABC ' terminology, has been retained for the present report, since it does seem to be more of a local cultural reality than the permutations of the A and B groupings formerly applied to the earlier Sussex Iron Age. However, acceptance of the term for the present purposes does not imply, as the ABC scheme originally did, invasions, hostile relations with 'AB' or Belgic 'C' cultures, as a definition of racial type. Cunliffe[1] has proposed the term ' Eastern Atrebatic '; ultimately this may prove more satisfactory.

SEB pottery is known from first century B.C.–1st century A.D. contexts from the Hampshire border, Sussex, Kent, Surrey, London and Essex. (Sussex sites not listed by Wilson and Burstow[2] or in the Crayford report[3] include Bishopstone, Crawley, Crowhurst Park, Fishbourne, Glynde, Herstmonceux, Offham, Pippingford, Seaford and Sedlescombe). The Newhaven vessels, with their generally narrow necks, spreading bodies, and flat or footring bases, are typical of first century A.D. ' Asham ' types (see 241). They form one of the most closely dated SEB groups, and one of the relatively few Asham groups to have been recorded from a non-cemetery context.

11-32 are contemporary vessels in generally similar fabrics. Some (11, 15, 26) are paralleled from other sites producing SEB pottery; others may simply be a rather undiagnostic products of the SEB ' culture ' (the characteristic eyebrow design generally occurs on large storage vessels rather than smaller cooking jars of this period). Crowhurst Park illustrates a generally similar group.

1 B. W. Cunliffe, *Iron Age communities in Britain* (1974).
2 A. E. Wilson and G. P. Burstow, ' The Evolution of Sussex Iron Age pottery,' *S.A.C.* vol. 87 (1948), pp. 77-111.
3 J. B. Ward-Perkins, ' An early Iron Age site at Crayford, Kent,' *Proc. Prehistoric Society*, vol. 4 (1938), pp. 151-168.

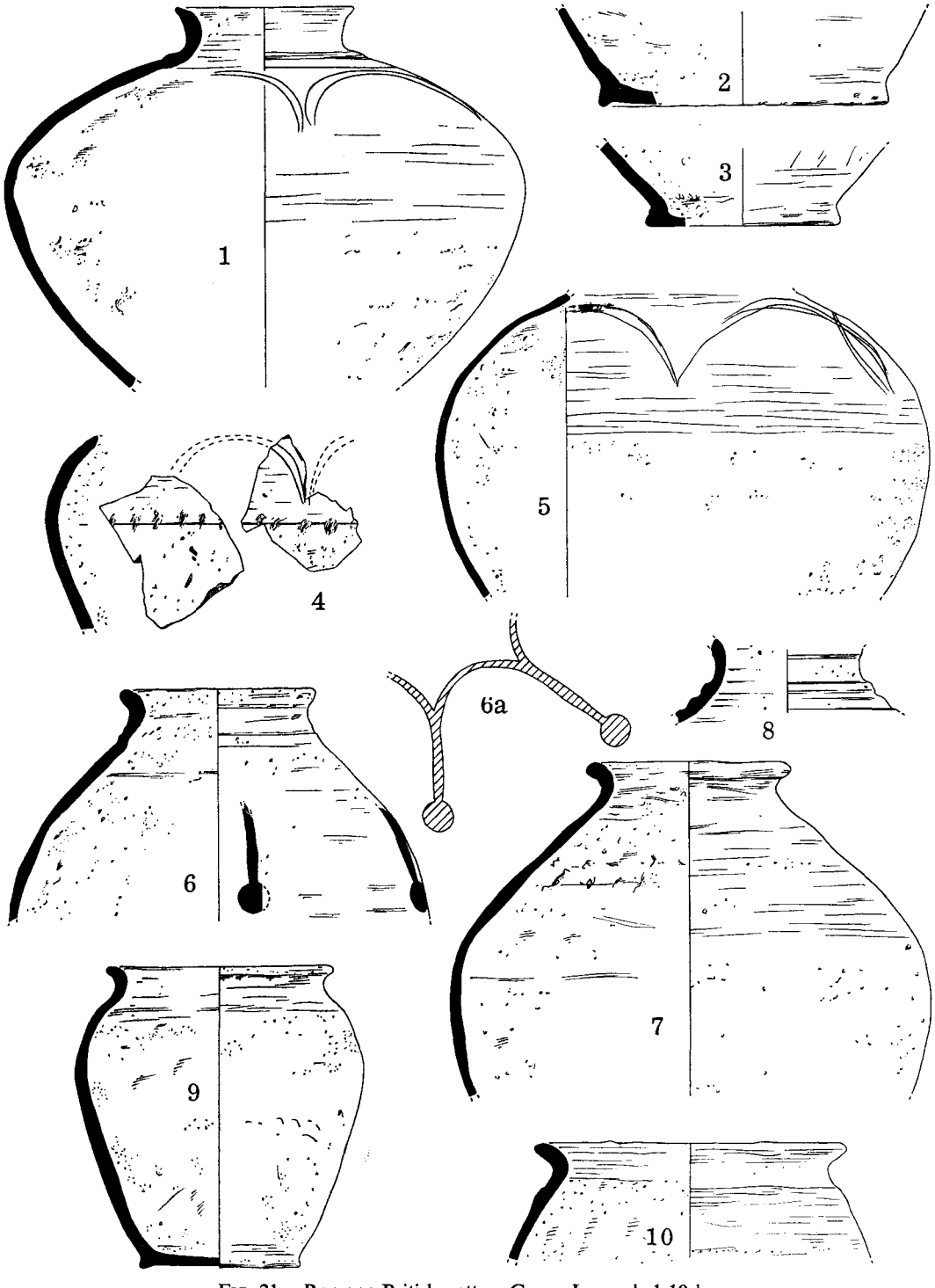

FIG. 21. Romano-British pottery Group I, vessels 1-10.$\frac{1}{4}$.

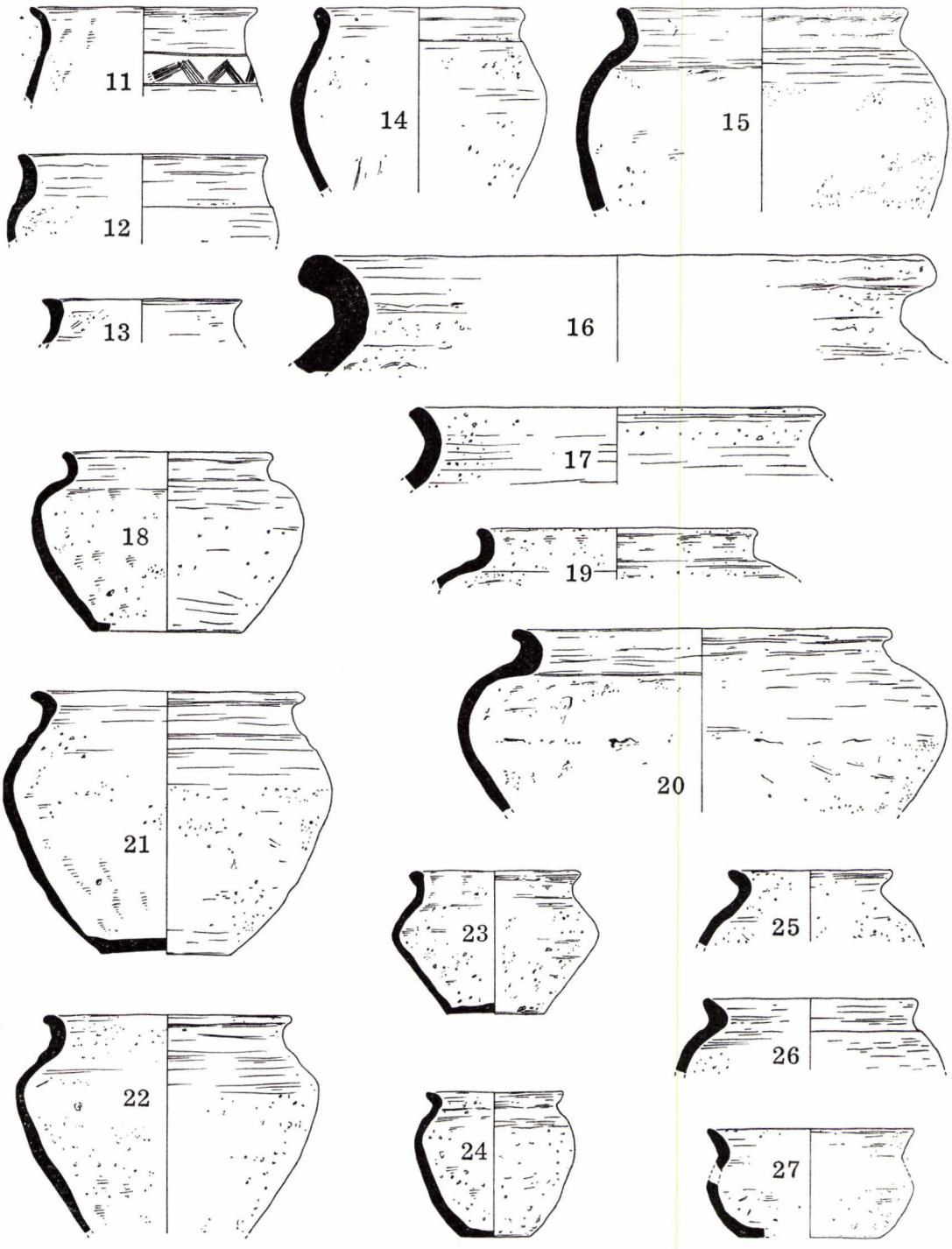

FIG. 22. Romano-British pottery Group I, vessels 11-27. ¼.

1 Narrow-mouthed wide bodied storage jar; cordon and lightly tooled groove on upper shoulder, 5 tooled eyebrow swags below. Light grey medium/hard CJF; ext. black, carefully burnished above girth, int. dark grey. Hand built but rim/shoulder wheel finished. A good example of an ' Asham ' jar (cf.241); the form is similar to Asham 2 (*S.A.C.* vol. 71 p. 254) and the stepped shoulder is a common feature (cf. Seaford (BH marked 88) and Offham, near Lewes (BH); all these examples contained cremations. The rim is closely paralleled by a plain form from Horndean *Proc. Hants. Field Club.* Vol. 22 p. 25.

Not illustrated. A similar rim, diam. 18cms. handmade in hard grey CJF.

2, 3 Variants of the SEB ' footring ' base, handmade hard CJF. Grey-black surfaces, ext. burnished above foot, and showing the distinctive ' tarmac ' finish inside. Tarmac surfaces are a drying property of the coarsely filled paste when not deliberately smoothed or burnished. Two examples of the wide-footed type 2 were found, representing vessels similar to 6 and 7. Cf. Glynde (*S.A.C.* vol. 93, p. 64, Fig. 9, 5); Chichester St. Pancras 179.

4 Large vessel with pronounced or stepped shoulder, incised eyebrow decoration and girth groove with slight superimposed fingernail impressions. Rather roughly handmade and finished in dark grey CJF with ironstone and shell inclusions; surfaces black, int. tarmac, ext. burnished above girth. Finger decorated girths are common on SEB vessels; cf. Charleston Brow (Figs. 18-24); Bishopstone (forthcoming); Newhaven Castle Hill (Fig. 6); Seaford (9-16) and Horsted Keynes (*S.A.C.* vol. 78 p. 252). Raised band decoration on plain forms (see 79-80, 109 etc.) is very common in the Newhaven area. (Wilson and Burstow 1948 op. cit. Table VIII).

5 Globular storage jar, decorated with inconspicuously and rather freely tooled eyebrows, with traces of paint, now brown, surviving on one swag. Hard dark grey close fabric filled with calcined flint; clean fracture. Handmade with thin walls; ext. grey, int. dark grey. Painting may well have augmented the rather faintly incised eyebrows of many SEB jars. Cf. Sedlescombe (and sherds at BH) and parallels for 6 below.

6 Jar with slightly everted rim and spreading body. Handmade and finished in light grey fabric much as 5, but with coarser filler and blue-grey core. One sherd displays a painted bar and dot, now brown, representing an eyebrow terminal. Significantly there is no trace of incised decoration, and excavated SEB material should always be very carefully cleaned so as to preserve possible paintwork. 6a possible restoration after Horsted Keynes (*S.A.C.* vol. 78 p. 256.1) cf. Sedlescombe.

7 Storage jar with everted round rim, constricted neck and spreading body. Coarse red-brown CJF, flame marked grey, with large ironstone inclusions. Int. red/brown/black tarmac. Coil-built hand finished. This form, with a wide footring base (cf. 2) is well paralleled from 1st century Romano-British contexts at Chichester, where it sometimes occurs in sandy grey fabrics. (*S.A.C.* vol. 94 p. 128 Nos. 164-5).

8 Everted-rimmed jar with constricted neck and stepped shoulder, wheelmade and finished in smooth orange-buff fabric with small flint, ironstone and organic inclusions. Probably a form in the SEB tradition, in an unusual fabric. Cf. Herstmonceux (BH).

9 Plain cooking jar displaying the classic SEB S-profile, wide footring and plain rim. Soft/medium CJF; ext. soot black tarmac where unburnished; int. grey-brown hand-smoothed. Handmade. cf. Bishopstone (forthcoming).

10 Jar with everted thickened rim. Coil-built, hand-finished soft rather smooth dull red CJF slight grey core. Black surfaces, tarmac int.

For further obviously SEB forms see 85-6, 127, 130, 241-2.

11 Bowl or large beaker with outcurved rim, hand-decorated with an incised chevron between grooves. Brown CJF, light grey core, burnished black surfaces; handmade and finished. This vessel is reminiscent of Belgic cordoned or carinated beakers; cf. Crowhurst Park (1, 4, 13); Lancing Terraceway and Temple site (*S.A.C.* vol. 81 fig. 10.4 and fig. 14.29); Hassocks Cemetery (BH marked 47 2/3).

12 Bowl with thickened plain upright neck. Light grey CJF black surfaces, ext. sooted. Handmade, ? wheel finished.

13 Jar with outcurved flat-topped rim. Dark grey CJF, burnished black surfaces. Handmade,? wheel finished.

14 Jar with upright thickened rim. Rather brittle grey-black CJF, larger ironstone inclusions. Ext. black-brown, int. dull red. Handmade, wheel finished.

15 Round-bodied jar with plain rim. Rather brittle grey-black CJF with much ironstone filler and some large inclusions; black surfaces. Handmade, ? wheel finished; cf. Crowhurst Park, 7; Kingston Buci (*S.A.C.* vol. 72. p. 202); Chichester Tower Street (A. Down *Chichester Excavations II* (1974) p. 54.2) 1st century, with lattice.

16 Very large storage jar with everted rim. Grey CJF with much rounded flint filler. Black where burnished ext. and over the rim; int. body buff, suggesting that the black colour has been deliberately applied. Handmade.

17 Everted plain-rimmed jar. Grey CJF, black/grey surfaces. Handmade, ? wheel finished.

18 Wide-bodied jar with pronounced shoulder. CJF burnt red since breakage.

19 Upright-rimmed jar with slight cordon on wide shoulder. Highly fired grey CJF, handmade.

20 Robust squat jar with heavily thickened neck. Unusually hard grey CJF with much calcined flint filler. Surfaces black, int. tarmac and probably intentionally blackened. Coil-built, hand finished.

21, 22 Jars with rather angular profile and stepped shoulder (cf. 36 below in sandy grey fabric). 21 grey black rather friable CJF; heavily sooted black surfaces. 22 hard highly fired grey CJF. Both handmade, possibly wheel finished.

23 Small jar with angular profile. Grey CJF with large rolled ironstone inclusions; surfaces oxidised red-brown, ext. flame-marked and completely burnished. Coil-built.

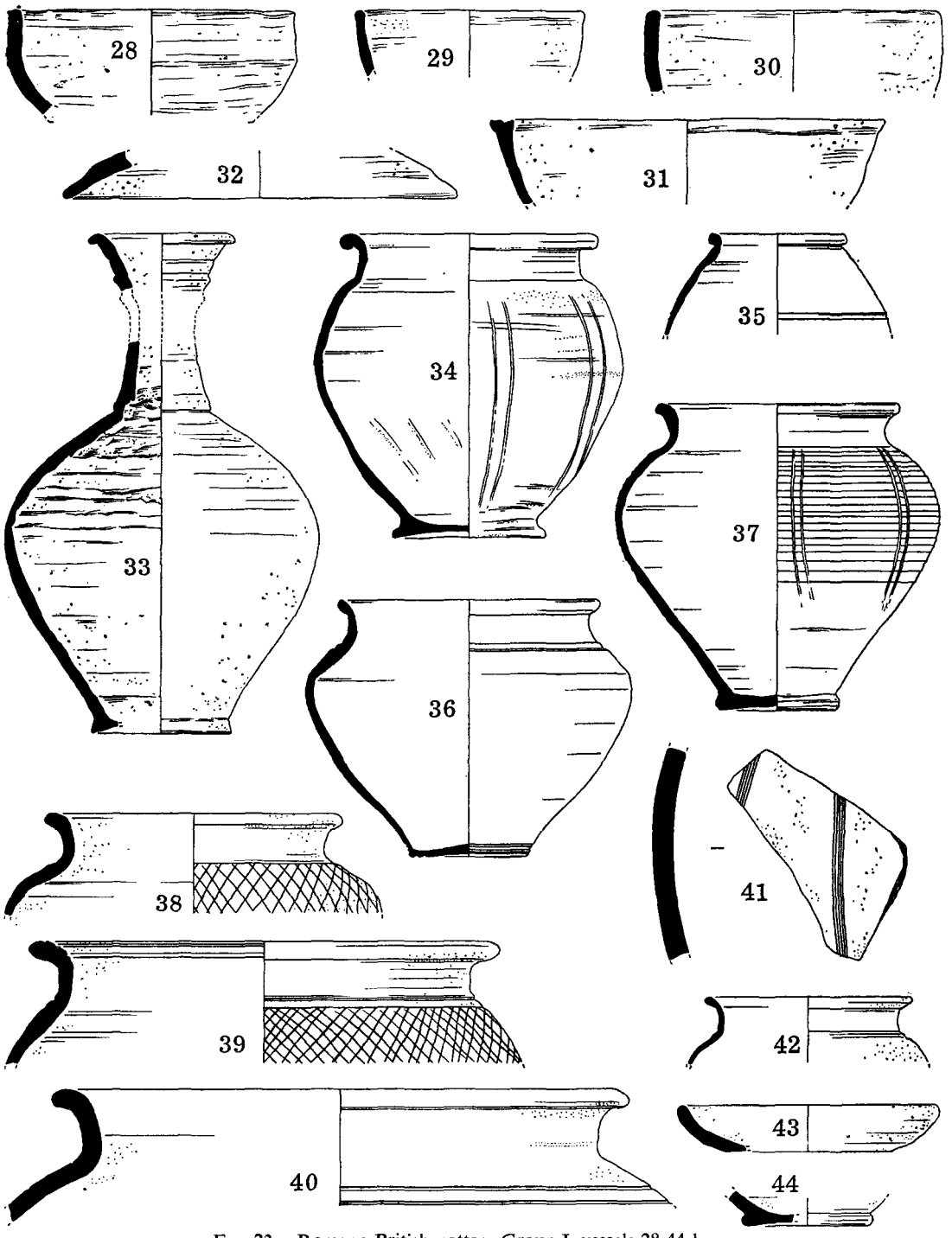

FIG. 23. Romano-British pottery Group I, vessels 28-44.¼.

24 Small jar with everted rim. Grey highly fired CJF with grey/grey-brown ' porridgy ' surfaces. Coil-built.
25 Round-shouldered jar with everted rim. Light grey hard highly fired CJF with a large wood inclusion. Handmade.
26 Heavily made round-shouldered jar. Dark rather hard CJF, surfaces densely black. Handmade, ? wheel finished. Cf. Kingston Buci (*S.A.C.* Vol. 72 p. 202, an eyebrow pot).
27 Small bowl with everted rim. Soft very soapy CJF, burnt red since breakage; ext. completely burnished. Handmade.
28 Carinated bowl with plain rim—an unusual form. CJF burnt red since breakage; burnished surfaces. Handmade.
29, 30 ' Dog-dish ' bowls. Black CJF. 29 burnished on all surfaces; 30 ext. left rough. Both handmade. Bowls of this type are common in the 2nd century at Newhaven, but relatively scarce in Group i; the forms remain practically unchanged.
31 Bowl with a flat-topped furrowed rim, perhaps a lid seating. Hard grey highly fired CJF, ext. grey. int. buff. Handmade, ? unburnished rough surfaces.
32 Lid. Black CJF, ext. burnished, int. tarmac. Handmade. Not illustrated: Sherds from at least 9 other CJF vessels.

33-54 Vessels in sandy fabrics.
33 Multiple ring-necked flagon; hard light grey with rather coarse sand filler—an unusual fabric for this form, which is not otherwise known at Newhaven. Ext. reduced to a slightly darker grey (cf. Neutral 5-6). The method of construction is interesting; the vessel is coil-built and the coils are unsmoothed over much of the interior, but the ext. is wheel finished and the neck and mouth are wheel thrown. Possibly some knife-trimming on body. No trace of handle. At Fishbourne, multiple ring-necked flagons (type 109) were generally from the pre-Palace phase, and in more normal flagon fabrics.
34 Jar with overturned round rim, decorated with pairs of slightly curved vertical lines. Hard dull red-brown sandy with grey core; surfaces reduced grey; some organic cavities. Hand-built but wheel-formed upper body and mouth. The form suggests the work of a potter in the SEB tradition—note the wide footring, round body and rim (cf. 9 and 7 above). SEB derivates in grey sandy fabrics occur at Chichester (see 7). A misfired vessel with a drooping lip and cracked body, in a reasonably similar fabric and similar decoration, was used as a cremation urn at Hassocks (BH, marked 7).
35 Ovoid jar with rolled rim and grooved body. Grey sandy with lighter core and possibly a darker slip. Angmering 1938, 3, also in grey sandy fabric, is apparently identical in form. The type is widespread in the Neronian-Flavian period.
36 Subcarinated jar with everted rim, cordon and groove below neck, and grooves and slight bead at foot. Medium/hard grey sand (cf. Neutral 6-7), flecks of black filler conspicuous on the surfaces. High shouldered jars were found at Angmering 1938, 4; The form is widespread in the Flavian period, e.g. at London, Aldgate 231, 227.
37 Jar with bead foot and lightly rilled body, decorated with tooled double vertical lines. Hard grey sandy fabric, rather similar to 36.
38 Shouldered jar with tooled lattice decoration. Hard grey coarsely sandy, with some red grog and ironstone filler.
39 Everted rim storage jar; lattice body with low cordon and grooves below neck, and three grooves inside rim. Fabric reminiscent of 34, with calcined flint and organic inclusions. Ext. brownish-grey; int. darker grey.
40 Large storage jar with grooves on shoulder. Hard dark blue-grey sandy; grey-brown surfaces, ext. originally well-smoothed.
41 Body sherd of large storage vessel, vertically decorated with a 4-toothed comb. Hard blue-grey sandy, brownish grey surfaces.
42 Jar in light grey sandy fabric with slight bluish core; grey-black ? slipped surfaces.
43 Platter. Grey finely sandy, lighter core. A plain variant of the Gallo-Belgic platter style, widely imitated in the 1st century. Cf. 96 below.
44 Beaded foot typical of greyware vessels from this assemblage. Rather friable grey sandy.
45, 46 Jars in a similar finely sandy grey fabric (cf. Neutral 6-7); well smoothed surfaces.
47 Wide-bodied jar or bowl. Hard finely sandy grey with red core; well smoothed grey-black slipped surfaces.
48 Thinly made beaker with two cordons on the neck. Soft finely sandy grey-buff with a slight buff core; some fine red grog. Dark grey shiny slipped surfaces.
Not illustrated. ? Poppyhead jar or beaker decorated with panel of barbotine dots. Smooth grey with a little sand filler. One small sherd, representing the only vessel of this type from the initial ditch fill, although such vessels are common in later contexts at Newhaven (cf. 90, 206, Cremation 2). Similar negative evidence from the pre-Palace phase at Fishbourne (267) suggests a terminal date of *c.* 75-80 A.D. for Group i, if the same sources of supply can be assumed.
49 Reeded-rimmed bowl; oxidised orange-brown fairly coarsely sandy with grey core; some organic cavities. A common later 1st to early 2nd century form.
50 Reeded-rimmed carinated bowl with two grooves on the body and flared foot. Hard grey sandy, grey-black surfaces; A thin white sandwich layer beneath the surfaces. Form close to Footlands (BH 61/1, marked III/?/2 dark grey/black finely sandy fabric).
51 Imitation samian f27 bowl; light sandy with black surfaces. Found embedded in the bottom of the ditch. See 62.
52 Lid decorated with 3 grooves. White finely sandy, dark grey slip.

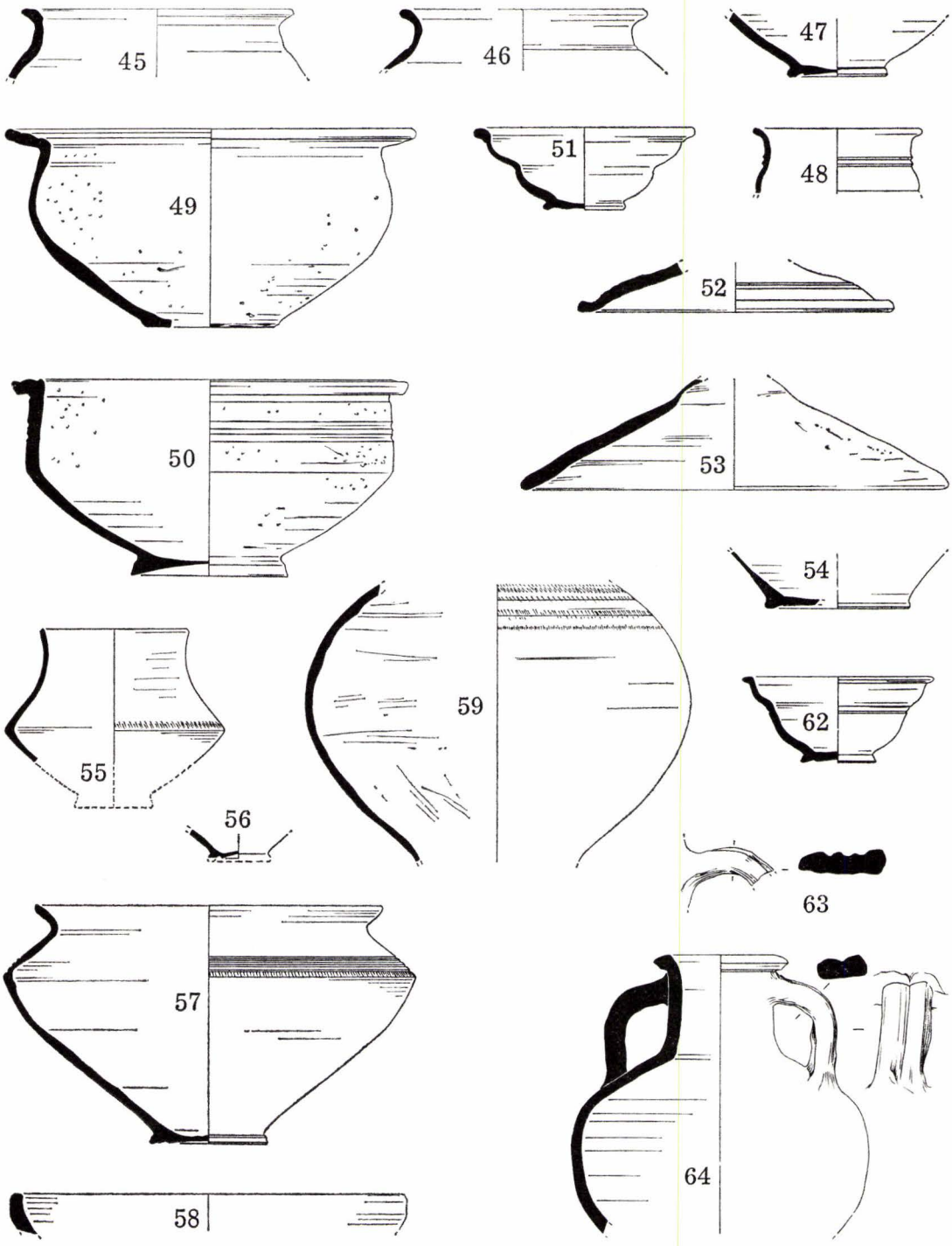

FIG. 24. Romano-British pottery Group I, vessels 45-64.$\frac{1}{4}$.

53 Conical lid; hard dark sandy with some organic cavities. Possibly handmade, but wheel finished.

Not illustrated. Body sherd of a thinly made jar in finely sandy light grey fabric with shiny black surfaces displaying fast rotation marks. Acute lattice.

54 Base of jar in micaceous fabric and finish similar to 55-9, 62 and 276 below, but with sand filler.

Not illustrated. Jar in similar but rather coarser fabric, decorated with groups of 3 vertical lines burnished on body.

55-61 Vessels in a distinctive dull red fine smooth micaceous fabric, developing a grey core and black or dark grey surfaces on reduced pieces (55-9, ? 62). Oxidised vessels are orange-red (? 60, 61). Firing temperature and hardness has been variable in the Newhaven examples. All the finer vessels in this fabric have well smoothed or burnished exteriors and are reminiscent of micaceous Terra Nigra. Similar fabrics from Fishbourne (p. 256) were not susceptible to heavy mineral analysis, but a Gault clay source seems probable, and B. W. Cunliffe, (*The Regni* (1973) p. 70) has suggested Hardham or the vicinity as the kiln site. Hardham produced a quantity of rouletted imitation samian bowls (f27, 29, 30, 37), but the excavator does not mention them as definitely local productions—although one (p. 108, 30) could have been a waster. The types illustrated here are commonest at Chichester, Fishbourne, Alfoldean, Hassocks and Angmering; their chief trade route was Stane Street.

With the exception of the imitation samian bowls, the forms are markedly Belgic in style.

55 Carinated beaker with line of rouletting above girth. Friable reduced with a very little fine red grog. A common form in various fine fabrics in southern 1st century Romano-British contexts, developed, apparently from continental Claudian types (C. F. C. Hawkes and M. R. Hull, *Camulodunum* (1947), 120a). Examples in the fabric under discussion occurred at Angmering 1938, 13; Chichester St. Pancras (1a) and Hassocks (*S.A.C.* vol. 66, p. 46 Plate 4, 103—described as ' Upchurch ware '); other fabrics (mainly fine grey micaceous with darker surfaces) from Hardham (Brighton Museum); Eastwood (B. J. Philp, *Excavations in West Kent*, Fig. 34, 285); London Aldgate (102); Richborough III (291-2).

56 An identical vessel, save the lack of rouletting, poorly fired and now extremely soft. Base only illustrated.

57 Carinated jar with flaring rim; rouletting and four grooves above girth. Well fired, black reduced surfaces. Common in West Sussex; Hardham pl. III, 4, 8, 12 (' typical '); Chichester St. Pancras 12a; Angmering 1947 Fig. 5, 8; Alfoldean (*S.A.C.* vol. 65 p. 131, 13-4, abundant and variable—some examples have a cordoned carination). Hassocks cemetery (BH) produced a number of examples, in fine or sandy light grey fabrics.

58 Bowl or dish. Soft black reduced surfaces. An unusual form, but cf. London Aldgate 162 (early 2nd century); Terra Nigra is also known in similar forms.

59 Globular jar, rouletted on the shoulder. Rather finely sandy with reduced black surfaces. Perhaps hand built, wheel finished. The vessel was perhaps a butt-beaker form, cf. Hassocks (*S.A.C.* vol. LXVI p. 46) which may have been similar.

60 (Sc. ½) Imitation samian form 37 bowl with compass-scribed ovolo. Surfaces oxidised orange-red to buff (cf. Yellow/Brown 5A-6B); fabric similar to 55-9 but with some fine black inclusions. Decorated with a rouletted zone above cordon and a band of c.16 ovolos scribed with a comb-like compass consisting of a centre point and three teeth (radius 11mm.). Vertical combing below ovolo applied with a 10mm. 4-toothed comb; further rouletted zone below. Compass scribed form 37 imitations are widespread in southern and eastern England and the Midlands in the later 1st and early 2nd centuries; some are recorded from Antonine deposits. Local examples in micaceous fabrics occurred at Chichester (*S.A.C.* vol. 94 p. 132, No. 275); Fishbourne (230), and possibly Hardham (p. 109); bowls in other fabrics (though usually fine and micaceous) or with slightly different decorations are reported from London Aldgate; Richborough III; Verulamium; Roman Colchester; Brixworth; Kent (Upchurch district); West Stow, Suffolk; Brough-on-Humber, etc.

61 (Sc. ½) Imitation samian form 30 bowl with hand-combed ovolo. Surfaces oxidised orange-red (cf. Red/Brown 4-5B). Fabric soft and friable, with a warm grey core. Central zone of 19 or 20 ovolos rather irregularly scribed with a 12-toothed comb 10cm. wide, between grooves and two rouletted areas. The ' samian ' colour is convincing. The decoration and fabric are distinctive, and sherds imitating form 30 or form 29 occur on many West Sussex sites: Chichester North Street, (*S.A.C.* vol. 100 p. 103, No. 23); Chichester Chapel Street (*S.A.C.* vol. 106, p. 123, No. 1); Fishbourne (229. 1-229, 2); Hardham (Plate IV, No. 6); Hassocks cemetery (BH). Allied types (forms 29/30 with incised ' fronds ') are recorded from Angmering 1938 (20) and 1947 (Fig. 62) and Park Brow (*Archaeologia* vol. 76 p. 26, fig. 36).

62 Imitation samian form 27 bowl, fabric rather close to 55-9, but has sand and brown grog inclusions and grey-brown surfaces with dark grey/black slipped int. Imitations of form 27 are common in the later 1st century, and are found in many fabrics (cf. 51 above). At Fishbourne they did not outlive the samian prototype (which was represented in Group i at Newhaven) and were largely confined to the pre-Palace phase (Fishbourne 50; see Group i summary below); cf. Angmering 1938 (21); Chichester St. Pancras (24c.); Park Brow (*Archaeologia* vol. 76 p. 26 fig 35).

Not illustrated. Grooved shoulder sherds from two carinated or sub-carinated jars in fine grey and buff micaceous fabrics. cf. Fishbourne (66. 1-66. 12).

63-73 Flagons. All without pouring lips; *appliqué* handles (except 67).

63 Large flagon/pitcher handle. Pink finely sandy, some red grog filler.

64 Two handled flagon; rather soft cream smooth 'chalky,' sparsely filled with red and buff grog, quartz sand and organic particles.

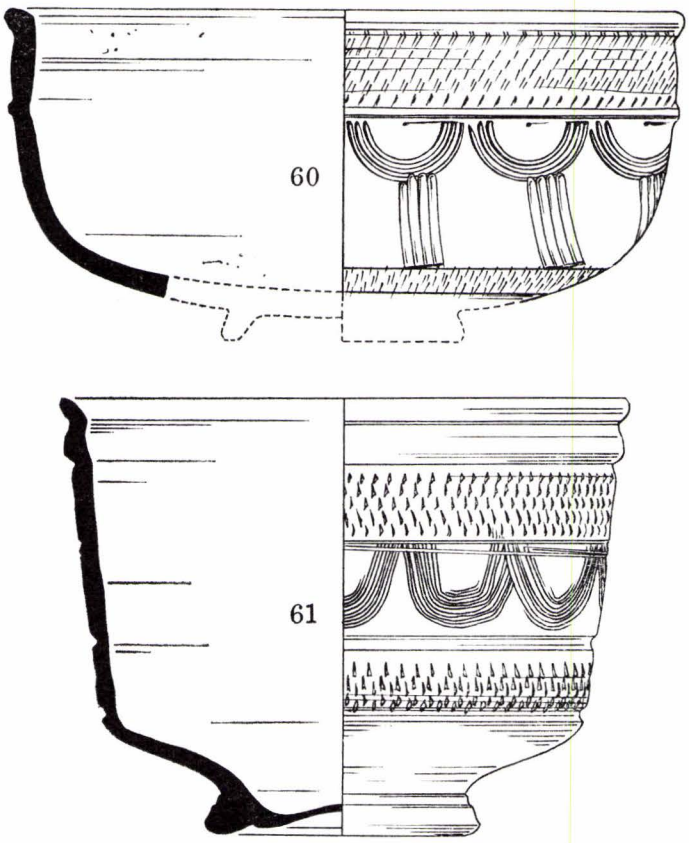

FIG. 25. Romano-British pottery Group 1, vessels 60 and 61.½

65 Pulley-necked flagon. Soft friable pink sandy; cream slip ext. and inside neck. Large calcined flint and organic inclusions. Pulley-neck flagons are characteristic of late 1st and early 2nd century contexts at Fishbourne (114); All the Richborough examples were ascribed to the 1st century (Richborough II, vessels 197-200); Chichester St. Pancras (60c—with a coin of Titus, 79-81 A.D.); Hardham (Plate VIII, 8).
66 Sharply defined pulley-necked flagon. Hard smooth blue-grey, fired cream/flesh on ext. Inclusions as 65.
67 Pulley-necked flagon with tanged handle. Finely sandy flesh coloured, reduced to dull mauve in places on the body; some red inclusions. Handle in fine cream-white clay, which has also been slipped over the upper body and inside the neck to give a two-tone effect.
68 Form as 65; medium/hard white-cream sandy.
Not illustrated. Similar vessel, friable white sandy.
69 Flagon base. Pinkish 'chalky,' some sand filler; white ext.
70 Coil-built, wheel finished flagon with footring. Rather coarse soft white-cream with multi-coloured sand filler and ironstone, red grog, chalk and organic inclusions. ? cf. Angmering 1947 (fig. 6, 4).
71 Flagon body. Soft/medium very sandy pink, lighter ext.
72 Flagon body. Pink finely sandy with red grog inclusions: cream slip int. and ext. around traces of a handle scar—probably a two-tone colouration. Knife-trimmed above base.
73 Flagon body. Hard finely sandy orange (cf. Brown/Red 6B) with a rough feel; detachment whorls on base.
74 7-lobed folded beaker finely thrown in a slightly micaceous soft orange fabric (cf. Yellow/Brown 6B) with a little red grog and rounded quartz grit filler. The folds have been formed by running a tool from top to bottom of the body. Parallels for this fine vessel are difficult to find, but cf. Angmering 1947 (fig. 1, 1 and 5).
Not illustrated. Rough cast thumb-pressed beaker. Smooth cream-pink with red-black slipped surfaces.
75 Conical bowl. Cream finely sandy with fairly coarse quartz sand filler and some red grog; slight grey core at base.

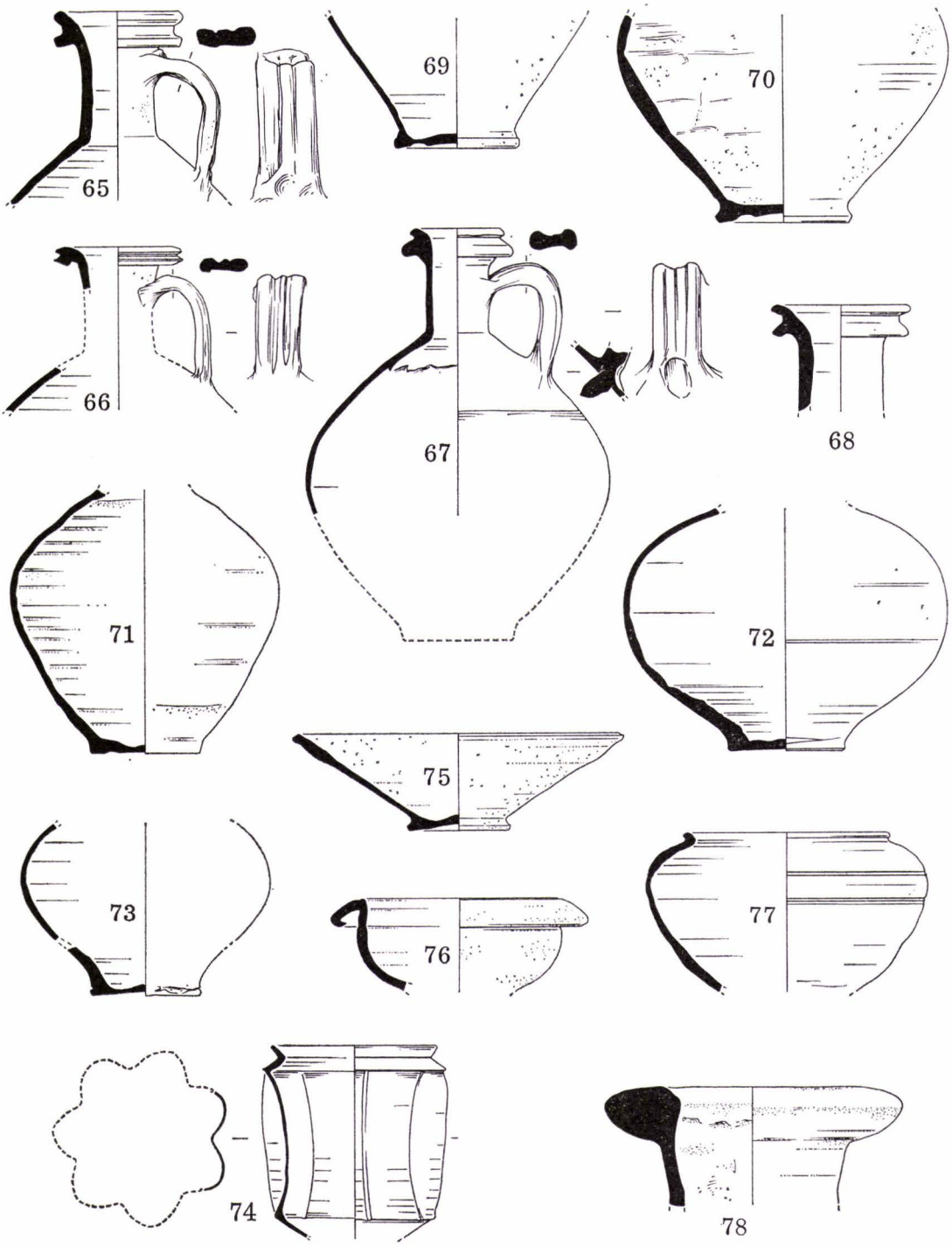

FIG. 26. Romano-British pottery Group I, vessels 65-78.¼.

76 Bowl with strongly inturned hook-rim. Very soft pinkish-white ' chalky ' fabric.
77 Bead-rimmed jar with grooves and very slight hollow cordon at girth. Soft flesh-coloured ' chalky,' with quartz sand filler. Reminiscent of a flagon fabric; the style is Belgic. Closely similar forms, in a variety of fabrics, occur widely in West Sussex (Fishbourne 167, all pre-*c.* 75-80 A.D., Arundel (*S.A.C.* vol. 77 p. 230 fig. 5, 9); Portfield (*S.A.C.* vol. 86 p. 139, 10) and London Aldgate.
Not illustrated. The following was contributed by K. Hartley.
Mortarium. Fragment with internal bead on rim; soft fine cream fabric with pinkish core. This is fairly certainly from either a form Gillam 238 or a mortarium of the type made by Q. Valerius Se———, and other potters (*Archaeological Journal* CXXII 46 Fig. 8 Nos. 22-25); and if so it was made in the second half of the first century.
78 Amphora. See specialist report by Dr. Peacock below.

Group i Summary:

Group i dates fairly certainly to the Neronian-early Flavian period—say 60-80 A.D. Earlier dates seem unlikely, since the most distinctive Claudian-Neronian imports known from nearby sites (and British copies) are conspicuously absent here. Only one presumably residual sherd of Terra Nigra (94) was found in a later ditch recut, but Gallo-Belgic fine wares and imported butt-beakers are known from Newhaven Castle Hill and Seaford. A terminal date for the group is suggested by certain similarities with Fishbourne, where the building of the Palace has been closely dated to *c.* 75-80 A.D. The pre-Palace phase, like Newhaven Group i, was very poor in poppyhead beakers (Fishbourne 267: cf. 90 below) they were however common in subsequent deposits on both sites. These vessels are widely distributed in late 1st and early 2nd century south eastern contexts, and their scarcity here is unlikely to be due to localised distribution. Other, positive, similarities with Fishbourne are single examples of forms (33, 62, 77) generally, or only, known there from pre-Palace contexts.

The general character of Group i is interesting. Although a number of the forms are widely distributed in the Flavian period, the Newhaven assemblage as a whole is most strikingly paralleled from sites in West Sussex, notably Angmering, another of the early Sussex coastal plain villas (see esp. Angmering 1947, illustrating material for which a similar Neronian-Flavian date was suggested); unfortunately no systematic excavation has taken place at the nearest sizeable settlement, Hassocks. Micaceous vessels (55-62) apparently made near Hardham, and known from a number of West Sussex sites, make a strong appearance here, no doubt as the most readily available substitute for samian, which was rather poorly represented in this early period. To reach Newhaven they would have to have been carried well away from their major axis of Stane Street (Hardham-Chichester; Hardham-Alfoldean-London), perhaps via Hassocks into the Ouse Valley.[1] Our knowledge of early R-B pottery production in Sussex is otherwise extremely poor, but many of the greyware vessels are unlikely to have travelled very far, since large zones of the Weald would have formed suitable production areas, given the existence of nearby market centres. The Hassocks area is again a likely candidate for the source of many greyware vessels (cf. 34).

Perhaps the most significant aspect of the group is the high proportion (45-50%) of vessels in native fabrics, probably of local manufacture, and some clearly in the local ultimate Iron Age SEB tradition (see Fig. 34). These types were used for most of the cooking and storage, and their prevalence suggests that the villa at this date exploited local Iron Age agriculture while producing little cultural change in the surrounding rural settlements (cf. Charleston Brow and Highdole).[2] However, the use of the wheel and R-B potting materials by a potter working in the SEB tradition (perhaps near Hassocks—see 34), does suggest that the process of assimilation was beginning, as does the frequent occurrence of SEB-type jars in local R-B cemeteries. Nor can the SEB ' culture ' be so clearly demarcated from the Belgic (' Iron Age C ') culture as the ABC scheme suggested; not only do many East Sussex sites produce Gallo-Belgic fine wares as well as SEB material (see above), but some local native vessels have marked Belgic affinities (cf. 11, perhaps a local copy of a cordoned or carinated beaker). Belgic style is, of course, much more obvious in the relatively standardised Flavian grey wares and table wares (see 35, 36, 43, 48, 55-7, 77).

Group ii, 79-84. Pottery from the initial fill of the enclosure ditch Site 1.

Pottery was scarce in the early ditch fill on Site 1 and none was found in the Site 5 sections. It cannot be assumed that 79-84 are exactly contemporary with 1-78, although a date in the second half of the 1st century seems likely. Groups ii and iv are sealed by Group viii. With the exception of 84, Group ii is from the ENE ditch.
79, 80 Handmade ' native ' jars with raised-band decoration applied and thumbed around the girth, both in CJF. Such decoration often occurs on SEB eyebrow pots (cf. 4), but continues into the 2nd century and probably later on plain forms (e.g. 109 below). Locally it is very common; a distribution map is given in *S.A.C.* vol. 81, Table VIII.
81 Square-shouldered ? bottle. Brownish grey finely sandy with small flint grit inclusions; fracture rather granular, surfaces reduced darker. ? Handmade and wheel finished. Decorated with lightly burnished oblique strokes on shoulder and body.
82 Everted-rimmed jar. Brownish slightly vesicular sandy fabric, with some dark flint filler. The surfaces retain traces of a distinctive light sky blue wash.
83 Everted-rimmed jar. Soft, finely sandy pink-buff with red burnt flint inclusions.
84 Rilled bowl, probably carinated. Hard bluish grey slightly micaceous sandy; grey surfaces. NNW ditch. Rilled bowls of this general type occur at Angmering (1947) Fig. 9, 32, and Hardham (pl. VIII, 18).
Not illustrated. Base of ? poppyhead beaker. Soft fine smooth bluish grey; dark slipped surfaces.

1 See Fig. 20 above and B. W. Cunliffe, *The Regni*, (1973), p. 115.
2 G. A. Holleyman (1936), op. cit.

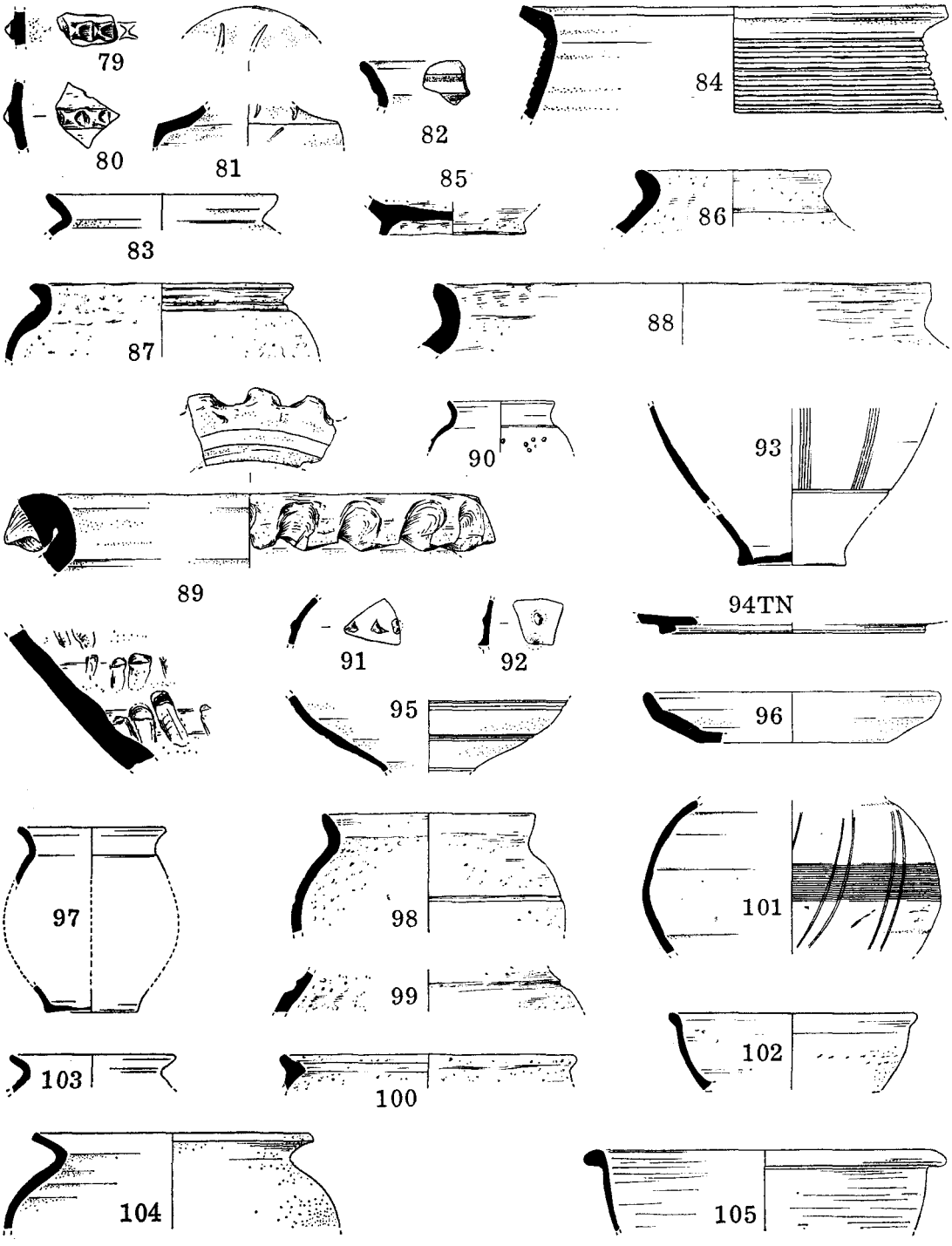

FIG. 27. Romano-British pottery Group II, vessels 79-84; Group III, vessels 85-97 and Group IV, vessels 98-105. $\frac{1}{4}$.

Group iii 85-97 Pottery from Layer 2 of the enclosure ditch on Site 6.

This material was from a recut of the ditch and included a number of sherds clearly redeposited from the initial fill (1-79); only vessels 89, 90, 93, 97 and an imitation f37 bowl (all represented by several sherds) are confidently ascribed to the period of the recut. The general character of Group iii suggests that the recut was not substantially later than the initial fill—say, the last quarter of the 1st century.

85 Footring of a handmade SEB jar, possibly belonging to 86 below. Hard flint-filled CJF; ext. grey-brown burnished; int. rough, grey.

86 Rim of a handmade SEB storage jar. Highly fired hard CJF; flame-marked grey-black surfaces, tarmac int.

Not illustrated. Coil-built native jar, form as 21 and 22; corky grey-brown CJF.

87 Round-shouldered jar with cordoned neck. Grey corky vesicular CJF; handmade.

88 Large storage jar with upright rim; handmade in hard grey CJF, grey-black burnished surfaces.

89 Storage jar of Thundersbarrow ware. Wheelmade in hard bluish grey slightly micaceous sandy fabric, with some larger brown grog and ironstone inclusions; surfaces browner grey. The overturned rim has been skilfully ' roped ' and the int. shows the characteristic finger roughening. This is an early example of a type with an apparently agricultural use and common on rural settlements in the 2nd to 4th centuries: cf. Fishbourne, 391; Highdown (*S.A.C.* vol. 80 p. 75 fig ix., 7, Bishopstone Fig. 8A).

Not illustrated. Body sherd of a large handmade jar of Thundersbarrow ware in a coarse and liberally filled CJF. Surfaces grey/buff/brown tarmac. Wall thickness 14.0-18.5mm. Cf. the chalk filled 4th century type specimens from Thundersbarrow (*Antiquaries Journal* vol. 13 pp. 149-151).

90 Small poppyhead beaker decorated with panels of dots *en barbotine*. Hard brittle fine smooth slightly micaceous light grey with some quartz sand grains. Traces of black ? paint on ext. cf. Fishbourne (267).

91, 92 Body sherds from rusticated beakers. 91 smooth grey fine micaceous with some rather coarse sand inclusions; 92 similar but brown-grey with blue-grey core. cf. Fishbourne (74—second half of 1st century).

93 Jar decorated with vertical combed lines (5-toothed comb) above a groove. Smooth very finely sandy brownish grey with black flint and red-brown grog inclusions; black ext. slip.

94 Valery Rigby has contributed the following:—
Base sherd from a large platter with a functional footring, in terra nigra. Pale blue fine-grained sandy paste; blue-grey surfaces; traces of a highly polished finish confined to the upper surface. Definitely an import, the fabric, finish and form are typical of large Gallo-Belgic platters (e.g. C. F. Hawkes & M. R. Hull *Camulodunum* (1947) forms 2, 3 and 5). Could be a pre-conquest import, it was manufactured in the Claudian period at the latest.
Imported terra rubra platters have already been found at Castle Hill, Newhaven. Terra nigra similar to this has been found at Fishbourne, Chichester, Lancing and Littlehampton. Newhaven is rather isolated from this distribution but is probably to be included in a secondary concentration in the south within the general distribution of terra nigra and terra rubra in southern Britain. The concentration of finds is along the South Coast, from Poole, Dorset to Newhaven, with a northerly projection reaching the Winchester area (V. Rigby, ' Potters Stamps on Terra Nigra and Terra Rubra found in Britain,' in A. P. Detsicas ed. *Current Research in Romano-British Coarse Pottery, C.B.A. Research Report 10* (1973), pp. 7-24).

95 Wide-bodied jar decorated with pairs of grooves and a slight cordon near base. Hard light grey finely sandy with coarser sand filler; surfaces reduced darker.

96 ' Belgic ' type platter. Hard blue-grey smooth micaceous with quartz sand filler and lighter surfaces. Traces of a darker slip. Two examples of this general form were found. Cf. 43 above—a widely distributed type, usually produced in grey sandy fabrics: Fishbourne 14.4—14.6; Angmering 1947 fig. 10, 42; Arundel (*S.A.C.* vol. 77 p. 230) fig. 5, 5.

97 Jar in dirty light grey slightly micaceous finely sandy fabric with red-brown grog; surfaces reduced soot black.

Not illustrated. ? Tazza. Small worn sherd from the body/pedestal junction in fine smooth micaceous brown-grey fabric with quartz sand and black and red grog inclusions (much sparser in the body component). ? cf. 54-9 above.

Not illustrated. Imitation samian f. ?37 rouletted bowl closely resembling 61, but with thicker wall and duller surface colour. Perhaps contemporary with the recut of the ditch.

Group iv 98-105 Pottery from Layer 2 of the enclosure ditch on Sites 1 and 5.

From the NNW ditch on Site 1 except 98 and 105.

98-100 Native jars. 98 (Site 5) and 99 rather hard coarse CJF; dark grey/soot black surfaces, burnished ext. and over rim; 100 with ? lid seating in light grey highly fired CJF. All handmade and finished.

101 Jar in rather soft grey sandy fabric with darker reduced surfaces; organic material plucked and burnt out. Lightly rilled zone on girth and pairs of tooled oblique lines. cf. 265.

102 Bowl with out-turned lip. Rather vesicular light finely sandy grey, with sparse quartz sand and organic filler. Dark grey/black surfaces, possibly slipped.

103, 104 Jars with everted rims; 103 micaceous black sandy; 104 grey sandy.

105 Pie dish. Finely sandy dark grey micaceous; reduced black surfaces, burnished ext. (Site 1 ENE ditch).

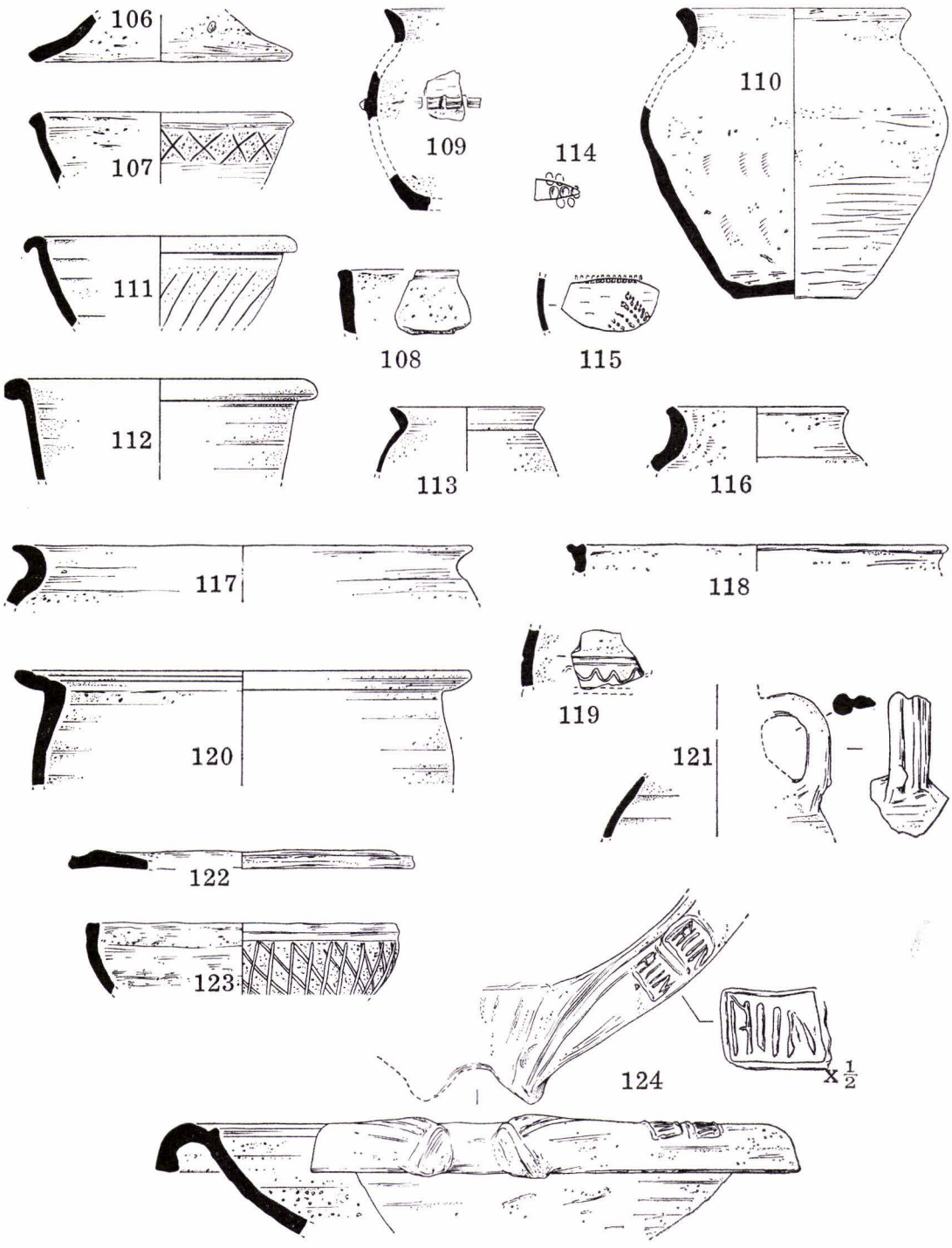

FIG. 28. Romano-British pottery Group V, vessels 106-121 and Group VI, vessels 122-24. Vessel 124, stamp ½; rest ¼.

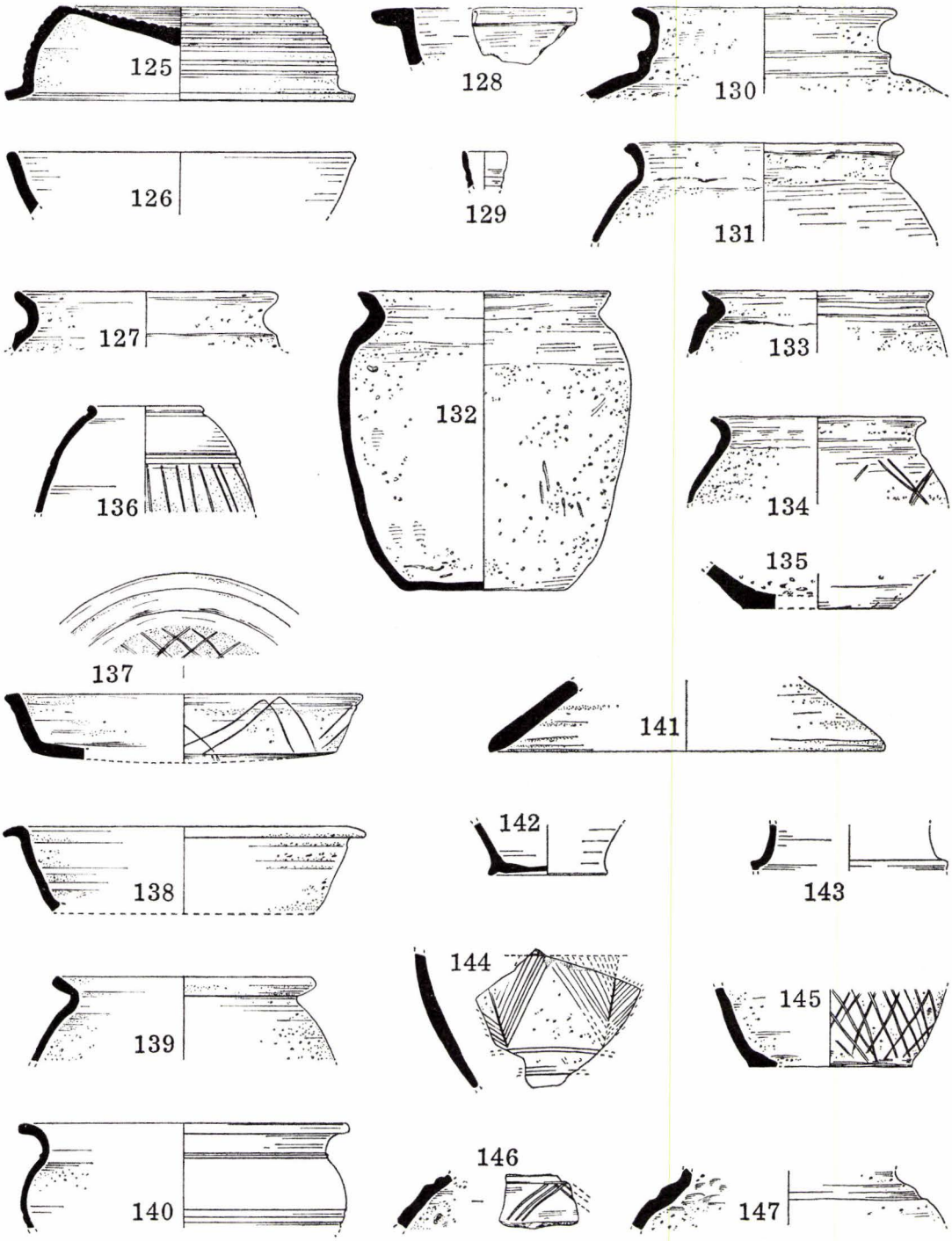

FIG. 29. Romano-British pottery Group VI, vessels 125-7; Group VII, vessels 128-143 and Group VIII, vessels 144-147. $\frac{1}{4}$.

Groups v-vii Pottery associated with the Site 1 buildings.

Group v 106-121 Pottery from the beamslot of Structure IV.

106 Handmade lid in grey CJF with large rolled ironstone inclusions; burnished black surfaces.
107 Handmade bowl in grey CJF with black surfaces, burnished above and below a rougher zone with burnished lattice.
108 Sherd of typical handmade CJF bowl; soft, busnished black surfaces. Two other examples were found.
109 Jar with raised-band decoration. Handmade in grey CJF; surfaces reddish brown. The band is trimmed and interrupted with a knife or similar tool. Cf. comments on 79-80 above.
110 Plain jar in light grey CJF, burnished above girth and possibly knife-trimmed below; coil built. The base was found crushed *in situ*.
Not illustrated. Sherds from at least 18 other CJF jars were found.
111 Hook-rimmed bowl faintly decorated with diagonal tooled lines. Hard bluish grey with quartz sand filler.
112 Pie dish. Rather friable black very sandy; int. surface redder.
113 Small everted-rimmed jar. Finely sandy reddish grey, blue-grey core. Surfaces grey; black slipped ext.
114 Sherd from a vase with carved oval facets, perhaps in imitation of glass vessels. Fine blue-grey with some black inclusions; darker slip on exterior.
115 Sherd from a poppyhead beaker decorated with rouletted girth band/s and a diamond zone of barbotine decoration. Hard fine almost metallic grey-blue with darker ? grog filler apparent on surface.
Not illustrated. Body of poppyhead beaker. Hard fine smooth blue/grey micaceous; whitish brown ext. with black slip, decorated with panels of barbotine dots. Poppyhead beakers in grey fabrics were frequent in and around the beamslot.
Not illustrated. Rough-cast beaker. Soft light red very finely sandy fabric, black slipped surface.
116 Jar with thickened neck in hard grey highly fired CJF. Handmade, perhaps wheel finished.
117 Large jar with everted rim in hard grey CJF; grey-black burnished surfaces. Handmade, perhaps wheel finished.
118 ? Bowl with divided rim—perhaps a lid seating. Irregularly handmade black friable CJF.
119 Large jar in well-fired hard grey CJF, decorated with a wavy line between two girth grooves; handmade.
120 Reeded-rimmed bowl. Oxidised orange-buff coarsely sandy with grey core. A typical late 1st to early 2nd century form.
121 Flagon with applied reeded handle. Orange-red sandy, white slipped exterior.

Group vi 122-124 pottery from the Structure V wall footings.

122 Flat lid/cover in hard grey/black CJF; burnished black surfaces, roughly handmade and finished. From a contemporary wall exposed in a contractor's trench.
123 Bowl in grey CJF, black surfaces burnished int., and ext. above a rougher zone with burnished lattice; groove beneath rim. Handmade, location as 122. cf. Fishbourne (235, from a late 3rd century context).
124 The following was contributed by K. Hartley. Five joining fragments from a mortarium in granular brownish orange fabric with buff surface and slip, and a grey core; white and grey (flint?), quartz and brown trituration grit. The fabric is tempered with tiny grit of similar type. Diameter *c.* 38cm. Two incomplete stamps are impressed close together, but no other example of them is known. Unfortunately it is not certain whether the stamps are retrograde or not, and only more complete examples will establish the potter's name or literacy. The rim-profile is clearly in the tradition of the potters who worked at Brockley Hill, Radlett and Verulamium, and can be closely paralleled in the mortaria of Driccius, whose activity can be dated to the period 110-150 A.D. The grey core is unusual in such mortaria but is also matched in the work of Driccius, who had kilns at Brockley Hill and Radlett.

Also:

125-6 From a large post hole to the SW of, and perhaps associated with, Structure V (1 F46).
125 Rilled lid (possibly bowl) with depressed centre. Hard brownish grey micaceous sandy with coarser quartz sand filler; dark grey/black reduced exterior.
126 Bowl in hard grey rather fine sandy fabric with a conspicuously rough fracture; reddish wash or oxidation ext. cf. 198.
127 Jar with stepped shoulder and constricted neck in hard light grey highly fired CJF with calcined flint filler. Probably a SEB vessel. (From an insecurely stratified context near Structure V).

Group vii 128-143 Pottery from the gully in Structure V. Antonine.

The fill of this feature was apparently homogeneous and probably represents the destruction of Structure V; it is thought to be contemporary with the final fill of the enclosure ditch on Sites 1 and 6 (Group viii below), and the forms of the majority of the cooking pots bear this out. The other vessels are consistent with an Antonine date, and one greyware jar is in a fabric also found in the destruction layer in the ditch.

128 Bowl of very large diameter in a completely oxidised hard, dull red sand ? micaceous fabric with burnished surfaces. Possibly handmade.
129 Mouth of a small flagon. Fine smooth orange-pink (cf. Brown/Yellow 7A) ' chalky ' with very fine filler and smoothly finished surfaces.
130 Large storage jar with prominently stepped constricted neck. Hard grey CJF. Presumably a SEB vessel, burnt after breakage and possibly residual. ? Coil built and burnished by hand.

131 Thinly made jar with overturned rim in dark grey CJF with chalk inclusions. Int. grey, ext. black and finely burnished—the finish is reminiscent of Black-Burnished Ware 1, which is also represented from this feature. Coil built. 4 jars of this form were found, one of them very large. Lattice decoration on the body may have been typical. Cf. also 181 from the Antonine ditch fill.

132-133 Handmade jars in CJF. 132 found smashed but practically complete, is in an unevenly fired organic-vesicular CJF with typical filler, red and brown grog, and a number of very large ironstone inclusions. Surfaces generally grey-black, highly burnished from the shoulder over the rim, rough below. The body form and finish is strongly reminiscent of contemporary Black-Burnished Ware 1 jars, although there is no lattice. 132 was heavily sooted within.

134 Lattice-decorated black handmade CJF jar.

Not illustrated. Cross-marked base of a handmade CJF jar, burnt red after breakage and perhaps residual. The cross is simple and burnished before firing. Cf. Charleston Brow (fig 26).

Not illustrated. Shoulder/neck of a Black-Burnished Ware 1 jar. Cf. below, 187, 188 (see R. Farrer (1973) op. cit., p. 103, 1).

135 The following was contributed by K. Hartley: A body sherd of mortaria fired to dark grey with dark red core and white (flint) grits. The exceptional hardness of this fragment, together with the extreme discolouration suggests that it could be a waster, though not necessarily unsaleable.

136 Ovoid jar with bead rim and two grooves above a girth zone decorated with diagonal lines. Grey sandy with reddish core; burnished above rougher decorated zone. Cf. Chichester (*S.A.C.* vol. 94, p. 126 No. 98—? an earlier vessel).

137 Decorated bowl with sagging base, rather roughly wheel made and ? knife trimmed. Hard grey white micaceous finely sandy with grey surfaces. Double wave motif on ext., lattice on rougher zone on int. base; probably also decorated underneath. A common type in the Chichester area: cf. Fishbourne (204), Chichester (A. Down *Chichester Excavations 2*, Tower Street, fig. 5.8, No. 10 and Central Car Park, fig. 8.24, No. 66).

138 Bowl with slight hook rim. Light grey rather micaceous sandy with surfaces reduced darker.

139 Jar with everted rim. Grey sandy, darker reduced surfaces. Fast rotation marks.

140 S-profile jar with cordon on neck and grooves beneath girth; hard light bluish-grey sandy with some large calcined flint inclusions; well smoothed ext.

Not illustrated. Base of jar in a distinctive blue-grey very hard highly fired fabric with rough fracture and pimply surfaces. This fabric also occurred in the final fill of the NNW enclosure ditch (Site 1). No form could be determined, but a pear-shaped jar with an everted plain rim, in this fabric, was used in the cemetery at Hassocks (BH, marked 68). The Hassocks example had distorted in firing, and seems likely to have been a local product.

141 Conical lid. Hard grey sandy with sparse large flint and ironstone inclusions; dark grey reduced surfaces.

142 Typical greyware jar base. Light grey sandy, bluer flecked surfaces.

143 Beaker with stepped profile. Fine smooth salmon pink with slight blue core; bluish white int., grey washed ext.; fast rotation marks.

Not illustrated. Sherds from about 8 poppyhead beakers in various fine grey fabrics, some micaceous.

Group viii 144-240 Pottery from the final fill of the enclosure ditch. Antonine.

Locations refer to the Site (1/5/6), and, for Site 1, sections on the NNW or ENE sides (1N, 1E). On sites 1 and 6 the final fill of the ditch was clearly a destruction layer, containing much burnt building debris as well as quantities of pottery (see main report, above), but Site 5 was relatively sterile, and may have filled over a longer period (see 188). It should be borne in mind that it is in the nature of destruction layers such as the Site 1 and 6 fills to contain residual materials; sherds of 223, for instance, were found scattered across the Site 6 R-B ground surface.

144-165 'Native' vessels in CJF and allied fabrics from Site 1, N section. These examples, excavated from a section less than 6m. in length, are illustrated as a group since many of them are fresh and clearly contemporary sherds. Many of them differ in form or fabric from those found elsewhere in the destruction layer. Vessels 149-160, 164 and 165 are in dark grey or black corky CJF with organic cavities, chalk, shell, ironstone and occasionally red grog inclusions. Soot black highly burnished finishes are typical, frequently above a single or double girth groove; the ext. is not normally burnished below the girth, rather globular jars with everted rims are a conspicuous type (153, 156, 158, 159, 161), as are jars with high shoulders (157, 160,163), and sub-biconical vessels (152, 155). All except 152 (wheel finished) are handmade (probably coil built) and hand finished. The following deserve special comment:

144 Body sherd with zone of chevron decoration lightly tooled between burnished grooves. Rather sandy grey CJF, black surfaces over brown sandwich layer; handmade.

145 Lattice-decorated handmade jar. Unusual in this group, though 154 may be latticed. Illustrated sherd found redeposited in a modern feature.

146, 147 Handmade jars with stepped profiles. 146 fabric as 149-160; decorated with chevron; 147 hard highly fired CJF. Either sherd might be residual.

148 Bag-shaped bowl very robustly handmade in hard light grey CJF with crushed calcined flint filler, black inclusions and some organic cavities. All surfaces burnished and originally black, but largely oxidised orange-brown in use. The form of this vessel is most unusual and it is unlikely to have served a domestic function. It would be suitable for an industrial process as a large crucible, but despite obvious use it shows no sign of high temperature scaling or metallic deposits. More likely is a process involving long periods of relatively low temperature heating, such as the final stages of salt evaporation.

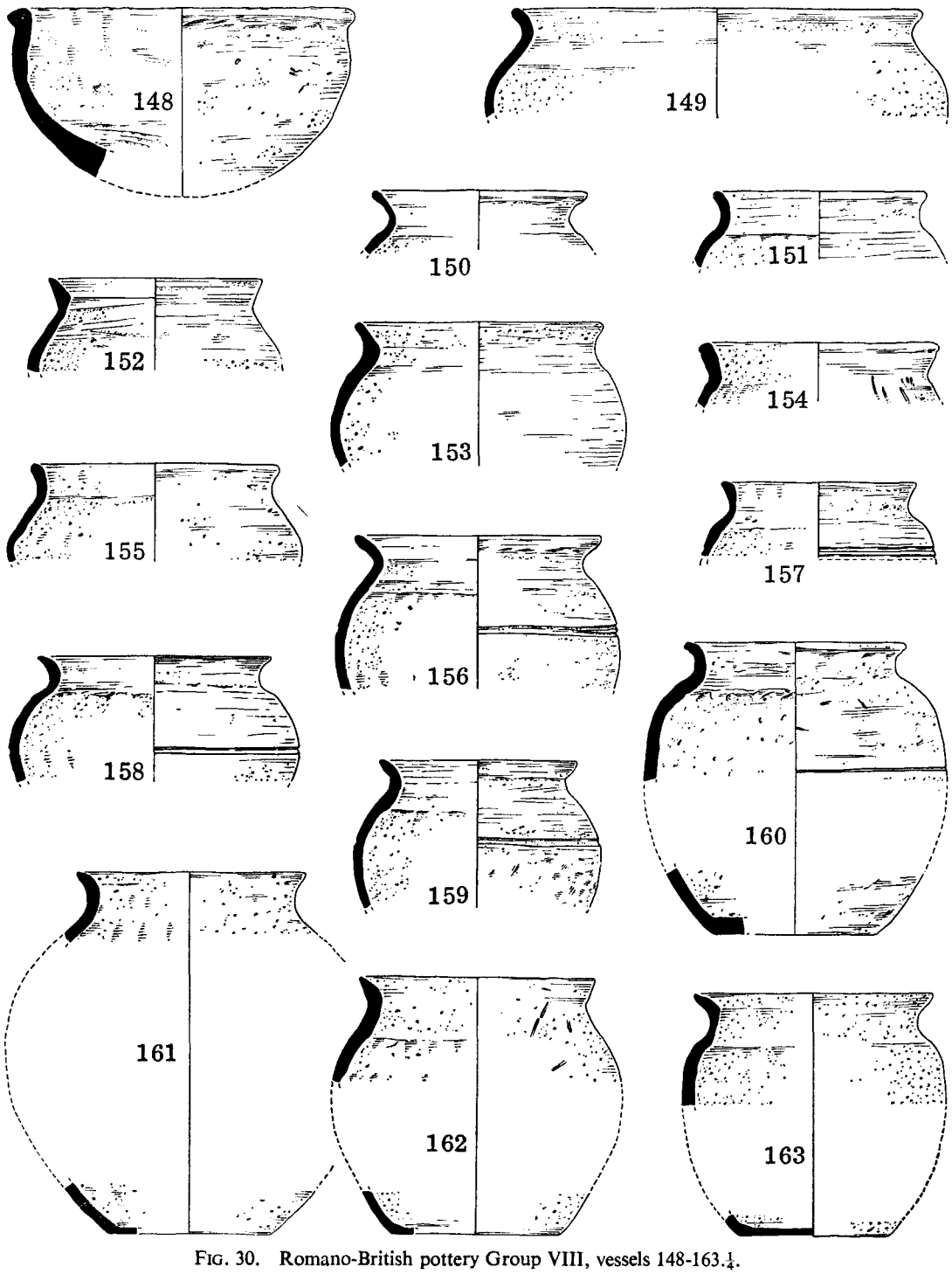

FIG. 30. Romano-British pottery Group VIII, vessels 148-163. $\frac{1}{4}$.

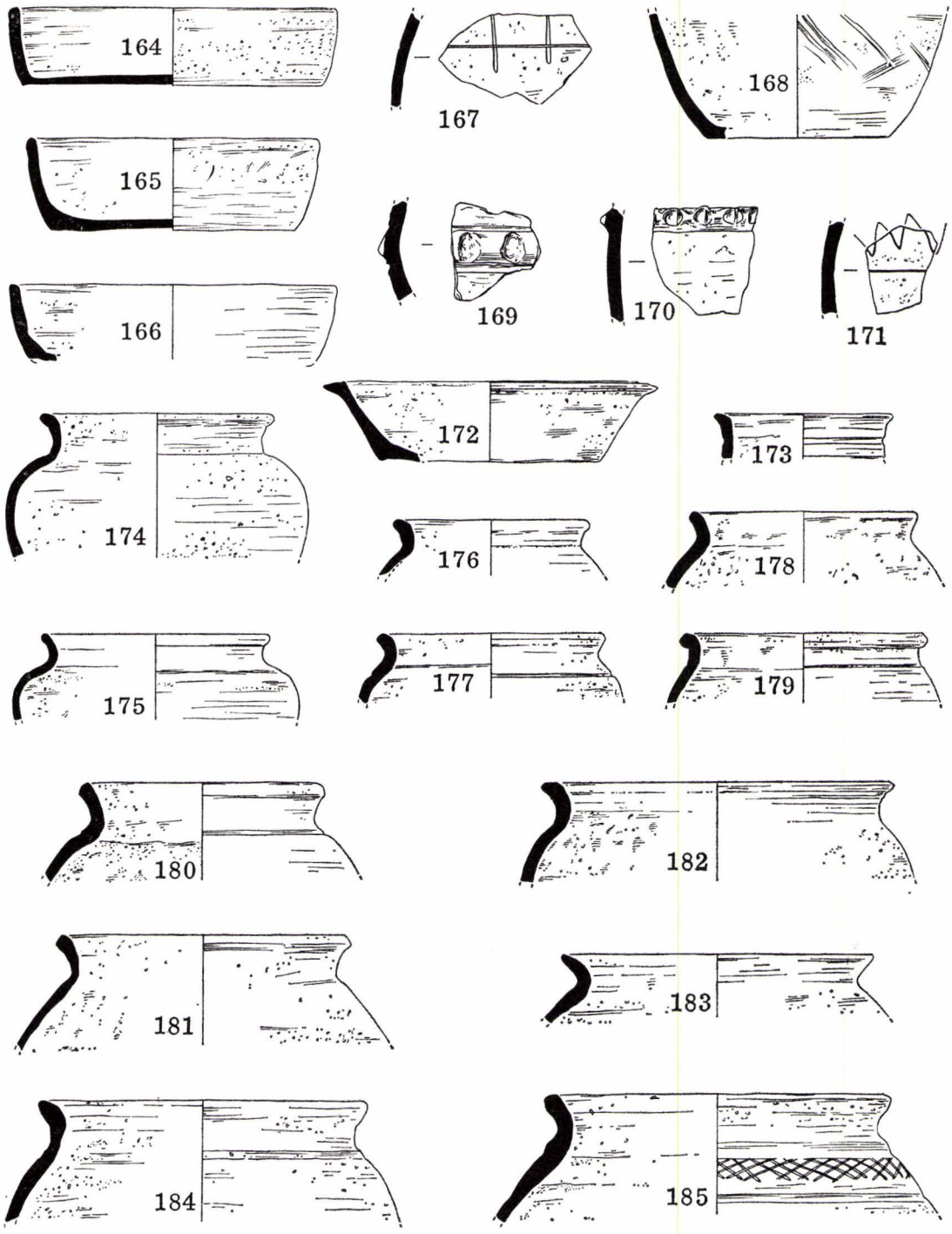

FIG. 31. Romano-British pottery Group VIII, vessels 164-185.$\frac{1}{4}$.

160 The form of this jar is obviously in imitation of Black-Burnished Ware 1 vessels of this period. Cf. 187.
161, 162 Round-bodied everted-rimmed jars in a closely similar rather smooth grey version of CJF with a little mineral filler and a fair amount of lost organic material, especially in 162. Both coil built.
163 High shouldered jar with flaring rim in an unusual organic-tempered orange-pink CJF, light in weight, with a grey-white core. Coil built.
164, 165 Typical ' dog dish ' black CJF bowls. Handmade.
Not illustrated. Body of large storage jar with raised-band girth decoration, fingernail impressed, much as 170. Light grey rather smooth CJF with intentionally blackened surfaces. Handmade. (1N).
Not illustrated. 3 further bowls and at least 11 jars in CJF were found in 1N.
166-185 CJF bowls and jars from sections 1E (166, 170, 172, 175-8, 180, 182-3, 185) and 6 (167-9, 171, 173-4, 179, 181, 184). All handmade and finished, except 182 (wheel finished). Generally rather plain rims, in contrast to 149-163. Many of the sherds have been burnt and/or abraded after breakage.
167-171 Decorated body sherds. 169, 170 examples of thumbed raised-bands. The Antonine ditch fill provided the majority of the Newhaven raised-band material.
173 Grooved cup or beaker; burnished black surfaces.
181 (3 examples) cf. 131 above.
185 ? Storage vessel with close lattice between grooves on shoulder. Decoration of this type is locally common and may derive from the late SEB ' Asham jars ' (241 below; cf. also 213).
A variety of similar rim forms comparable with 149-185 are illustrated from West Blatchington (p. 221).
186-228 Grey and sandy fabrics.
186 Plain-rimmed jar. Dull red-grey sandy with CJF-type filler, including oyster shell and organic particles. Perhaps handmade, wheel finished. (1N).
187 Black-Burnished Ware 1 jar; reddish brown sandy, black burnished shoulder and over rim; latticed body. Handmade. A typical 2nd century example (R. Farrar (1973) op. cit. p. 103, 1) (6).
188 Black-Burnished Ware 1 jar: black sand, burnished on shoulder and over rim; handmade. The flaring rim, though not so pronounced as in 4th century examples, probably indicates a later 2nd or 3rd century date. Site 5, from the uppermost silting of the enclosure ditch, where it may represent casual loss. Cf. R. Farrar (1973) op. cit. p. 103-4; Fishbourne (328. 1); West Blatchington (Plate VI—? end of 2nd century); Chichester St. Pancras (175a); the type is common in Sussex, though not always found in Black-Burnished ware proper. 187 and 188 were mass-produced near Poole, Dorset.
189 Neck of coil built flagon. Soft friable micaceous with sand filler and ironstone and red grog inclusions. Wheel finished, cf. 33 above. Burnt and probably residual. (6)
190 Everted-rimmed jar. Medium/hard grey micaceous sand-filled fabric; black inclusions. Black reduced surfaces, roughly knife-trimmed on the wheel. (6).
191-4 Storage jar with grooves on neck and inside rim (1N), carinated rilled bowl (6), everted-rimmed jar (1N), and lattice-decorated hook-rimmed bowl (1N); all light grey sandy rather micaceous with black inclusions; surfaces occasionally reduced a little darker.
195-7 Hook-rimmed bowl and two jars in similar hard grey/dark grey slightly micaceous sand fabrics with rough fractures and pimply black-flecked surfaces. 195-6 (6), 197 (1e).
198 Jar; solid but rather friable blue-grey sandy with a rough fracture; surfaces a little darker and covered with an orange-red wash. One small sherd (1E). Probably a pear-shaped jar of a type very common at Fishbourne (313) and Chichester, but local in distribution (see *S.A.C.* vol. 112 pp. 86-96). Some at least were made at the Rowlands Castle kilns, near the Sussex-Hants. border. Complete jars may have ' batch marks ' inscribed on the shoulder.
Not illustrated. Plain bowl in similar fabric and wash to 198. The form is similar to that of 126 from 1 F46. (1E).
199 Flanged bowl; hard fine smooth brownish grey with red-brown grog; surfaces dark grey, wheel burnished. (1E).
200 Bowl with hooked flange; fine smooth grey with red-brown grog and black inclusions; red-brown core. Finely smoothed silver-grey surfaces. (6) A hook-rimmed bowl in this fabric was found at Hassocks (BH Box 60/5).
201 Miniature jar; fine light grey with well smoothed surfaces; ext. burnished. (1E).
202 Hook-rimmed bowl; friable dark grey finely sandy; black reduced micaceous surfaces. (1E). An identical vessel from Hassocks (BH Box 60/5).
203-5 Bowl (6) and two plain jars (1N, 6 respectively); brittle fine light grey with small black inclusions. Surfaces silver-grey, finely smoothed, smeared with flecks of filler. 5 other vessels, including a poppyhead vase, were found in this fabric, which is common at Newhaven.
206 Plain poppyhead beaker; soft greyish white ' chalky ' with sparse quartz sand filler; dark grey slip ext. (6).
Not illustrated. A large number of poppyhead beakers in various fine grey wares were represented by single sherds. All but one (decorated with panels of barbotine dots) showed no signs of decoration.
207 Jar with flaring rim, round body and girth grooves. Hard fine grey with sand filler; ext. well smoothed, int. pimply. (1E).
208 Large robust bowl; hard light grey/buff sandy with rough fracture; dark grey reduced surfaces. Roughly wheel made. (1N).
209 Corrugated bowl with incised wavy line decoration. Soft grey-buff rather coarsely sandy with grey-brown grog inclusions; buff ext. (1N).
210 Everted-rimmed jar. Smooth slightly micaceous with sand and brown grog fillers; burnt red—? residual. (1N).

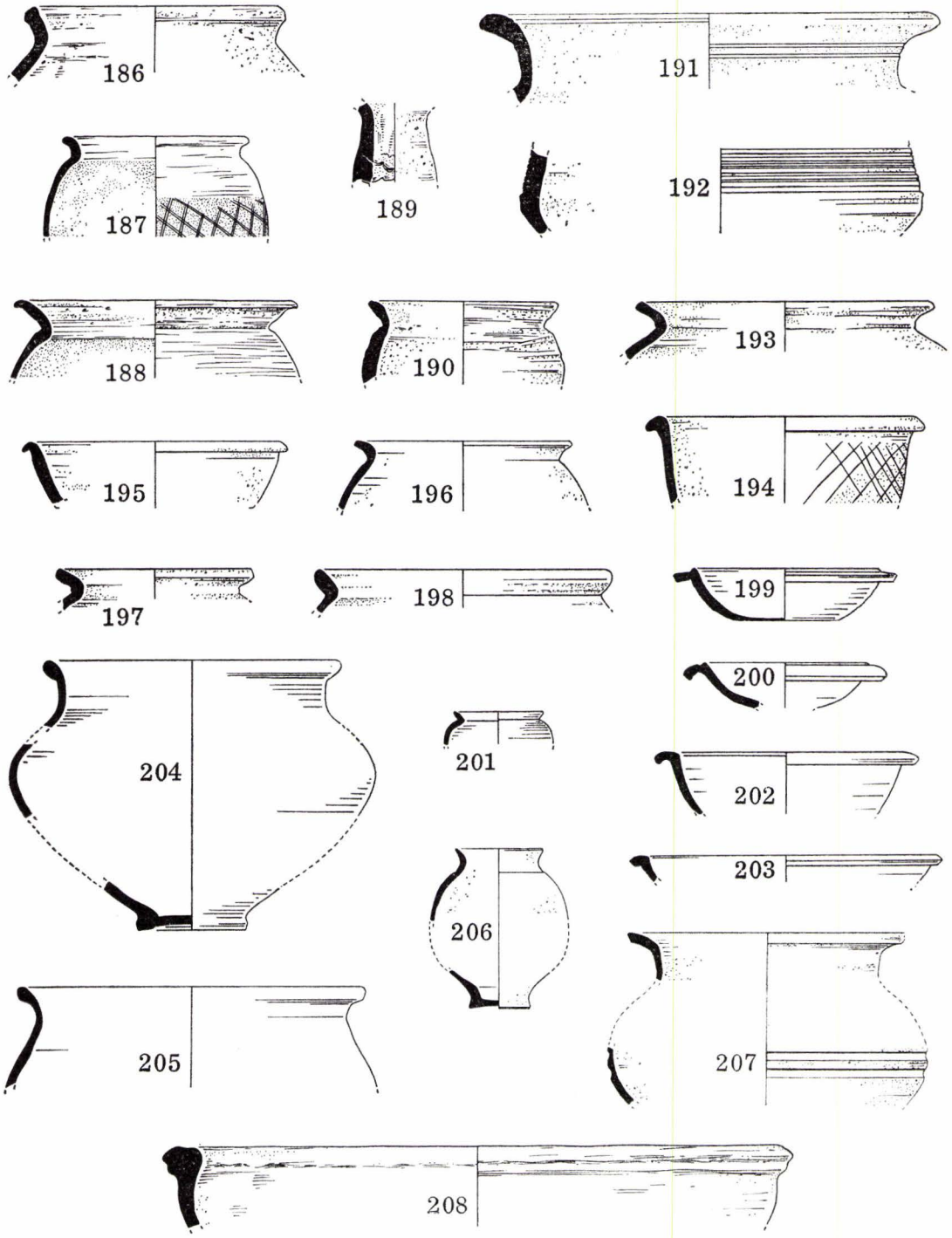

FIG. 32. Romano-British pottery Group VIII, vessels 186-208.¼.

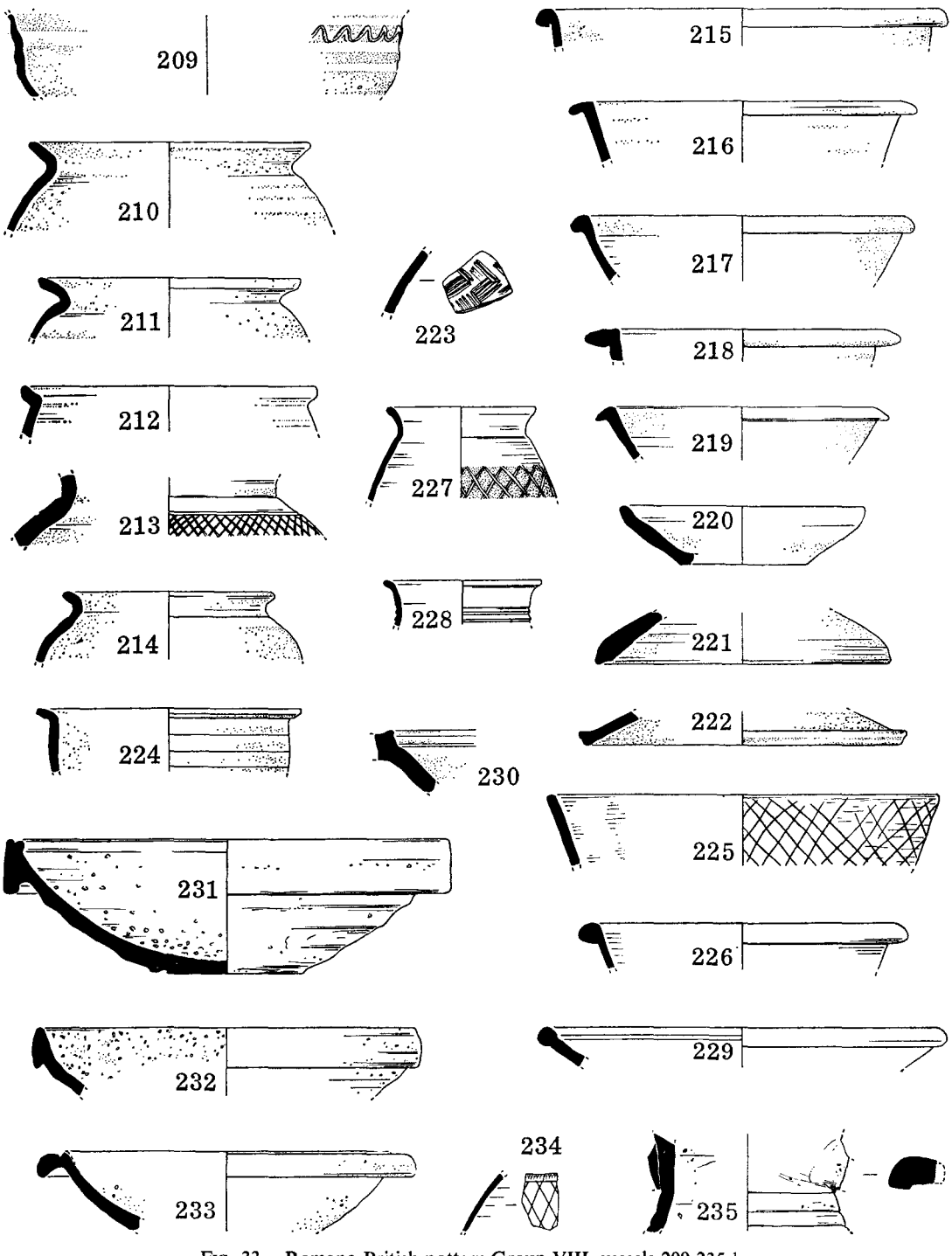

FIG. 33. Romano-British pottery Group VIII, vessels 209-235. $\frac{1}{4}$.

211 Everted-rimmed jar. Grey-brown finely sandy with red-brown and blue-grey sandwich cores; coarser sand filler. (6).
212 Jar or bowl with lid seating. Hard grey sandy. (6).
213 Jar with groove and fine lattice incised on shoulder. Dark grey, a common type in this period; cf. Hardham, (pl. VI, 52, 58, where similar grey ware forms were fired).
214 Jar; dark grey slightly micaceous sandy with organic cavities: surfaces oxidised dull orange. (1E).
215 Bowl with overturned rim; hard reddish grey sandy with blue-grey core; sizeable organic cavities. (1E).
216 Flange-rimmed bowl; grey sandy fabric. (1E).
217 Bowl; micaceous grey sandy with calcined flint filler. (6).
218 Flange-rimmed bowl; grey-brown finely sandy; surfaces burnt. (1E).
219 Bowl; brownish grey finely sandy with rather coarse sand fillers; dark grey reduced surfaces. (6).
220 ' Belgic ' type platter; hard dark grey slightly micaceous sandy. (6).
221 Heavily made lid; hard light grey micaceous sandy with calcined flint inclusions; reduced darker grey ext. (6).
222 Lid; light grey micaceous finely sandy with sand filler; surfaces reduced a little darker. (1E).
223 Large jar with herringbone decoration combed on body; white finely sandy, grey slipped surfaces. (6 and 6 R-B ground surface).
224 Bowl with very slight body grooves; friable smooth grey with sand filler; surfaces reduced black. (6).
225 Latticed bowl; friable dark brown slightly micaceous sandy; surfaces burnished, int. black, ext. brown with burnished lattice. (1E).
226 Typical round-rimmed pie dish; friable dark brown micaceous finely sandy; black wheel burnished surfaces. (1E).
227 Jar with spreading body and lattice decoration; friable dirty grey-buff micaceous sandy, surfaces reduced black; fast rotation marks. Lattice burnished over rougher zone. (6).
228 Vase with grooved neck; very finely sandy grey, since burnt pink. (6).
229 Dish perhaps imitating samian f. 31; rather brittle finely sandy flesh-coloured with grog inclusions, surfaces lighter with a bluish tinge. (6).
Not illustrated. Thundersbarrow storage jar. Body sherd with finger dab on interior. ? Originally grey coarsely sandy with brown grog; ? burnt reddish/brown/buff. (6).
230-3 Mortaria.
230 Flange or bead missing; hard dirty white sandy. No grits present. (1E).
231 The following was contributed by K. Hartley. Three large fragments from a mortarium in fine-textured hard white fabric with white quartz tempering and trituration grit. Similar mortaria have a wide, but thin distribution throughout Britain but are much more common in the extreme south. Rapsley (*Surrey Arch Collections* vol. LXV (1968) p. 30-56) had at least eight examples. Distribution suggests manufacture in Surrey area, and parallels show that they were being made in the 2nd century as well as later. A date of *c.* A.D. 140-250 would probably cover the period of production.
232 The following was contributed by K. Hartley. Diameter about 24cm. A mortarium in orangy brown fabric with thick grey core and abundant grey and white (flint) and brown trituration grit rising to the very rim of the vessel. The rim form would fit a date within the period A.D. 140-250. See 291 for further comments.
233 The following was contributed by K. Hartley. A small flanged mortarium in fine-textured orangy fabric with one grey flint grit. Slightly burnt. This vessel could well have been made in the same region as 291, 290, 232. The bead is broken off but the mortarium is likely to be second century.
234 Jar with rouletted and lattice decoration. Fabric and finish as 55-59 above. Single sherd. (6).
235-8 Amphorae—See also specialist report by Dr. Peacock.
235 Amphora with corrugated body. Hard dirty cream sandy with slight greyish core; shell, black and red grog inclusions and organic cavities. Handle scar. (6).
236 ? Globular Spanish amphora. Pink-buff sandy, slight greyish core; organic cavities. (1E).
237 Amphora handle; grey/salmon pink sandy with ? limonite filler. (1E).
238 Large amphora or pitcher; very finely sandy reddish brown with organic inclusions burnt out; ext. pink-buff. Decorated with combed wavy line at girth. (6).
239 Flagon. Fine smooth micaceous, grey in fresh fracture; pinkish white surfaces and weathered fracture; grey int. body. Some organic cavities. (1N).
240 Rough cast beaker with cornice rim and low girth. Hard fine smooth, int. reduced grey, ext. oxidized red-brown; black colour-washed surfaces. (5). The low girth on this type usually denotes a date towards the mid-, rather than the early 2nd century, and the fabric is typical of what is perhaps to be regarded as a copy of Nene Valley pipeclay examples; see Chichester (*S.A.C.* vol. 95, p. 137, 8); Fishbourne (266); Brixworth (P. J. Woods, *Brixworth Excavations Vol. I*, fig. 23) and J. P. Gillam ' *Types of Roman Coarse Pottery in North Britain* ' (1968), 72-5.

Group viii Summary:

The general character of the pottery suggests an Antonine date (mid second century A.D.). The form of the rough-cast beaker (240), for which a typology has been put forward, would confirm this, but the vessel was found in a section to the west of the bulk of the group. Samian evidence suggests that some of Group viii must belong to the latter part of the Antonine period.

A few comments can be made about the assemblage. As in Group i local ' cooking jar fabric ' pots are strongly in evidence, but formal resemblances to the local late Iron Age SEB jars are tenuous. At least one of the Newhaven jars is in imitation of Dorset Black-Burnished Ware 1 types, and a number of them (see 156-160) may well belong to a single batch with a BB1-type finish. The grey sandy wares are more abundant, but in the absence of known East Sussex kiln sites few of them can readily be ascribed to a particular area. Relatively local production (i.e. within East Sussex) seems likely for the majority of these vessels, though, since grey wares from known West Sussex production centres—for example the Rowlands Castle area (see 198) and Hardham (BH)—form only a very small proportion of this assemblage (the same is true of BB1 jars). Hassocks is again suspected to be a major source, almost certainly producing a hard blue-grey ware (not illustrated) found in Groups vii and viii, and perhaps also 203-5. More generally, the material from various unpublished excavations and collections made at Hassocks (BH) is strongly reminiscent of the present group. Non-samian table wares, though, are very poorly represented here (see fig. 34). Taken alone, in comparison with the majority of villa sites that are later in date and better served by communications, particularly roads, the pottery does not reflect the status of a villa using painted plaster and glass windows.

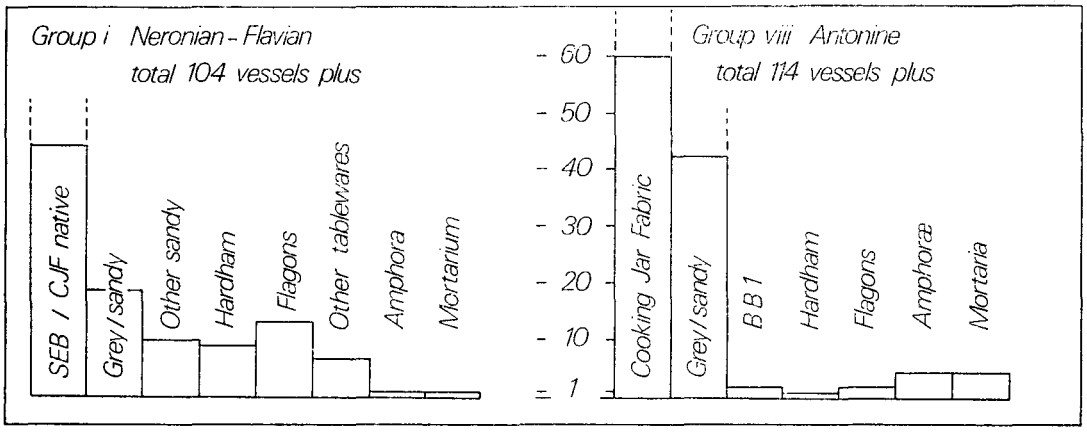

FIG. 34. Newhaven, Romano-British pottery, comparison of the main groups.

Group ix (241-293) Pottery from the Romano-British ground surfaces, minor R-B features, and post-Roman contexts:

Locations give the site number (1, 5, 6) and the layer (R-B ground surface as RB, Medieval hillwash as M, unstratified as US) or feature (F); e.g. 6 F3 or 1RB.

241 Asham jar in dark grey/black CJF liberally filled with chalk, flint, ironstone and perhaps shell. Coil built; pronounced black ' tarmac ' int., black burnished ext. and over rim. Cordon, close obtuse lattice on an unburnished zone, and groove below neck. These vessels belong to the later stages of the SEB tradition (cf. 1-10), in which the eyebrow swag is often replaced by a girth or shoulder lattice; the constricted neck and wide body are typical. Later 1st century. (1 US). The type site of Asham Coombe (*S.A.C.* vol. 71, p. 254) is only 5km. (3 miles) to the N; there 4 jars of this type containing cremations were discovered, apparently in a lynchet boundary (see Asham (and BH); Crayford). Although it seems likely that they were post-conquest burials, Iron Age cultural tradition is indicated. Elsewhere Asham jars have generally been recorded from Romano-British cemeteries—at Bormer, Plaxtol (Kent) (see Crayford), Seaford (BH, marked 88), Herstmonceux (? pre-conquest) and Hassocks (BH, marked 100, apparently found with a samian f33 bowl in the mouth).

242 Pedestal base in hard coarse flint filled CJF with organic cavities. Handmade; black surfaces, burnished ext ? a SEB vessel of unusual form. (1 US). Cf. *Newhaven Castle Hill* (fig. 5, 2).

243-256 Handmade bowls, jars and lids in CJF. (243-5, 248-250, 253, 255-6 from 6 RB; 246-7, 252, 254 from 1 RB; 251 from 1 US).

243 Raised band.

244 Haphazardly combed body sherd, angle uncertain. Hard grey highly fired CJF with calcined flint filler.

246 Jar with lid seating; cf. Chichester (A. Down, *Chichester Excavations 2*, Central Car Park 117, apparently from a very late context).

249, 255 Plain bowls with groove on top of rim—a common form on Site 6 RB.

257 Flanged rim bowl in Black-Burnished Ware 1. Handmade, black fabric burnished int. and on top of rim. Cf. 187-8 above and R. Farrar 1973 op cit. (6 RB).

258 Body sherd of jar decorated with panel of barbotine dots. Light grey sandy, darker ? slipped ext. (1 US).

259, 260 Body sherds of jars decorated with diagonal ? rouletted pricked lines around the shoulder. 259 blue-grey rather finely sandy; almost metallic finely finished light grey slip above decorated zone (6 RB). 260 decoration between grooves; hard light grey finely sandy with a little coarser sand filler (1 RB).

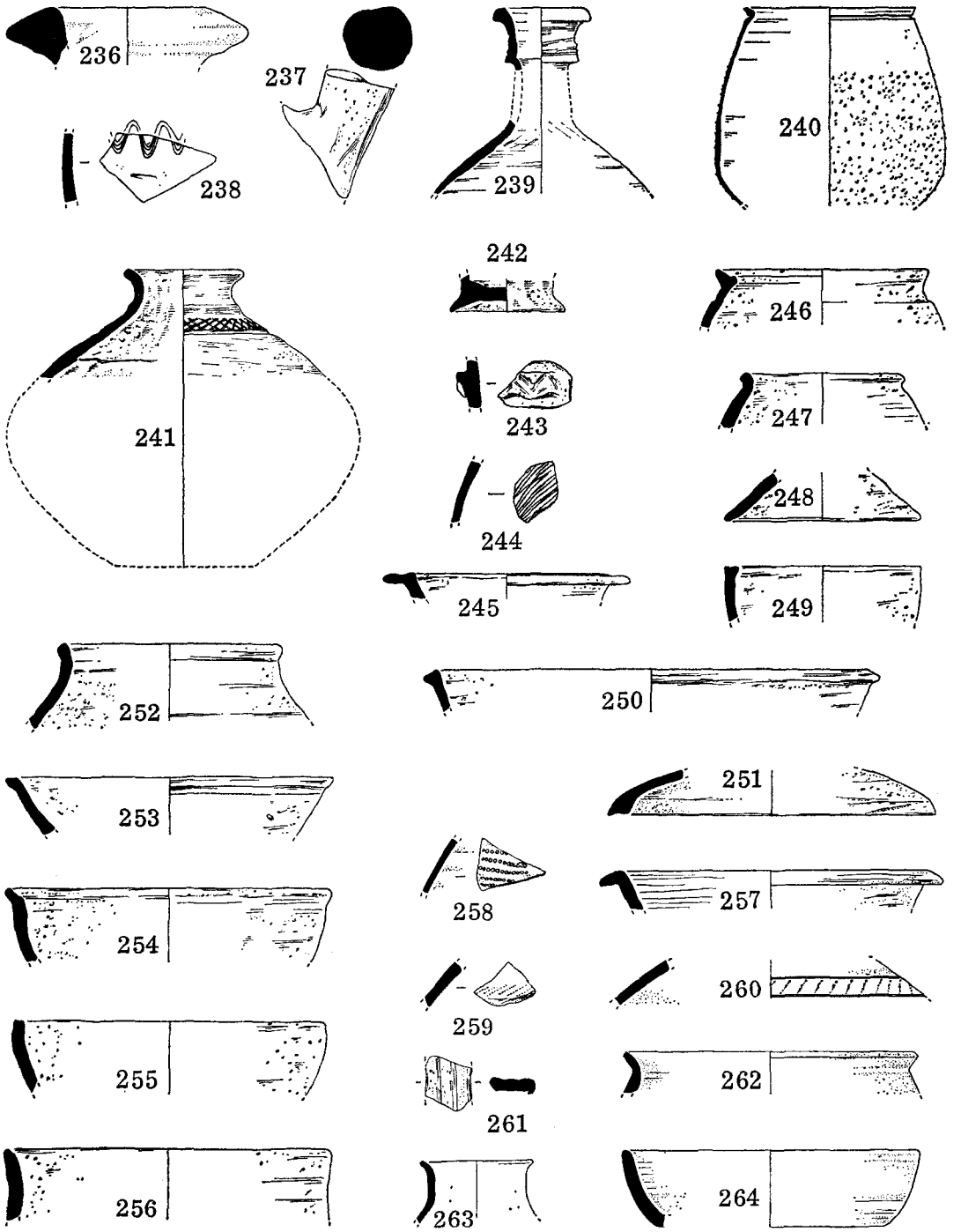

FIG. 35. Romano-British pottery Group VIII, vessels 236-240; Group IX, vessels 241-264.¼.

261 ? Flagon handle with 3 reeds. Hard light blue-grey coarsely sandy. (6 RB).

262 Jar; light brownish grey sandy with blue-grey core. (1 RB).

263 Beaker mouth; hard fine smooth blue-grey with some coarse sand filler; brownish grey surfaces. (6 RB).

264 Bowl; grey-brown sandy with dark grey core; black reduced or slipped surfaces. (1 RB).

265 Jar with lightly combed girth decorated with paired diagonal lines (cf. 101 above). Hard light grey micaceous sandy; darker grey/sooty reduced surfaces. (1 RB).

266 Platter with stepped int. profile; hard fine blue-grey, some coarse sand filler. (1 US).

267 Bowl with groove/bead rim; light grey sandy. (6 RB).

268 Narrow-necked jar; hard buff micaceous sandy with blue/grey core; grey slipped surface. (1 RB).

269 Bowl; hard grey-white sandy with coarse sand filler; grey surfaces. (1 RB).

270 Handled lid; hard dark grey rather coarsely sandy with larger calcined flint and organic inclusions; surfaces reduced brownish dark grey. (1 US).

271 Jar with grooved neck, latticed shoulder and incised wavy line on girth. Hard smooth blue-grey micaceous with dull red sandwich layer beneath int. surface; sandy filler and black inclusions. Burnished lattice between burnished lines around shoulder. (1 US), cf. Angmering 1938 (17)—ascribing a long mid 1st to mid 2nd range for the form.

272 Everted-rimmed jar with groove inside rim and below neck; latticed shoulder. Light brownish grey micaceous finely sandy; surfaces reduced dark grey, wheel burnished ext. (1 US).

273 Neck of flask or bottle; brittle greyish white very finely sandy; grey reduced surfaces. (6 RB).

274 Dish in grey sandy fabric. (6 RB).

275 Wide-shouldered jar; brownish grey slightly micaceous sandy; dull red core and black surfaces. (6 RB? 1st century).

276 Everted-rimmed jar with grooves on shoulder; perhaps a carinated form. Fabric as 54 above, with rather coarse sand filler firing to a ' pimply ' black reduced surface. ? 1st century (1 RB).

Not illustrated. Rilled base/body of jar; fabric and finish as 276. (1 US).

277 Jar with 3 reeds on outside of out-turned rim. Hard dark grey sandy, light brownish grey beneath the black reduced surfaces. (1 US).

278 ? Bowl with inturned rim; full reddish brown micaceous sandy; black reduced surfaces. (6 US).

279, 280 Flanged bowls with shallow grooves above and underneath flanges; probably deep forms with narrow bases. 279 (5 RB) tough black sandy with large ironstone inclusions; 280 (6 RB) grey sandy micaceous, with black reduced surfaces. ? late 2nd or 3rd centuries; cf. Fishbourne (356); West Blatchington (Plate v, 13).

281 Pie dish with faintly burnished diagonal decoration; friable black sandy, reddish brown core; well smoothed black surfaces. (1 US).

282 Pitcher neck; very hard light grey sandy, smoothed surfaces. (6 RB).

283 Pitcher with overturned rim; handle flush to mouth. Friable pink sandy, white core. (6 RB).

284 Flagon with divided rim; hard fine buff with rough fracture. (1 US). Generally late 1st to early 2nd century at Fishbourne (114.1 297).

285 Flagon with scar of ? two-reeded handle; friable ' chalky ' white sandy with an ironstone inclusion. Residual in the cremation urn of Cremation 1 (Site 1).

286 Colour-coated vessel with ? applied circular decoration; smooth 'chalky' cream, with black slipped surfaces. (6 RB). Possibly a post-Antonine sherd from a New Forest or Nene Valley source.

287 Rough cast beaker with cornice rim; brittle fine smooth cream wih thin reddish black slip (1 US). A Nene Valley product? Such colour-coated wares were not very common at Newhaven; their relative scarcity has also been noticed in the surface finds from *Newhaven Castle Hill* (p. 292).

288 Rim of a 3rd-4th century colour-coated bulbous beaker; soft fine orange ' chalky ' with some sandy filler; very slightly micaceous, surfaces lost. (6 US.) Probably Oxford ware (see C. Young, ' The Pottery Industry in the Oxford Region ' in A. P. Detsicas ed. *Current Research in Romano-British Coarse Pottery* (1973) fig. 325).

289 The following was contributed by K. Hartley. A badly weathered fragment of mortarium in pinkish brown fabric with paler surfaces; the fabric contains much red-brown and possibly quartz grits. Perhaps from the same workshop and of the same date as 291 etc.

290 The following was contributed by K. Hartley. Two fragments from a mortarium in slightly brownish buff fabric with thick grey core and grey and white (flint ?), and red brown trituration grit. Slightly burnt. The form points to manufacture within the period A.D. 140-250. See 291 for other comments (6 RB).

291 The following was contributed by K. Hartley. Two fragments from a mortarium in orange-brown fabric with thick grey core. The fabric is heavily tempered with tiny white and grey (flint ?) and red-brown grit. The abundant trituration grit is composed of uniformly small grits of the same type. The form and fabric of this, almost miniature mortarium (diameter *c.* 20cm.) are entirely new to me, and as there are at least two others in similar fabric in this small group (232, 290) I would certainly expect them to be of fairly local manufacture, probably from the same workshop. They could certainly not be earlier than A.D. 140 and are probably later than A.D. 150, indeed they would not be out of place in the first half of the third century. (6 M).

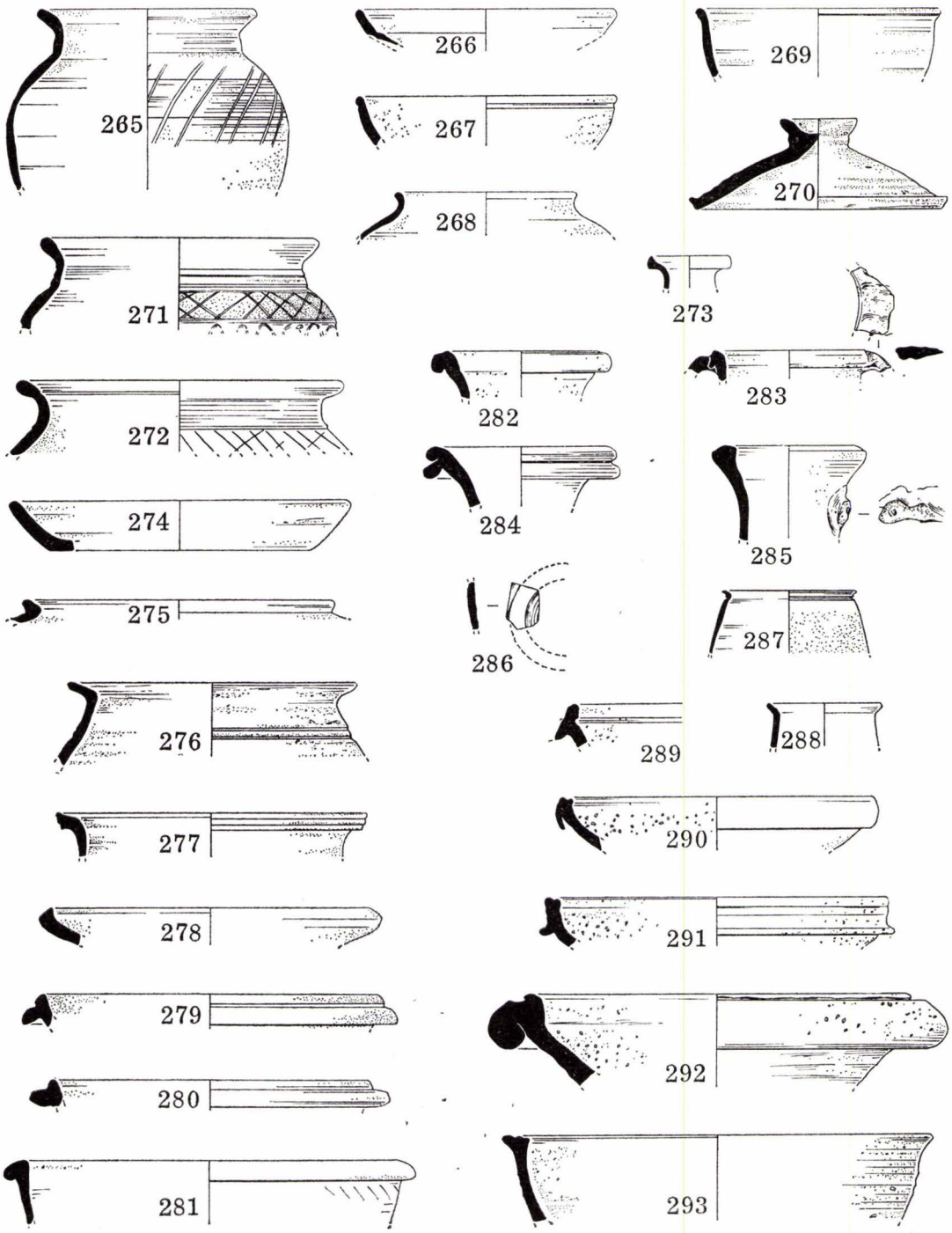

FIG. 36. Romano-British pottery Group IX, vessels 265-293.$\frac{1}{4}$.

292 The following was contributed by K. Hartley. A mortarium fragment in fine-textured yellowish cream fabric tempered with fine grit and with small grey flint grits on the flange, which shows slight superficial burning. A generally similar mortarium was found in a pit at Richborough (J. P. Bushe-Fox, Richborough IV, Pl. XCV, No. 500), dated to A.D. 90-125. This fabric could have been produced in southern England or Gallia Belgica but the almost concave ledge behind the bead is reminiscent of mortaria made in Gallia Belgica, and on balance this origin is the more likely. I would expect this mortarium to be early 2nd rather than 1st century in date.

293 Bowl with reeding on top of rim. Rather soft ' chalky ' flesh-coloured with grey core; sand filler. (1 US).

Not illustrated. Body sherds of a thinly made amphora; soft fine dull red with bright red core. (6 F3 post packing).

Group ix, Summary:

The bulk of the material does not appear to differ very greatly from Groups i-viii. Although no features of this date were recognised, some *post-Antonine* sherds do occur (e.g. 279-80), 288, ? mortaria), but only in very small quantity. Particularly striking is the near absence of third-fourth century colour coated wares, whether from Oxford, New Forest, or Sussex sources, although they are common nearby at Bishopstone. A lack of late R-B pottery was also noted at Newhaven Castle Hill.

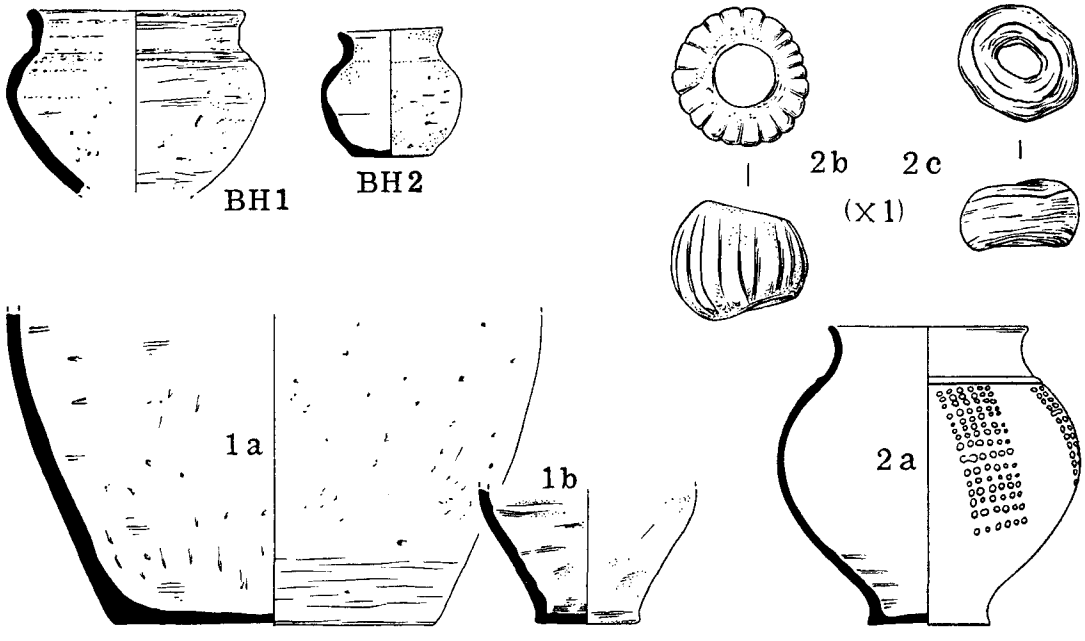

FIG. 37. Romano-British pottery vessels B.H. 1 and 2, found in 1962 on Site 1 and Cremations 1 and 2 also from Site 1. 2b and 2c are beads from vessel 2a, vessels $\frac{1}{4}$; beads $^1/_1$

The Cremation vessels (Figure 37)

Cremation 1. Just north of the outside wall of Structure V (see fig. 16), a large cremation urn and a small subsidiary vessel of which only the bases survived the Post-Medieval disturbance.

Fig. 37 1a. Large CJF jar with plain base, truncated at girth. Handmade and unusually soft and friable, liberally filled with chalk grog, flint and organic particles. Grey interior dull red brown to black exterior.
Fig. 37 1b. Truncated plain subsidiary jar; blue-grey rather micaceous, buff interior and dark grey reduced exterior. Roughly ? wheelmade vertically smoothed exterior.
Cremation 2. 1.4m. from the above outside Structure V (see fig. 16).
Fig. 37 2a. A single vessel containing cremation and beads. Poppyhead jar with cordon below neck in blue grey sand fabric. Decorated with panels of barbotine dots. Much abraded round its girth and holed in one place in antiquity. Probably a Highgate product.

1962 Find. Two vessels found on Site 1 in 1962 are also likely to have contained cremations originally. These finds were sent to Barbican House Museum, Lewes, where they are accessed as BH.63/47.

BH 1. Small grey black handmade CJF jar with sooted burnished exterior. Low cordon below an upright neck and rim. Approximately half the vessel is represented as freshly broken joining sherds. The presumption must be that it was intact before discovery.

BH 2. Small globular subsidiary vessel, complete. Burnished grey sandy with blue-grey surfaces, originally black slipped exterior. Rather micaceous with larger black flint and organic inclusions, some plucked out on the wheel. Rather roughly thrown, being lopsided and heavy for its size.

None of the cremation vessels can be closely dated, but all are consistent with the first or second century A.D. suggested for the rest of the site. It was noted above that Cremation 1 appeared to predate the Antonine destruction of Structure V.

The Samian ware (Figure 38). By A. P. Detsicas, M.A., F.S.A.

The large majority of the material submitted for reporting was of Central Gaulish origin, with sherds representing most of the standard forms; there were also a few sherds of East Gaulish provenance as well as some manufactured in South Gaulish factories, though in the case of the latter none of the early diagnostic forms were represented, except for no. 1 which survived in association with Central and East Gaulish sherds.

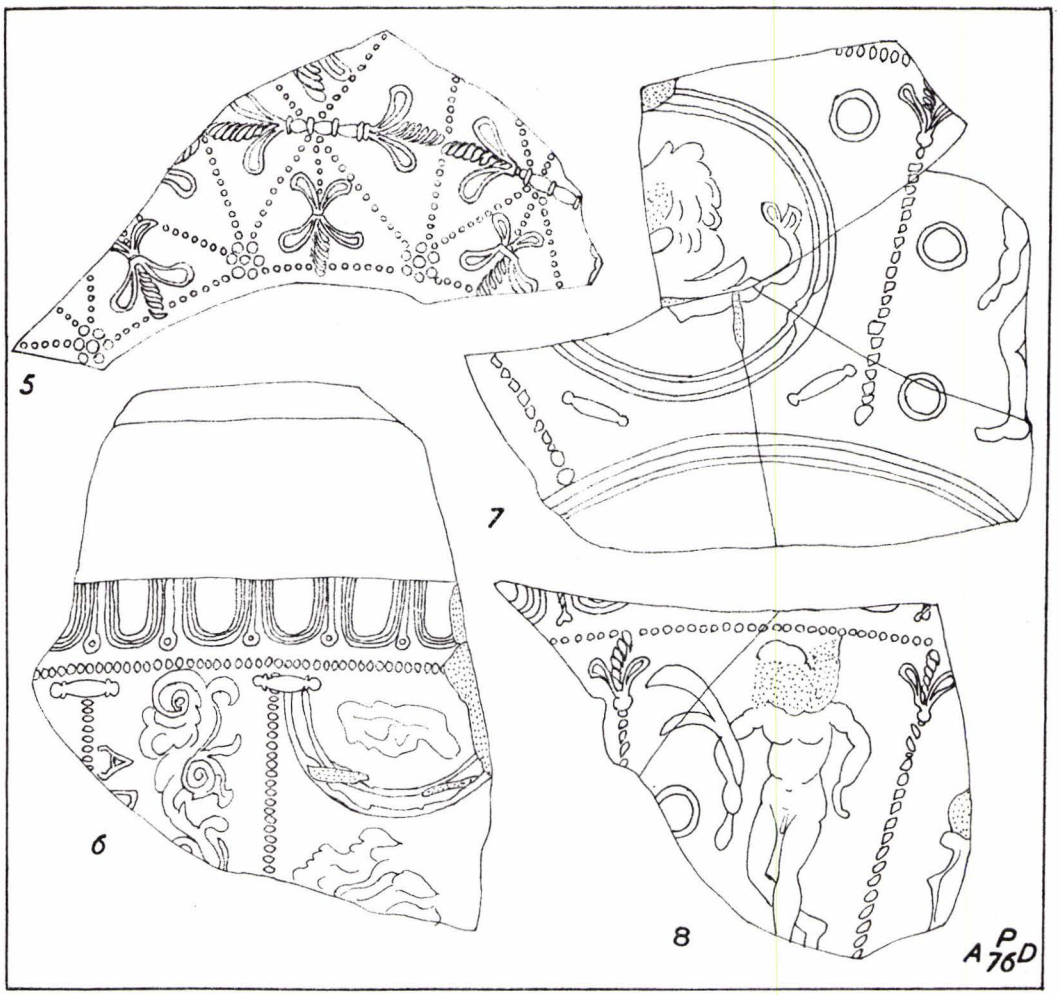

FIG. 38. Samian Ware 1/1

On the basis of this material, it is clear that, although samian was reaching the site in very small quantities in late-Flavian times, most samian imports took place in the course of the second century A.D.

1. Form 27, South Gaulish, stamped MMOR( )M, almost certainly MEMORISM. Date: *c.* A.D. 70-100. (Site 6; ditch layer 3).
2. Form 31, Central Gaulish, stamped ADVOCISIO. Date: *c.* A.D. 160-190. (Site 6; ditch layer 1).
3. Form 31, Central Gaulish, stamped RITOGE(NI), very worn. Date: *c.* A.D. 155-175. (Site 1; north ditch layer 1).
4. Form 33, Central Gaulish, stamped REG( ), probably REGINI·M. Date: *c.* A.D. 100-140. (Site 1; Roman ground surface).

The large majority of decorated sherds were very fragmentary and badly worn, and only a few sherds are here illustrated.

5. Form 37, Central Gaulish, in the style of DRVSVS I (Potter X-3),[1] with a characteristic panel design of St. Andrew's Crosses composed of bead-rows, astragali,[2] cordate leaves[3] and small double leaves;[4] the junctions of the bead-row borders are masked by this potter's seven-beaded rosette.[5] Date: *c.* A.D. 100-130. (Site 6; ditch layer 3).
6. Form 37, Central Gaulish, by ADVOCISVS, with a remnant, AD( ), of his stamp and his ovolo no. 2[6] over a bead-row border. The decoration, in panels demarcated by bead-row borders terminating in astragali, contains a floral scroll[7] and, in the panel to its right, a double-ringed half-medallion and two figure-types which are too squashed for positive identification. Date: *c.* A.D. 160-190. (Site 6; unstratified).

7 and 8. Form 37, Central Gaulish, in the style of LAXTVCISSA. Several sherds from this bowl were recovered, but the remainder do not add anything more to the scheme of decoration than the two pieces illustrated. The decoration, below this potter's ovolo no. 1[8] is divided by bead-row borders ending in cordate leaves[9] and shows, within one panel, a double-ringed medallion with Sea-horse (D.33=0.33),[10] astragali[11] and plain-rings;[12] on another sherd, within a narrow panel, Apollo (D.55=0.92), as on a stamped sherd from Leicester.[13] Date: *c.* A.D. 150-180. (Site 6: ditch layer 1).

The Amphorae by D. P. S. Peacock, BSc., Ph.D.

Twelve sherds were examined; they represent globular oil amphorae made in Southern Spain between Cordoba and Seville. There was one rim sherd from a globular, Dressel 20, amphora of an unusually heavy type. All the fragments were from the enclosure ditch on Site 6; Layer 1 produced one body sherd, Layer 2, five sherds including the rim, Layer 3, two sherds, and Layer 4, four sherds. A number of other fragments noted in the pottery report above, as, for example, the body sherds in the post seating in Structure V (fig. 16), appeared to the excavator identical to the above, but were not examined by the writer.

The glass vessels by D. Charlesworth, M.A., F.S.A.

Vessel I Fig. 39.1. Fragments of a hollow tubular rimmed bowl in yellowish green glass. The metal is quite unweathered. The vessel is a long-lived type, illustrated in wall painting at Pompeii and the Boscoseale villa, and found at Verulamium, for instance, in contexts ranging from 75-410 A.D., but mainly second century A.D.[14] Site 6, ditch, Layer 3.

Vessel II Ribbed fragment in greenish glass. The shape of the vessel cannot be determined. First to second century A.D. Site 6, Roman ground surface.

Vessel III Small fragment of a square-bodied bottle or flask. First to third century A.D. It could be a ' Mercury ' flask rather than the more common square bottle. Site 6, Roman ground surface.

Vessel IV Fragment of a large square-bodied bottle *c.* 60-130 A.D. Site 6, Roman ground surface.

Vessel V Fragment of a large square-bodied bottle *c.* 60-130 A.D. Site 6, ditch, Layer 1.

Vessel VI Fragment of a large square-bodied bottle *c.* 60-130 A.D. Corner of the moulded base marking with a circle remains. Site 6, ditch, Layer 1.

Vessel VII As VI above. Site 1, Roman ground surface.

Vessel VIII As IV above. Site 1, gully in Structure V.

Window Glass. (Figure 39.2).

Thirteen fragments of window glass had an average thickness of 3mm. They were found on the Romano-British ground surface and in the ditch, Layer 1. All were green or bluish green of the matt/glossy type consistent with a first or second century date.[15] Several fused lumps of window glass suggest the destruction of a building by fire, either accidentally or, as can be shown in the case of Structure V, during systematic demolition.

1 J. A. Stanfield and Grace Simpson, *Central Gaulish potters*, London, (1958), Fig. 4, p. 13 (hereafter abbreviated to *C.G.P.*); A. P. Detsicas, *The anonymous Central Gaulish potter known as X-3 and his connections*, Brussels, 1963.
2 Detsicas, *op. cit.*, Fig. 2, p. 26, no. 15.
3 *C.G.P.*, Fig. 4, p. 13, no. 8; *Detsicas, op. cit.*, Fig. 2, p. 26. no. 8.
4 Detsicas, *op. cit.*, Fig. 2, p. 26, no. 12.
5 *Ibid.*, no. 15.
6 *C.G.P.*, Fig. 33, p. 205.
7 This floral scroll occurs on stamped sherds from Corbridge (unpublished), Caerwent (*C.G.P.*, Pl. 112/12) and other sites.
8 *C.G.P.*, Fig. 27, p. 184.
9 *Ibid.*, no. 5.
10 J. Déchelette, *Les vases céramiques ornés de la Gaule romaine*, Paris, 1904 (abbreviated to D.); F. Oswald, *Index of Figure-types on terra sigillata*, Liverpool, 1936-7 (abbreviated to O).
11 *C.G.P.*, Fig. 27, p. 184, no. 3.
12 *Ibid.*, no. 7.
13 *C.G.P.*, Pl. 10 0/24.
14 S. S. Frere, *Verulamium Excavations*, vol. 1 (1972), p. 199.
15 D. B. Harden, ' Domestic window glass, Roman, Saxon and Medieval,' in E. M. Jope ed. *Studies in Building History* (1961), pp. 39-63.

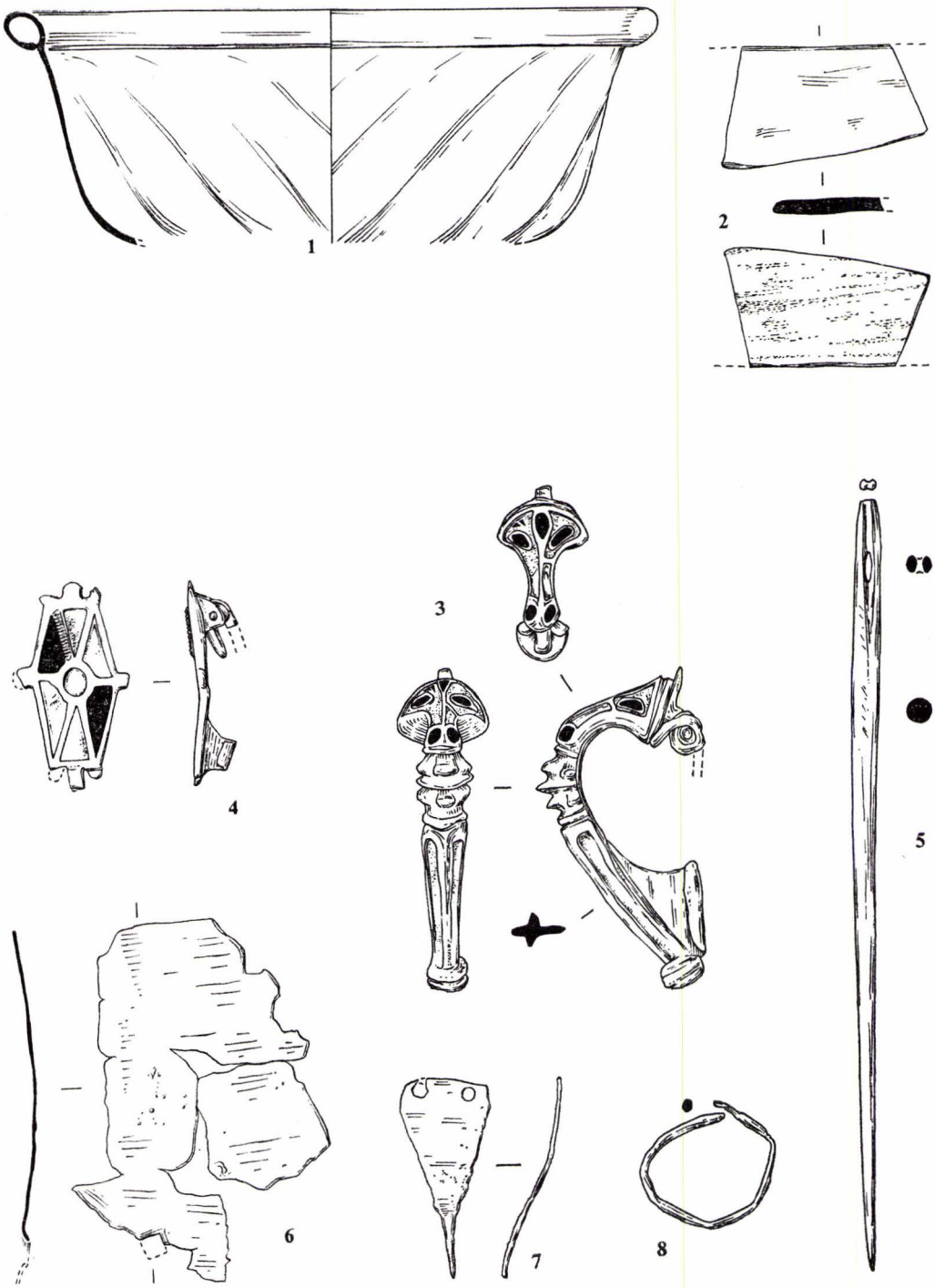

FIG. 39. The glass, 1-2 and small bronze objects, 3-8. Glass, ½; bronze 1/1

THE SMALL OBJECTS

Coins: 1. Three-fifths of a broken bronze of Gallienus (252-268 A.D.) obv. (G)allienus PF A (ug); bust radiate facing right. rev. badly corroded. Unstratified in Post-Medieval soil Site 6.
2. Bronze of Antoninus Pius (138-161 A.D.) obv. Antoninus Aug-; head laureate. rev. AS Aug. draped female figure standing left with winged caduceus and cornucopiae Sc. Site 5, ditch, Layer 1.
3. Roman bronze coin, very worn and illegible. Site 6, ditch, Layer 1.

Bronze

Fig. 39.3. Mr. M. R. Hull has contributed, the following:
" A Backworth brooch of Collingwood's type RIV, the foot is missing. The spring had four turns and there is a spike on the head to hold a loose loop and shackle which are now missing. The head is enamelled with the pattern of three pointed oval leaves on a red ground, and there are two round blue spots immediately above the button. The leg was probably enamelled. The trefoil pattern is paralled by one from London which also has the two round spots.[1] The pattern also occurs at Charterhouse on Mendip; Tibberton, Glos.; Traprain Law;[2] Charlton Camp in Greenwich;[3] Brough; Mildenhall; Pakenham and Scawly, Lincs. None of the parallels have any dating evidence, but the brooch is probably late first or early second century A.D. Found on Site 1, in a beamslot of Structure IV, thus it belongs to the destruction level of that building."
Fig. 39.4. A six-sided flat brooch divided into seven compartments, a central one is circular, the others are in segments of the hexagon. Two compartments contain dark blue/green enamel, two others have traces of a red paste. One of the margins between segments of enamel is overlain by a thin moulded bronze strip. At the corners and end were flat circular lugs or trefoil terminals, now broken. The back is flat with a catchplate and spring held between two lugs. No exact parallels have been found, the nearest are lozenge shaped brooches at Nor'Nour[4] etc. From top fill of gully in Structure V, contemporary with the destruction of that building.
Fig. 39.5. A large needle with broken point, possibly a netting needle. Site, 1, Layer 1 of the enclosure ditch.
Fig. 39.6. Thin bronze sheet with two sides at right-angles. Encrustations on surface appear to represent bronze nails which probably secured the sheet to a wooden box. Metallic salts of bronze from the artifact have preserved a small area of fiberous material which has been identified by Miss C. R. Cartwright as wood. From Site 6 post hole 34.
Fig. 39.7. Isosceles triangle-shaped bronze object with two slightly concave sides meeting at a sharp point. The base is perforated by two holes. A somewhat similar object from North Street, Chichester, is described as ' possibly a fitting for leather work.'[5] Site 5, Roman ground surface.
Fig. 39.8. Thin bronze wire bent in a circle like a crude ring. Site 1. Gully in Structure V.
Not illustrated.
(a) A 2cm. length of lead wire, thickness 2mm. Site 1, ditch, Layer 1.
(b) A piece of folded lead sheeting. Site 6, ditch, Layer 1.
(c) A fused lump of lead 6.5 x 5cm. Site 1, ditch Layer 1.
(d) Two blobs of lead from Site 1, ditch, Layer 1.
(e) An offcut of lead, probably a piece of piping, weight 43.86 grams. Site 1, post hole 70.

Bone

Fig. 40.2. A well polished, plain bone pin with rounded end broken near the point. Site 6, ditch, Layer 1.
Fig. 40.3. The undecorated shaft of a bone pin, length 2.8cm. Site 1, ditch, Layer 1.
Fig. 40.4. A neatly worked and polished oval of long bone which has broken where it became constricted as a ? handle, probably a spatula.[6]

Clay

Fig. 44.1. The greater part of a triangular clay loomweight with equilateral sides of *c.* 15cm. and thickness 5cm. One corner has broken across a perforation from which the weight would have been suspended. The other preserved corner is without perforation. This type of loomweight is generally found in Iron Age contexts.[7] This find from a first century level is more likely to be an instance[8] of pre-Roman traditions surviving on this rural site, rather than a rubbish survival from Iron Age occupation of which we have no definite traces. Site 6, ditch, Layer 3.

Beads

Fig. 40.5. Small clear glass annular bead. Site 1, Roman ground surface.
Fig. 40.6. Segment of a blue melon bead. Site 6, Roman ground surface.
Fig. 37.2b. Melon bead with slighly glassy finish, rather eroded on girth. Site 1, Cremation II.
Fig. 37.2c. Annular dark green bead with streaks of white. Site 1, Cremation II.

1 R. E. M. Wheeler, *London in Roman times* (1930), London Museum Catalogues, No. 3, Fig. 28, 30.
2 J. Curle, ' An inventory of objects of Roman origin in Scotland,' *Proc. Society Antiquaries Scotland*, vol. 66 (1931-2), Fig. 31, No. 5.
3 F. C. Elliston Erwood, ' The Earthworks at Charlton, London, S.E.,' *Journal of the Archaeological Association*, vol. 72 (1916), Fig. 17.1.
4 D. Dudley, ' Excavations on Nor'Nour in the Isles of Scilly 1962-6,' *Archaeological Journal*, vol. 124 (1967), pp. 1-64.
5 K. M. E. Murray and B. W. Cunliffe, ' Excavations at a site in North Street, Chichester 1958-9,' *S.A.C.*, vol. 100 (1962), p. 109, No. 8.
6 See A. C. Brodribb, A. R. Hands and D. R. Walker, *Excavations at Shakenoak Farm, near Wilcote, Oxfordshire: Part III* (1972), Fig. 59.71 and 72.
7 D. W. Harding, *The Iron Age in Lowland Britain* (1974), p. 85, Fig. 21.
8 See the pottery report above.

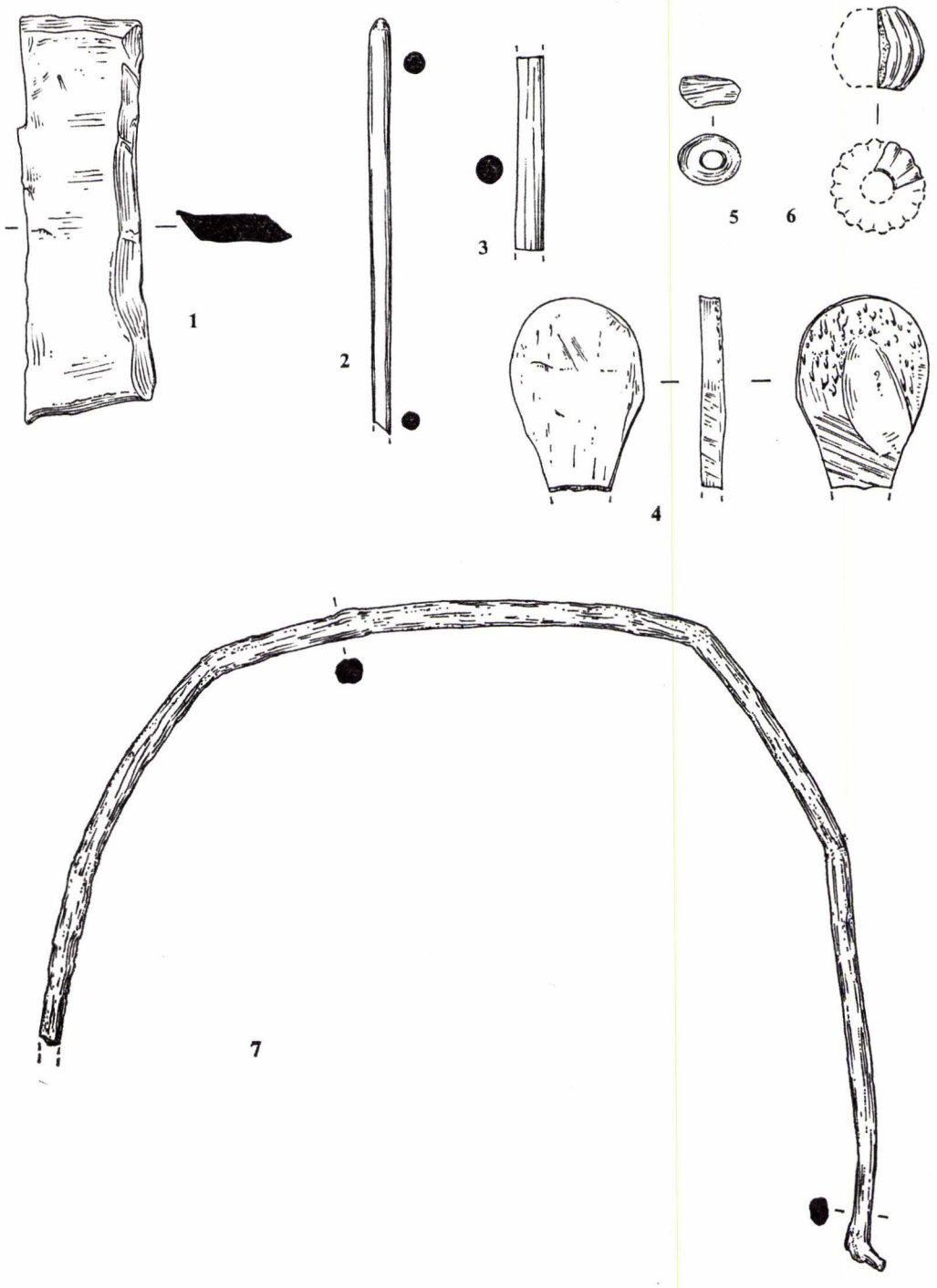

FIG. 40. The small objects; lead, 1; bone, 2-4; beads, 5-6 and iron 7. 1-6, 1/1; 7, 1/2

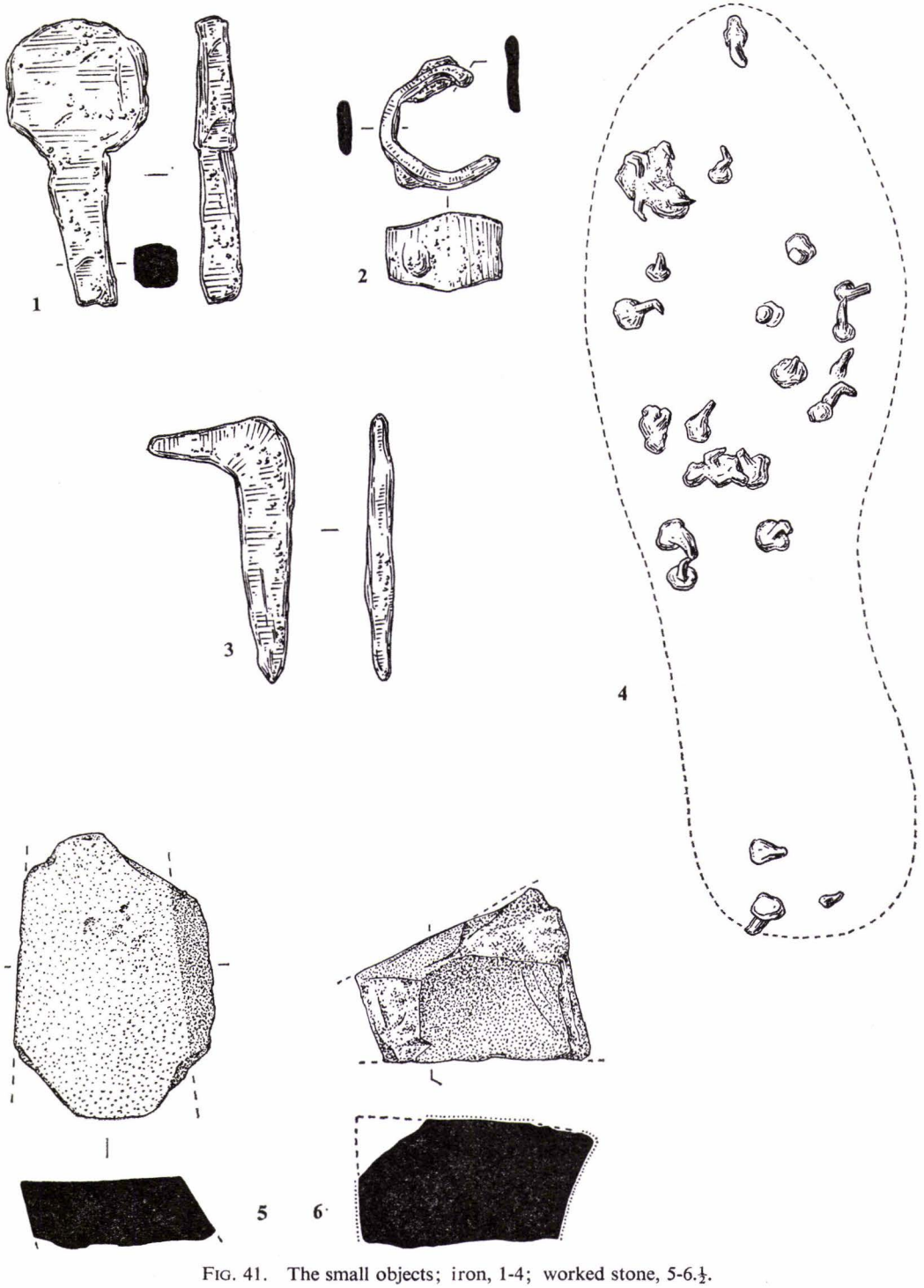

FIG. 41. The small objects; iron, 1-4; worked stone, 5-6.½.

Iron (Figs. 40 and 41)

The excavations produced several hundred pieces of iron, most of which were in very bad condition. The vast majority were iron nails and of the remainder only a few were sufficiently well preserved to permit identification.

Fig. 40.7. Bucket handle made from a bar of iron, 6mm. square, bent in a semi-circle, diameter of bucket 25cm. Terminals bent outwards to attach to body of bucket. Site 5, ditch, Layer 1.

Fig. 41.1. Square bar of iron diameter 1cm. flattened at one end into a rough circle, possibly a lynch pin. Site 1, ditch, Layer 1.

Fig. 41.2. Strip of iron diameter 2cm. and length 8.5cm., folded into two-thirds of a ring radius 1.5cm. Possibly a haft binding from an implement. Site 6, Roman ground surface.

Fig. 41.3. L-shaped hinge staple, ends pointed. Site 5, Roman ground surface.

Fig. 41.4. Thirty hob nails in the rough shape of a heavy boot, lifted in a block of plaster of Paris. Site 5, ditch, Layer 1.

Nails (Fig. 42)

A total of 333 nails were recovered from Romano-British levels, of these 132 were unbroken. On the accompanying histogram the nails are divided into length categories at 5cm. intervals, whole nails, broken nails with heads and shaft fragments are distinguished, as are round and rectangular heads. Above each size category is a drawn sample from that range. Generally the shank is of square cross section, but several nails shorter than 2cm. appear to have a round shank. Four major types were distinguished.

Type 1. Length 0-1.5cm. with a large domed circular head. Thirty of these nails were found in the shape of a shoe, and the use of this type was obviously as hob nails.

Type 2. Length 1-2cm. Slightly smaller heads and longer shank than Type 1, in some cases with a flatter head. Those with domed heads are likely to have been used in furniture or upholstery.

Type 3. Length 2.5-8cm., includes the majority of nails. Generally these have round flat heads with occasional rectangular heads at the larger end of the size range. Such nails would be used for hanging tiles, joining small timbers and the fixing of fittings.

Type 4. Length 8-11cm., large round or rectangular heads, used presumably for the joining of main constructional timbers; only three were found suggesting that the type was little used at Newhaven.

Iron forging took place on the site and nails are likely to have been made for home use.

Ironworking Refuse. (Table 3) by Henry Cleere, B.A., F.S.A.

The following materials were identified:

A Tap-slag: a dense blue-black material with contraction ripple marks on one surface (the upper).
B Furnace lining: hard-baked clay, with adherent vesicular slag.
C Furnace bottom: vesicular slag with inclusions of charcoal.
D Furnace clay: hard-baked clay with green vitrified surface (probably part of stopping of arch of bloomery furnace).
E Forging slag: Highly vesicular slag, light in colour.

The occurrence of these materials in the seven examples examined is shown below:

Sample		Material				
		A	B	C	D	E
1	Site 6, ditch, Layer 1	x	x	x	x	x
2	Site 1, ditch, Layer 2	x				x
3	Site 6, R-B ground surface					x
4	Site 1, ditch, Layer 1		x			
5	Site 1, ditch, Layer 1		x			x
6	Site 1, R-B ploughmark	x				
7	Site 1, Beamslot of Structure IV			x		

Discussion

The presence of all these materials on one site would suggest that iron smelting and working were both carried out there. However, the amount of tap slag, which results from the smelting operation in a bloomery furnace, was small—only six pieces in total. All the other materials (with the possible exception of D) could result from normal smithing operations on iron smelted elsewhere. This very small scatter of tap slag cannot be taken as evidence of iron smelting having been carried out on the site. The amount produced by the process is considerable, and it is found in profusion on Wealden sites of the period (e.g. Bardown;[1] Minepit Wood;[2] Pippingford Park;[3] Broadfields, Crawley[4]).

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

2 J. H. Money, 'Iron Age and Romano-British iron-working site in Minepit Wood, Rotherfield, Sussex,' *Historical Metallurgy*, vol. 8, No. 1 (1974), pp. 1-20.

3 C. F. Tebbutt and H. Cleere, 'A Romano-British bloomery at Pippingford, Hartfield,' *S.A.C.* vol. 111 (1973), pp. 27-40.

4 J. Gibson-Hill, personal communication.

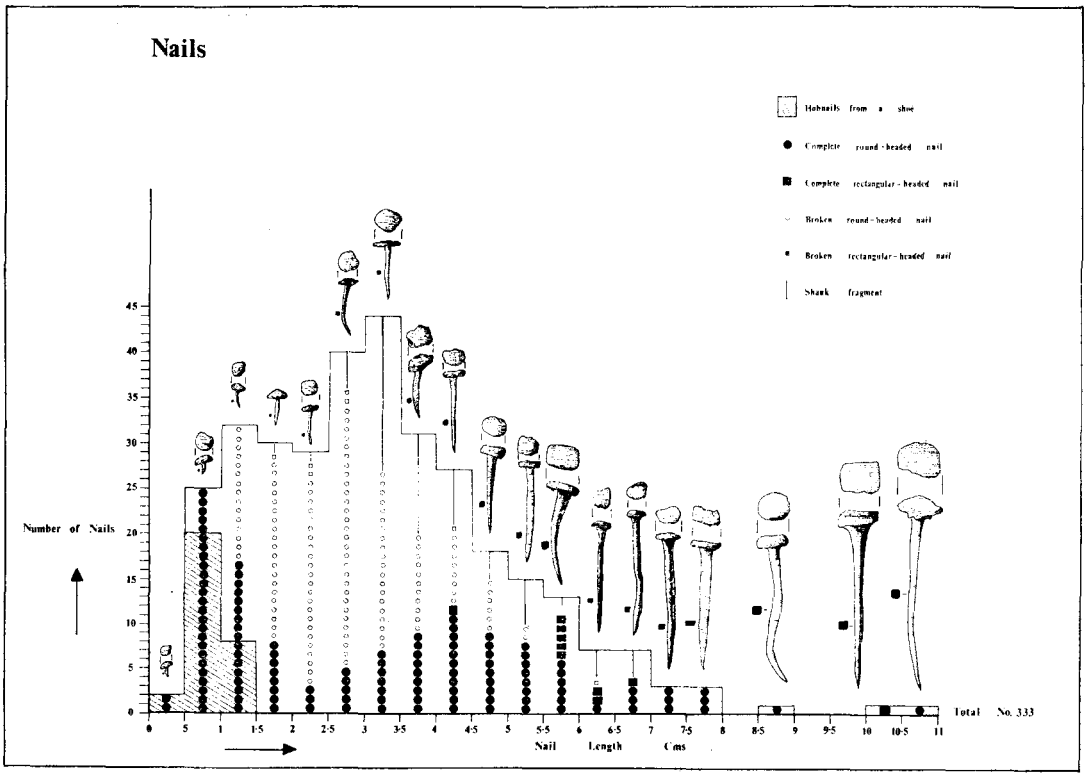

FIG. 42. The length and shape of iron nails expressed as a histogram at length intervals of 0.5 cm. An example from each size category is illustrated

It would seem necessary to seek another explanation for the presence of this material. This may be found in seeking the origin of the iron ore, the smelting of which would have produced this slag. Most of the iron produced in the Weald during the Roman period was smelted from the ores of the Wadhurst Clay, and to a lesser extent from the Weald Clay; unfortunately, there is no deposit of either of these formations in the vicinity of Newhaven. However, there is an outlier of the Woolwich Beds at Castle Hill, only 1km. from the site. Ironstone occurs in this formation as bands of nodules or thin beds,[1] which are still visible on Castle Hill. It would not be unreasonable therefore to postulate that this ore was smelted by the occupants of the Newhaven site and transported a relatively short distance in the form of raw or worked blooms for further working up into artefacts. It would seem almost inevitable that a little of the omnipresent tap slag from the smelting site would have been brought to the habitation site.

Conclusion

On the basis of the specimens examined, it seems likely that iron working from raw or worked blooms was carried out at Newhaven. It is not impossible that the iron ore from the Woolwich Beds in the Castle Hill area was smelted at Newhaven, but analogies with other ironmaking sites in the Weald make it more probable that the ore was smelted *in situ*.

1 Institute of Geological Sciences, *Geology of the country around Chatham* (1954), p. 81.

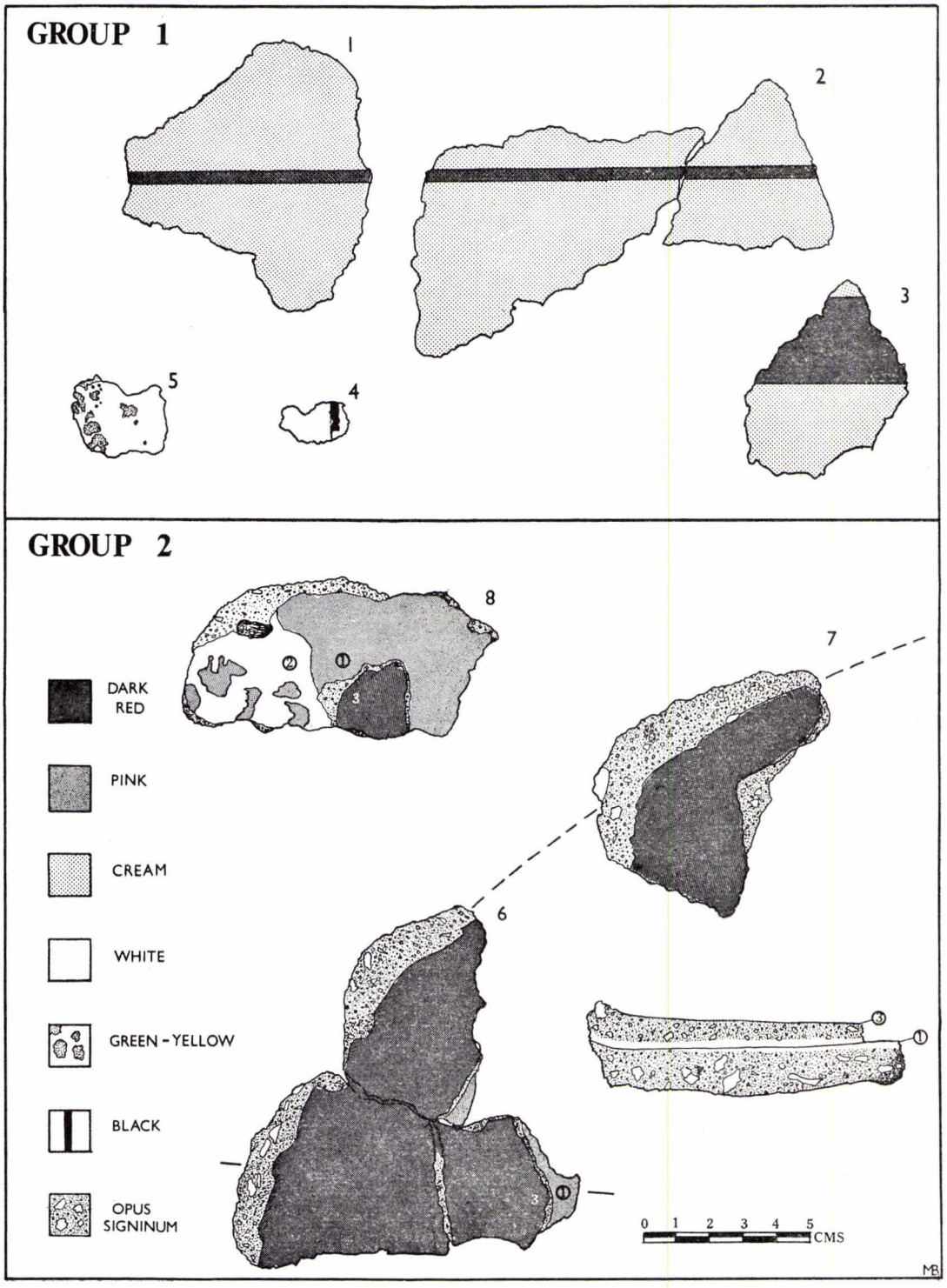

FIG. 43. Painted wall plaster of Groups 1 and 2.¼.

THE BUILDING MATERIALS

Wall plaster and cement (Figure 43)

This was dumped in the top layer of the enclosure ditch and confined to two areas which produced distinct groups derived from different parts of the building.

Group I was found at a point where the contractors' trenches for Southway exposed a section of the ditch (Fig. 2). Twenty-two fragments of wall plaster formed a total surface area of 324sq. cm. Fifteen fragments had a plain cream/white plaster surface.

Fig. 43.1 and 2. Two fragments from the same scheme—a ground of cream on which was a dark red line of thickness 4mm.

Fig. 43.3. A cream ground against which is a dark red line 2.6cm. thick. Fragments 1-3 have signs of an earlier layer of plaster, covered by 5mm. of plaster upon which the decoration was made. No paint was found on the earlier surface.

Fig. 43.4. A small fragment of plaster with a white ground on which is a black line.

Fig. 43.5. A white ground with splashes of green/yellow paint. Probably a crude imitation of marble, such as was frequently used for the decoration of dados.[1]

One fragment (not illustrated) of diameter 2cm. covered with a dark red paint.

Associated with plaster of Group I were about 100 fragments of white cement up to 15cm. in diameter. One fragment with an irregular flat surface probably came from a floor. Many fragments of wall plaster and cement had impressions of a wooden superstructure. Flat surfaces showed where plaster had lain against squared timbers. Impressions of thin laths of wood had a clear twist, and some fragments had impressions of laths crossing at right angles. Others had impressions of round poles of diameter 3cm. at 45° to flat surfaces of a timber frame. Group I was from the wall or ceiling of a timber framed building in which the frames were infilled with wattles and laths, strengthened with diagonal poles of round timber. The wooden framework was covered first with cement and then plaster.[2] Decoration consisted of a cream ground with panels outlined by red. Fragments 4 and 5 are distinguished by their white ground and hint at a slightly more elaborate design elsewhere.

Group II. From the northern 5m. of ditch on Site 6. It is distinguished from Group I by quantities of crushed tile included in the mortar. There were 42 painted pieces with a dark red surface coat, which formed a total surface area of 1,600sq. cm.

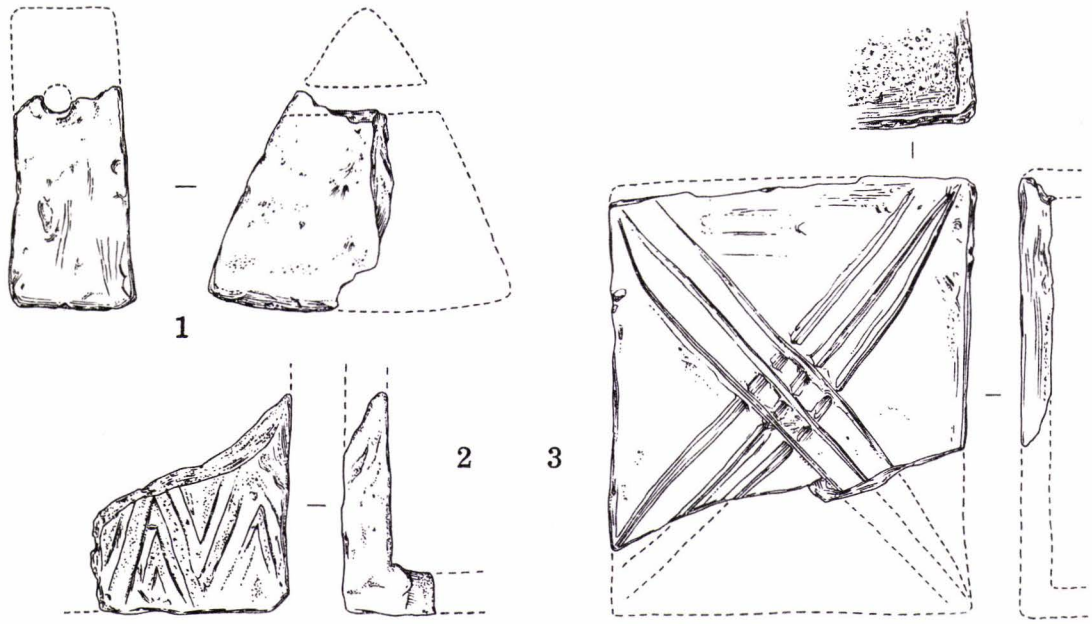

FIG. 44. Objects of clay; triangular loomweight, 1; roller-stamped box tile, 2; incised box tile, 3. ¼.

1 J. Liversidge, *Britain in the Roman Empire* (1968), p. 87.
2 Compare S. S. Frere, *Verulamium Excavations Vol. I*, Fig. 4. Newhaven however has a cement covering to the wattles rather than the more usual clay covering.

Fig. 43.6 and 7. Two fragments with a dark red surface coat (3) covering an earlier surface (1) which was painted pink. A slight raised lip on one side shows where a break has occurred at the angle between horizontal and vertical surfaces. The lip on fragment 6 has a slight curve and the fragments are reconstructed as from a semi-circular area.

Fig. 43.8. A surface layer of dark red paint (3) was removed to reveal an underlying area of white (2) and below that a pink wash. (1) The white may be a deliberate wash or the result of calcium carbonate deposition at the junction between two layers of plaster.

Group 2 included fifteen fragments of cement with a high content of crushed tile and daub, and forty fragments of plain cement with beach shingle. One fragment had impressions of three wooden laths between which plaster had seeped, possibly from a ceiling. Most of Group 2 is *opus signinum* probably from a bath house. Fragments 6 and 7 may come from a small apsidal plunge bath.[1]

Tiles (Fig. 44.2 and 3 and Table 4).

Every fragment of Roman tile, amounting to 652 pieces, was saved and is analysed in Table 4 according to tile type and the context in which it was found. The greatest number (44.9%) are from Layer 1 of the ditch. Layers 2 and 3 only produced 1.9%. The deposition of Layer 1 evidently coincided with demolition of a tiled building. In this layer were 13 incised and 3 roller stamped box tiles, and 64 tiles 4-6.5cm. thick generally used for flooring or pilae.

TABLE 4. Classification and Context of the Roman Tiles

	Medieval Hill Wash	R-B Soil	Ditch 1	Ditch 2	Ditch 3	Str. IV. Beamslot	Posthole 44 Layer 1	Posthole 44 Layer 2	Enclosure Wall	Str. II Cobbled Floor	Posthole 34	Posthole 1	Posthole 12	Beamslot 43	Feature 42	Posthole 6	Posthole 31	Total of Types
Incised Box Tiles	4	123	13	–	–	–	1	–	1	1	–	–	–	–	–	–	–	143
Roller Stamped Box Tiles	–	–	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3
Tegulae	1	32	92	–	1	–	–	1	–	1	1	–	–	–	–	–	–	129
Imbrices	–	13	19	–	2	–	1	–	–	–	–	–	–	–	–	–	–	35
Floor Tiles (4cms. thick) ..	–	4	64	–	–	–	10	4	–	–	–	–	–	–	–	–	1	83
Fragments too small for classification	45	62	102	1	9	3	–	2	1	6	–	10	9	2	3	2	2	259
Total from each context	50	234	293	1	12	3	12	7	2	8	1	10	9	2	3	2	3	652
%	7.67 %	35.9 %	44.93 %	1.99%			9.50%											

1 See G. P. Burstow and A. E. Wilson, ' A Roman bath, Highdown, Sussex,' *S.A.C.* vol. 80 (1939), p. 66, Fig. 3.

Box tiles. Most of the 143 pieces had an incised or combed design, and three were roller stamped; those illustrated are from Layer 1 of the ditch Site 6.
Fig. 44.3. Most of one side of a box tile height 18cm., projected width 20cm.; incised arc design, heavy sooting on interior.
Fig. 44.2. One of three fragments of a roller stamped box tile. The diamond and lattice design is probably of Lowthers' Group 5,[1] but the fragments are too small to assign to a specific die.

Roller stamped flue tiles are generally dated to the first half of the second century A.D. They were in use in the third period bath building at Fishbourne constructed between A.D.130 and 160,[2] and in late first or early second century contexts in the villas at Eastbourne[3] and Angmering.[4] Many of the floor tiles and tegulae had abundant impressions of straw and cereal grains noted in Mr. Arthur's report above.

Geological materials

During excavation all structural stones were planned and where possible provisionally identified. Specimens of these were taken, and where they are of Sussex origin have been identified by comparison with hand specimens collected during field surveys. In this way it was sometimes possible to trace samples to exposures, such exposures are marked on Figure 1. The Newhaven outlier of the Woolwich and Reading Beds was an important source of stone.[5] In the first 3km. of cliff west of the Ouse the beds overlie chalk. Regular cliff falls provide a constant supply of building blocks, which was certainly used in the Roman period since many of the excavated stones from this source are slightly rounded by the sea. Constant erosion means that exposures plotted in Figure 1 would have been somewhat further out in the Romano-British period.

Building stone

Limonite concretions. Nodules of relatively hard clay/marl stone on which a crust of limonite has formed, from Eocene beds that outcrop in the cliff at TQ443000.
Yellow sandstone. A poorly cemented yellow sandstone of Eocene date, 4 samples; outcrops in the cliff between TQ447000 and TQ435999.
Ferruginous sandstone containing Ostrea. The oyster bed of the Woolwich and Reading series; outcrop as above.
Ferruginous Flint Breccia. The basal bed of the Eocene strata where it rests on chalk. In the cliff between TQ449001 and TQ433000.
Chalk. Chalk rock as hard as that from some of the foundations does not appear to outcrop in the immediate vicinity of the site. A hard band of chalk, Melbourne Rock, occurs at the base of the Middle Chalk. One fragment of a conglomerate of chalk pebbles in a ? siliceous matrix is of a type which occurs at the junction between chalk and Eocene strata. A search has not yet revealed exposures in the cliff at Newhaven, but it is abundant east of Seaford Head at TV512975.
Flints. The most abundant building material, generally large and without ferruginous stain. They were probably collected from arable fields on the chalk downs, certainly not from areas capped by Clay-with-Flints or Eocene strata. A small percentage were water rolled flint boulders from the beach.
Upper Greensand. Only one or two fragments.
Lower Greensand. Several rough fragments were used in buildings, but the bulk of specimens were fashioned as rubbers and querns (see below), All 12 specimens appeared to be from the Folkestone Beds.
High Wealden Sandstone. Five specimens probably from the Hastings Beds which outcrop around Isfield and Framfield on the Ouse.
Silicified Sandstone. Several round boulders of ' sarsen ': these are found scattered on the downs.
Quartz in Limonite. Probably an Eocene residual deposit, similar to sarsens: found on the downs and in Clay-with-Flints outcrops.
Silicified Sandstone with Lamellibranchs. Probably from the Hastings Beds.
Tufa. One fragment, a light calcareous evaporite commonly used on Roman sites for voussoir blocks in bath houses. Site 1, ditch, layer 2.
Quartz. A large lump of quartz showing crystals which had grown radially into a cavity. This formation is commonly found in Carboniferous limestones of the Mendips and doubtless elsewhere. It was presumably collected because of its attractive appearance. (Site 6, Romano-British ground surface).
Fine Sandstone with Mica. Unknown origin.
Clay. From the Woolwich and Reading Beds: several lumps in the primary fill of the ditch.

Stone artifacts

Querns. Three segments of rotary querns were all of Lower Greensand. In Layer 1 of the enclosure ditch and in the Romano-British soil on Site 1 were 330 grams of lava. These are clearly comparable to outcrops on the Rhine near Mayen, which were a source of Romano-British querns.[6]
Rubbers. Five pieces of stone had signs of rubbing on one or two faces. One was of Lower Greensand, one of sarsen and three of Hastings Beds sandstone.

1 A. W. G. Lowther, *Roman relief-patterned flue tiles found in Surrey and others of the type found in Southern England*. Research Paper I of Surrey Archaeological Society (not dated).
2 B. W. Cunliffe, *Excavations at Fishbourne Vol. I* (1971), p. 179.
3 T. Sutton, ' The Eastbourne Roman villa,' *S.A.C.* vol. 90 (1951), p. 12.
4 L. Scott, ' The Roman Villa at Angmering,' *S.A.C.* vol. 79 (1938), p. 18, Fig. 10.
5 H. J. O. White, *The geology of the country near Lewes*, Memoirs of the Geological Survey (1926).
6 A. L. F. Rivet, *Town and Country in Roman Britain* (1964), p. 119. Specimens from Newhaven were compared to those from Mayen in the collections of the Institute of Archaeology, London.

Whetstones. No manufactured or traded whetstones were found in Romano-British levels, but six metamorphic pebbles collected from the beach had mica inclusions, and one showed clear signs of use as a sharpener.

Fig. 41.5. Quartz grains loosely cemented in a matrix which includes iron oxide and flecks of mica, possibly from the Hastings Beds. In section the piece is shaped like a parallelogram. Three sides are at angles of 100° and 80°, they are cut and smoothed perhaps for use as a rubber or for some architectural purpose (Site 6, ditch, layer 2).

Fig. 41.6. A fragment of Lower Greensand smoothed on three faces (Site 6, Roman ground surface).

Not illustrated—a highly ferruginous Wealden sandstone from the Hastings Beds with a marked groove where it had been used as a sharpener. (Site 6, ditch, layer 2)

Discussion

Considering that this site was a small rural farm with a short life, it has produced a surprising range of geological materials. Flint was by far the most widely used, accounting for 98.52% of the foundations of Structure V, and 72.29% of demolition debris in the ditch layer 1 on Site 6. Limonite concretions accounted for 26% of the building debris in the top of the enclosure ditch, but only 0.2% in the foundations of Structure V. This implies that limonite concretions were more widely used in the postulated bath house than in Structure V. It may also imply that they were used more above ground level than in the foundations. About 98% of the geological materials used in buildings were probably obtained within a 2km. radius of the site (Fig. 19). Rocks from further afield were irregular, unworked lumps, used randomly in the foundations or as post hole packing in just the same way as flints. Relatively small quantities of stone from several different exposures seem to have arrived at this site. often without any apparent intention to use them in a way different from flints that were available locally. Nearly all of the rocks outcrop within the Ouse basin, some of the material may be ballast discharged at the Ouse mouth by boats whose trade was largely riverine and coastal. Equally, the rocks may reflect journeys to various parts of the Ouse basin by the inhabitants of the site.

THE MEDIEVAL PERIOD

In the Medieval and Early Post-Medieval periods the settlement now called Newhaven went under the name Meeching, an early place-name suggestive of a Saxon origin.[1] The settlement is not recorded in the Domesday Book, but a church, mill and four acres of land at ' Mecinges ' were among the properties granted by William de Warenne c. 1095 as endowment to the Priory of St. Pancras at Lewes.[2] Archaeological evidence of Saxon occupation in the parish is restricted to four sherds of pottery from Castle Hill,[3] and a few rather doubtful small sherds from the present excavation. The Medieval settlement and its possible Saxon predecessor was presumably in the vicinity of the parish church of St. Michael, the earliest parts of which are of twelfth century date.[4] The church is on the hillside at 37m. O.D., 500m. west of the site of the present excavation. The stratigraphy left no doubt that the excavations were within one of the intensely cultivated fields of Meeching.

Site 3

The only two Medieval features found were pits cut into the alluvium of the Ouse flood plain on Site 3. They were noted in a contractor's foundation trench 10m. west of the Chapel Street subway under Southway (Fig. 2); both had been truncated by Victorian buildings.

Medieval Feature I

A shallow scoop in the alluvium 20cm. deep and 1.80m. in diameter filled with humus rich, clayey soil, charcoal, daub, oyster shells, a sheep's molar and a residual sherd of Roman pottery. Fifty-nine fragments of Medieval pottery included: 46 body sherds from coarse ware cooking pots; one fragment of a coarse sandy ware jug with green glaze both outside and inside, and three sherds of fine flesh-coloured wares without glaze, as well as the following illustrated sherds:—

297 Rim in red/orange ware with beach sand and some shell as temper; rather triangular rim with flat top and slight internal bevel.

298 Bowl with everted rim in brown/black ware, reduced on inside, sand filler. Rim formed by drawing up body and folding back to make a hollow on the interior. Rim well rounded outside, slightly concave top.

299 Everted rim bowl in orange oxidized ware; sand grits, concave top; well rounded outside. (Sherd from similar vessel not illustrated).

300 Everted rim bowl in orange/red oxidized ware; sooting on outside; some flint grits; rim has concave top with rather squarish outer profile.

301 Sagging base from cooking jar. Inside oxidized; outside sooted; sand temper. (3 other sagging bases are not illustrated).

No firm date should be assigned to such a small and fragmentary assemblage, the 13th and 14th centuries A.D. provide a likely time bracket.

1 J. McN. Dodgson, 'The significance of the distribution of the English place-names in-*ingas*, -*inga*—in south east England,' *Medieval Archaeology*, vol. 10 (1966), p. 23.

2 L. F. Salzman, ed. *The chartulary of the priory of St. Pancras of Lewes* (Sussex Record Society, vol. 38, 1932), p. 21.

3 M. G. Bell, ' Castle Hill, Newhaven ' *S.A.C.* vol. 112 (1974), pp. 154-5.

4 *V.C.H., Sussex.* Vol. 7, p. 64.

Medieval Feature 2

A shallow pit 60cm. in diameter and depth 26cm. was exposed 1.25m. east of Feature 1. The fill of brown clay contained numerous fragments of charcoal and daub, a fragment of Lower Greensand, a residual piece of Roman tile and ten Medieval sherds. Of these eight were coarse body shards in orange/red ware with quartz, flint and shell filler, one fragment was from an everted rimmed jar and another from a jug with a thumbed base (all too fragmentary for illustration). A date range as for Feature 1 seems likely.

Sites 1, 5 and 6

The main areas of excavation were above the supposed river cliff which marks the edge of the Ouse alluvium. Here the Roman levels were buried below plough-wash which accumulated in the Medieval period to a maximum thickness of 1.5m (Fig. 3 and Plate II). This was a layer of yellow clay/loam containing scattered flints, pottery, charcoal and daub fragments. This must be the product of erosion higher up the hill and downslope movement under the dual processes of ploughing and slope-wash. These processes took place on a fairly modest slope of 5° to the horizontal. Erosion on such an apparently large scale is interesting in this Medieval context, particularly in view of the fact that the material eroded and deposited on the present site was Pleistocene strata from further up the hill and contained a proportion of loess. Its removal to the valley bottom would have resulted in a reduction of soil profile depth on the downland and perhaps in some consequent loss of fertility.

The Medieval plough-wash contained quantities of residual Roman material (discussed in pottery Group IX and Table 4 above) and Medieval pottery. Two hundred sherds were collected but these only represent a sample since much of the hill-wash was removed with a machine. Presumably this pottery represents a spread of occupation debris from the settlement of Meeching; it was perhaps distributed on the fields with manure. Certainly it is not a closely dateable stratified group, it ranges from Saxo-Norman times onwards, and suggests that this field is likely to have been part of the intensively cultivated infield of Meeching throughout the Medieval period. The following are some of the most distinctive sherds from the Medieval hill-wash.

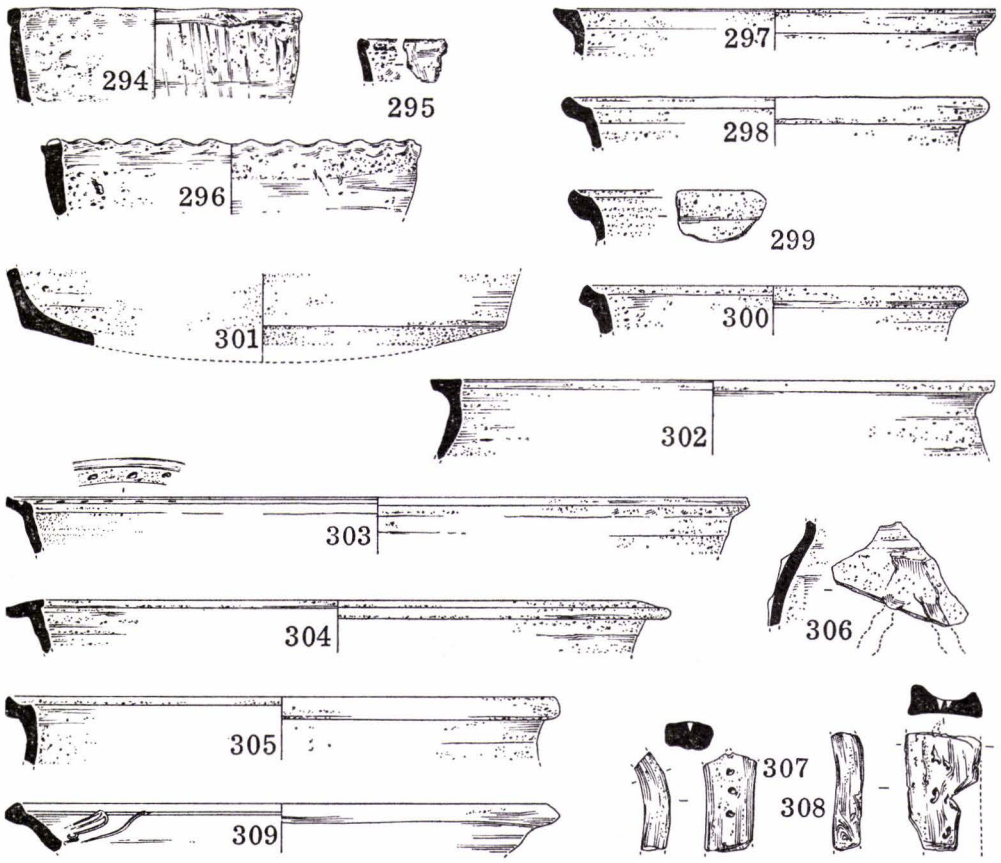

FIG. 45. Medieval pottery vessels 294-308 and Post-Medieval pottery, vessel 309.¼.

The Pottery[1]

294 A crude bag-shaped pot, hand made, reduced, slight external bead for rim made partly by pinching. Temper—small fragments of calcined flint and traces of some fired out vegetable material. Prehistoric or Saxon.
295 Rim of a crudely made vessel with internal bead, calcined flint filler, traces of vegetable temper. Possibly Saxon.
296 Handmade dish with finger impressed rim, calcined flint grits, porous surface as a result of fired-out vegetation and chalk. Prehistoric or Saxo-Norman.
302 A wheel made flat-topped cooking jar, reduced, sand filler, *c.* thirteenth century A.D.
303 Rim of cooking pot, pink sand filler, sooting on outside, pricked, flat top with beaded outer edge. (A similar rather thicker rim is not illustrated).
304 Rim of cooking pot; filler—sand and calcined flint; flat rim internal bead. (10 similar vessels with plain flat rims are not illustrated).
305 Rim of bowl; red/orange; and filler; rounded outer edge to rim, concave inner surface (5 similar vessels not illustrated).
306 Body sherd of large cooking pot in grey fabric with quartz filler, decorated with horizontal and vertical strapping (3 similar sherds not illustrated).
307 Jug handle nearly rectangular section, regular and deep pricks, pinkish buff with sand grits and an olive green glaze.
308 Crude strap handle from jug, with deep central groove and irregular stabbing with a forked stick; oxidized surface, reduced core, sand filler.

Medieval Small Finds

Fig. 47.1. Section of mica-schist whetstone, neatly fashioned rectangular cross section, ancient breaks at either end.
Fig. 47.2. A whetstone of mica-schist, triangular in section, well worn by use, ancient breaks at either end.
Fig. 47.3. Miss D. Charlesworth contributes the following. Fragment from the foot of a stemmed vessel in green glass, flaking black iridescent weathering; *c.* fifteenth century A.D.

THE POST-MEDIEVAL PERIOD

The period around 1539 saw a dramatic change in the fortunes of Meeching. The mouth of the Ouse at Seaford had become blocked by a shingle bar, and the once prosperous Cinque port declined. To remedy this situation, and provide drainage for the Ouse Valley, the Commissioners for Sewers cut a ' new haven ' at the base of Castle Hill.[2] So significant were these events that Meeching changed its name to Newhaven, and replaced Seaford as the port for this area. One might have expected that the cutting of the ' new haven ' would have resulted in a shift of the settlement towards sites near the river. It is thus surprising that early Post-Medieval structures were entirely absent in the area excavated. The period from the sixteenth to the eighteenth centuries is represented only by pottery sherds and clay pipes (seventeenth and eighteenth centuries) discussed below.

The area was still open ground when the Tithe map was made in 1841, with Site 6 and the area to its south Glebe land; Site 1 a drying ground owned by the vicar; and Site 5 and the area to its west owned by William Elphick and used as arable. In 1843 Elphick sold a piece of land (Site 5) to the parish for the construction of a National School. Part of this building was uncovered during the excavations. It included a cesspit which contained an inscribed writing slate and pencil, and a small pottery group; this was sealed by a wall constructed in 1884. In 1868 a school building was erected on Site 1. Following Gladstone's Education Act of 1870 the school was given over to the Newhaven School Board. By 1884 a larger building was required and this was built on Site 5 after the demolition of the 1843 building.[3]

Site 6 was still open ground in 1872 when it was occupied by allotments. Between 1871 and 1881 the town's population increased very dramatically,[4] and created the need for a new Church of England church which was built on Site 6 in 1881. Called Christchurch, it was designed by E. P. Loftus Brock in red and yellow brick, with a wide nave flanked by two aisles and an apsidal chancel. These buildings were demolished in the early 1970s prior to the present excavations.

The Post-Medieval Pottery by O. H. J. Pearcey, B.Sc.

Most of the Post-Medieval layers were removed by machine. Scaffolding pits for the construction of Christchurch in 1881, and a single rubbish pit sealed below the church yielded small amounts of pottery. Site 5 produced a small group from the cesspit related to the 1843 school building; it was sealed by foundations of 1884, in which year the pit was infilled. Most of the material discussed here was found unstratified, either in the allotment soil which predated the church on Site 6, or in the disturbed building rubble on Site 1.

1 I am grateful to John Hurst for examining vessels 294-296.
2 P. Brandon, ' The origin of Newhaven and the drainage of the Lewes and Laughton Levels,' *S.A.C.* vol. 109 (1971), pp. 94-106.
3 Information kindly provided by the National Society and from the Minutes of the Newhaven Board School in The East Sussex Record Office, Lewes.
4 *V.C.H. Sussex*, Vol. 7, p. 63.

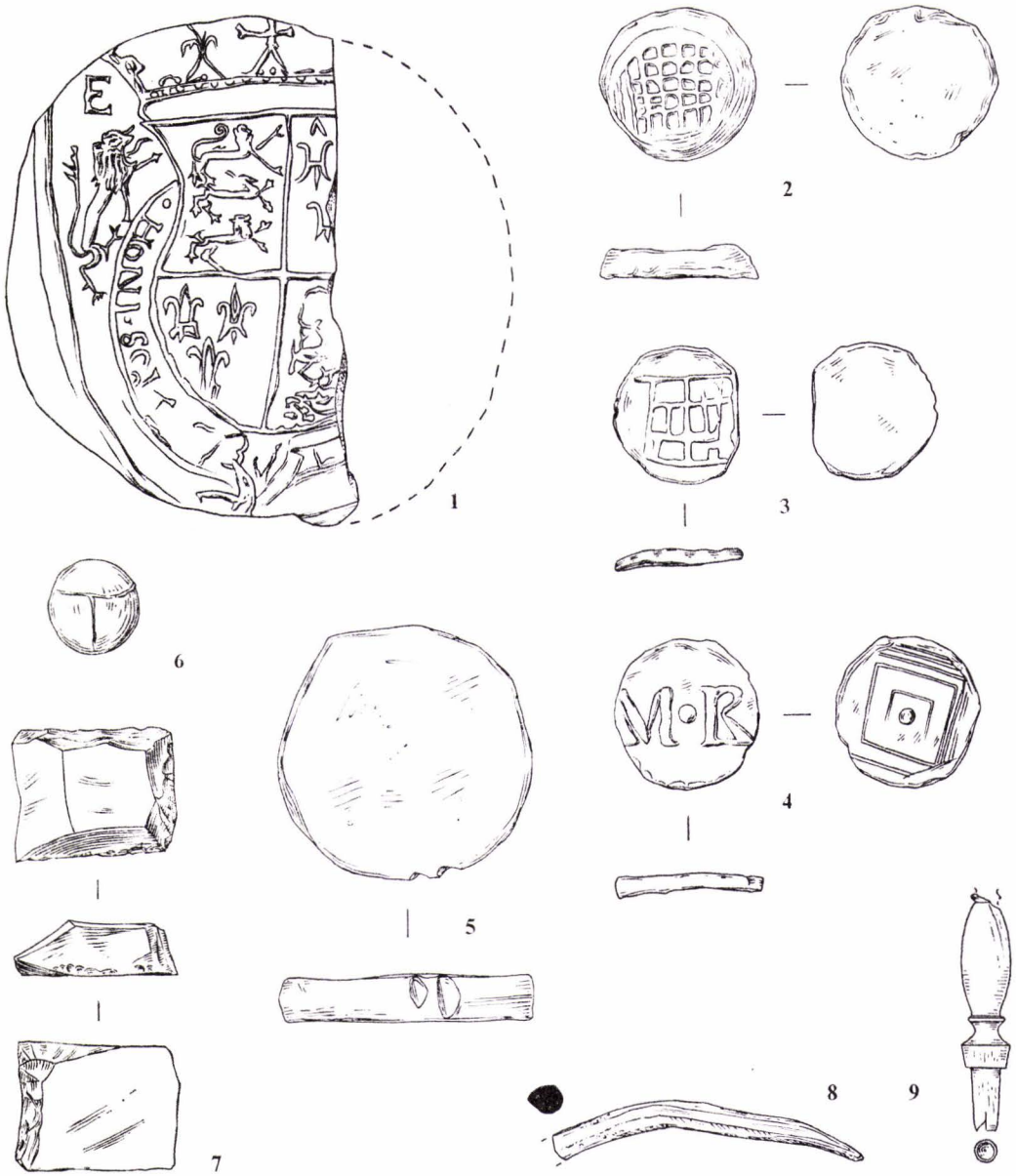

FIG. 46. Post-Medieval small objects; stoneware medallion, 1; lead, 2-6; gun flint, 7; copper alloy pin, 8; bone, 9. 1/1

Sixteenth and Seventeenth Centuries

Fig. 45. 309 A portion of the rim of an earthenware dish. This is in a white fabric, slipped first red and then white with sgraffito decoration cut through the white to the red slip, and glazed with lead coloured green in places with an underglaze paint. Almost identical to a sherd reported from Chichester which was manufactured in Beauvais in the sixteenth century.[1]

1 J. G. Hurst, 'Report on post-medieval pottery from All Saints, West Pallant,' in A. Down, *Chichester Excavations* vol. 2 (1974), p. 93.

Fig. 46.1. The earliest sherd for which a fairly precise date can be offered is part of a decorative medallion from a German salt-glazed jug or tankard. The medallion represents the Tudor coat of arms, with the letter E, presumably for Elizabeth I (1558-1603) to the left. The sherd has been carefully chipped around the edge, possibly for use as a counter or keepsake. It was probably made in Cologne in the last quarter of the sixteenth century.

Green glazed wares resembling those made in the sixteenth and seventeenth centuries in the Farnham area were found. Several vessels, both jugs and dishes, were in a hard red fabric coated internally with a brown lead glaze with iron speckles. These were produced from the mid sixteenth to nineteenth centuries and are generally of local manufacture.

Eighteenth Century

This is chiefly represented by stoneware, tin-glazed and lead-glazed earthenware, all made in this country, the lead-glazed pots probably locally. There is little material from the mass-producing Midland potteries, surprising in view of the fact that the poor of Newhaven were engaged in the collection of flint boulders for use as raw material by the Staffordshire potteries.[1]

Nineteenth and Twentieth Centuries

The cesspit on Site 5 contained a variety of nineteenth century domestic wares. These sherds, mainly transfer printed wares, dated from the beginning to the third quarter of the nineteenth, which is consistent with the documentary evidence suggesting that the pit was made in 1843 and finally infilled in 1884. The bulk of the pottery found elsewhere in the excavations is generally of late nineteenth and early twentieth century date. This reflects the major population increase in Newhaven at this period, and the expansion of the town over the sites excavated during the second half of the nineteenth century. It is nearly all domestic stoneware, porcelain and china and is all mass produced.

The Clay Tobacco Pipes[2] (Figure 47) by D. R. Atkinson, M.A., F.S.A.

Clay tobacco pipes came from the Post-Medieval ground surface and building levels, not from securely stratified deposits. They provide an interesting collection from Newhaven as well as evidence of activity in the vicinity of these sites during the seventeenth to twentieth centuries. With few exceptions the pipes can be identified as being of Sussex make, mostly from Brighton or Lewes.

No. 4 Smallish bowl with stumpy spur and heavy milling, a type common in Sussex *c.* 1660-70.
No. 5 Bowl of similar date with straight sides and flat ' heel ' at the base, a London type.
No. 6 Larger London-style pipe of late seventeenth century. Seldom found in Sussex but the type was made by John Holcom of Lewes (died 1699) who moulded his initials I/H upright at the sides of the base. This pipe has a stamp consisting of a single serif B, incuse and unframed on the base. Maker unknown.
No. 7 One of two pipes with initials T/H moulded in relief at the sides of flat base. Made by Thomas Harman I of Lewes who worked *c.* 1720-60.
No. 8 Piece with part of ' spread-eagle ' design on each side of bowl, initials M/G on spur—Mary Goldsmith working at Brighton in 1845.
No. 9 A bowl with design of leaves, fluting and masonic symbols. Initials W/S of unknown maker on spur, similar pipes by Stephen Leigh of Chichester are dated 1841-55. A similar unillustrated pipe came from the pit on Site 5 which was infilled in 1884.
No. 10 Pipe decorated with fluting and leaves; I/B on small ' square ' spur and relief design along stem. Made by John Blake, Lewes 1835.
No. 11 Small pipe with fluted bowl with leaves and a small star each side of spur. Found over a wide area from Steyning to Newhaven, unknown maker *c.* 1850-70.

The following are not illustrated:—

12 Similar to 4, but with thin stem, narrower spur and bowl. T/H on spur, by Thomas Harman junior, working 1758-74.
13 Plain eighteenth century pipe with cross mould in relief at base of inside of bowl—a mid-18th century feature, not pre *c.* 1750.
14 Large bowl, pointed spur, no initials. *c.* 1770-1800.
15 Stem fragment with serif R/N on spur, Richard Neave of Lewes, 1774-1818.
16 Bowl similar to 6, initials L/S on spur, Stephen Leigh of Chichester 1841-55. The initials must be due to an error in making the mould.
17 Plain bowl with short flat spur with initials W/F, probably William Farr of Brighton *c.* 1868.
18 Stem with moulded decoration and star each side of spur, W. Goldsmith, Brighton, in relief, working *c.* 1830-40.
19 Bowl with tile or scale decoration, one variety made at Pipe Passage Kiln, Lewes.[3]
20 Bowl possibly by Harrington and Sons at Horsham branch or at Pipe Passage Kiln, Lewes (ceased use *c.* 1880).

1 T. W. Horsfield, *The history and antiquities of Lewes and its vicinity* ' vol. 1 (1824 edition), p. 338.

2 For documentary references to makers, etc., see D. R. Atkinson, ' A new list of Sussex pipemakers,' *S.A.C.* vol. 110 (1972), pp. 37-43.

3 N. E. S. Norris, ' A Victorian pipe kiln at Lewes,' *Post-Medieval Archaeology*, vol. 4 (1970), pp. 168-170, Plate IX.

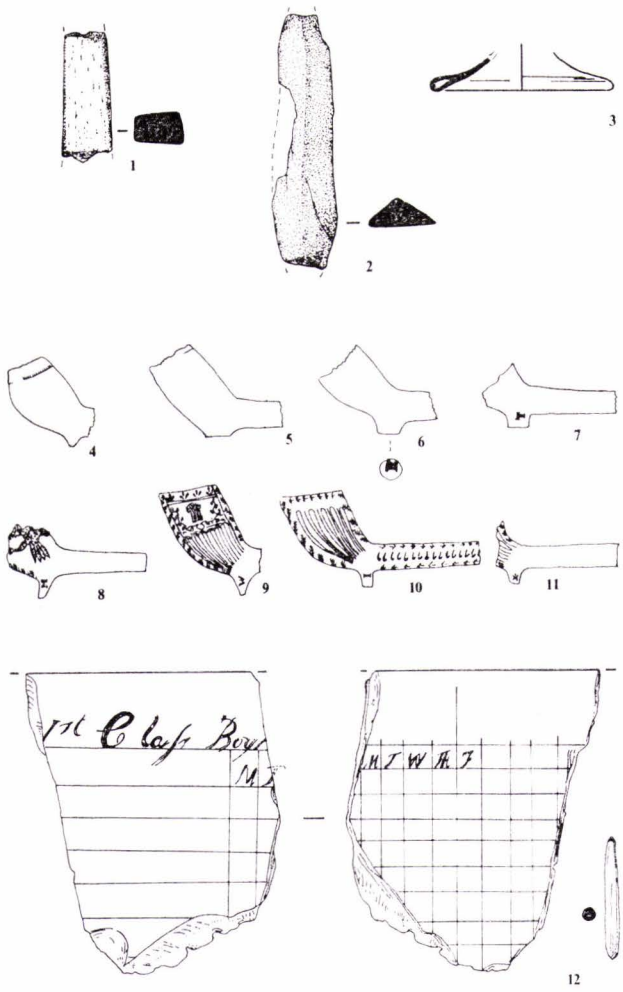

FIG. 47. Medieval finds; whetstones, 1-2; glass, 3. Post-Medieval clay pipes, 4-11; slate class register and pencil, 12.$\frac{1}{2}$.

21 Two late nineteenth century pipes inscribed Burns Cutty and Harrington and Sons.
22 Part of acorn shaped bowl, unknown maker, second half of nineteenth century; one variant was made in Pipe Passage Kiln.
23 Spur fragments initials C/B, probably Charles Bishop, Lewes, 1838-45.
24 Stem with Harrington Horsham incuse, worked 1866-99.
25 Spurless pipe rustic design on bowl dates *c.* 1880, maker unknown.
26 Piece with spikes or nobbles on bowl and stem, popular in late nineteenth century.
27 Piece with large star each side of the spur, hollow centre to star. Examples from Steyning and Upper Beeding, unknown maker *c.* 1870.
28 Piece with bowl design of vine leaves and grapes from pipe made by S. Goldsmith, Brighton, *c.* 1820-30.
29 Bowl fragment with fluting and beading. Richard Neeve, Lewes, produced this design, 1774-1818.
30 Piece of bowl with moulded milling round lip and R.A.O.B. design common in use *c.* 1880-1910.

Post-Medieval Small Finds (Fig. 46)

2 Lead weight with stamped chequer board pattern on one side, weight 12.02 grams. Site 1 unstratified.
3 Lead weight with stamped chequer board pattern on one side, weight 4.60 grams. Site 1 post hole.

4 Lead weight or token obverse with monogram M.R , reverse plain, weight 4.94 grams. Site 6 Post-Medieval allotment soil.
5 Circular lead weight, diameter 3.5cm., thickness 5mm., weight 61.06 grams. Two file marks were presumably cut to reduce it to the correct weight; unstratified.
6 Lead pistol ball, diameter 1.2cm., weight 12.50 grames. Site 6, pit.
7 A gun flint, rectangular plan, trapezoidal section, worn on one face by use. Site 6, allotment soil.
8 Pointed object of copper alloy.
9 Shaft of bone spoon, wheel turned.

Fig. 47.12. One of several fragments of classroom slate from a cess-pit infilled in 1884, this belonged to the first school on Site 5. The illustrated example is a piece of a class register. On one side are incised horizontal lines with at least two vertical columns on the right hand side. On the top lines the words ' 1st Clafs Boys ' have been carefully incised several times. On the line below ' Name ' can just be made out. In the first of the vertical columns is an M. The opposite side is divided into squares of roughly 1cm. In the top row of squares are the letters M, T, W, Th, F. Both sides of the slate were presumably used as a register with pupils' names followed by a record of their attendance during the week. The other slates are only inscribed with horizontal lines; they are of rectangular shape with the longest side measuring 20.5cm. Several slate pencils were found.

ACKNOWLEDGEMENTS

Permission to excavate was readily given by the East Sussex County Council, Architects and Roads Departments, the Police Authority and R. and J. Contractors Ltd. The excavations were organised by the Brighton and Hove Archaeological Society and financed by the Department of the Environment, the Society, and numerous individual and corporate donors. Finds processing premises in Newhaven were made available by the Police Authority and G. Sargent, Esq. When excavations finished the Brighton Museums enabled work on the finds to continue by making rooms at Preston Manor available; Miss M. Waller and Caroline Dudley arranged this. Tony Payne provided much help locally.

The administration was handled by Mr. John Makin, helped by Messrs. J. Holmes (Treasurer) and W. Gorton. Excavation staff were Chris Green (Assistant Director), Ken and Marion Suckling, E. W. O'Shea (Surveying), J. Sharpe and E. Carter. The photographers were B. Westley and D. Robinson. The finds department was organised by P. Norman, J. Palmer and J. Biggar. Thirty-four weeks of excavation cost under £500, a tribute to the volunteer helpers numbering over 100. They included Misses E. Guy, T. Patten, M. Nichols, D. Westley, Mrs. M. Maloney, Messrs. C. Skeggs, O. Pearcey, P. Wilkinson, M. Mander and A. Sayers. For the writer the work was sometimes only made palatable and always only made possible by virtue of the fact that these personalities were involved.

The report owes much to the authors of the specialist contributions who are mentioned elsewhere. Chris Green drew all the pottery and small finds and helped extensively throughout. Brenda Westley as reports assistant was a constant help with background research, field work and typing the text. The pottery report and parts of the general text were prepared with the aid of a grant from the Sussex Archaeological Field Unit through the good offices of Peter Drewett.

The Society is greatly indebted to the Department of the Environment for a generous grant towards the publication of this report.