

**EXCAVATIONS AT HAMWIC,  
VOLUME 1:  
EXCAVATIONS 1946--83,  
EXCLUDING SIX DIALS  
AND MELBOURNE STREET**

**MICROFICHE CONTENTS: SHEET 1**

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All burials	mean 96°	sd 4	(n=34)
All adults	mean 96°	sd 4	(n=28)
Adult males	mean 96°	sd 4	(n=17)
Adult females	mean 96°	sd 4	(n=10)
Children	mean 94°	sd 6	(n= 6)
Trench A, all	mean 94°	sd 4	(n=17)
Trench C, all	mean 96°	sd 2	(n=17)

Table 7. SOU 13: the mean alignments of different burial types.

Group II	mean 95°	sd 4	(n = 8)
Group III	mean 93°	sd 5	(n = 5)
Group IV	mean 96°	sd 4	(n = 4)
Group VI	98°		(n = 1)
Group VII (incl FF67 and 89)	mean 97°	sd 2	(n = 12)
Group VII (excl FF67 and 89)	mean 96°	sd 2	(n = 10)
Group VIII (incl FF67 and 89)	mean 97°	sd 4	(n = 6)
Group VIII (excl FF67 and 89)	mean 97°	sd 5	(n = 4)

Table 8. SOU 13: the mean alignments of different burial groups.

It seems probable that the burial alignments were intended to reproduce that of the church, which was 96°. One might therefore expect that, in the apparent absence of other mortuary features, the further away from a church a grave was dug the more likely it would deviate from 96°.

To check this, the alignments of the 34 bodies listed above were assessed to the nearest 30'. Although, as will appear, this was perhaps an overly scrupulous accuracy, it necessitated the leaving out of FF1, 29, and 75, whose alignments could not be so closely calculated. The distance between the mid-point of 31 bodies, therefore, and the produced line of the church walls was also measured. To minimise the effects of any slight errors introduced by this method, measurements were made in 0.1m units (at the original 1:25 scale of most of the original site drawings, this translates as an accuracy to 4mm). After the difference between the alignments of the bodies and that of

interpreted as older children (F68, for instance, or F106) were treated as adults. Equally, it may be that many of the individuals here interpreted as adults should be redefined as pueri or puellae! The problem is more interesting than the solution; which is to accept the osteological view without further quibble,

- 3) Attention had had to be focused on the trench C burials, both because of the high percentage of burials available for study and because it is reasonably certain that the entire southern width of the cemetery was exposed. It is sometimes assumed in this report that these burials exactly replicate the situation in trench A, from which a smaller sample was available for study, however, and where the possible existence of burials to the north of the trench must lead to some caution in one's conclusions.
- 4) A number of unsexable adults have had to be considered. Usually, it has been assumed that the male--female ratio among them was the same as that found among the other adults (2:1). Any figure based on that assumption has been marked with an asterisk (\*).

## RESULTS

In trench A (ignoring F35, which may have been a later intrusion), 20 of the 33 adults were male (60.6%), nine were female (27.3%), and four were unsexable (12.1%). The corrected figure is therefore \*23 males (69.7%) and \*ten females (30.3%). In trench C, fourteen of the 25 adults were male (56.0%), eight were female (32.0%), and three were unsexable (12.0%). The corrected figure is therefore \*sixteen males (64.0%) and \*nine females (36.0%).

Using the chi-square test at the 95% confidence level, it was found that there was no significant separation of the sexes either side of the church, whether one considered only the sexed adults or also included the unsexable ones in any combination.

It was suggested in the main text that burial close to the church was seen as desirable. Before testing whether there was any bias in the positioning of bodies according to their sex, the distance between adults and the church was measured to the nearest 0.1m; the method being the same as that explained in the previous report. Only seventeen adults from trench A (51.6%) but 23 from trench C (92.0%) could be considered. Because of the low percentage available from trench A and the possibility that any conclusion would wholly distort the true pattern north of

MF1:D1

**SOU 14 (SARC XIV)**

e the main text of this volume.

(item 161; M370). Two were intermediate Series U sceattas (items 84 and 85; M179 and 110). Five were secondary sceattas (a 'porcupine' and, in Series H, two BMC Type 39 coins and two BMC Type 48 coins: items 92, 87, 90, 88, and 91; M14, 24, 30, 32, and 40). One was a penny of Coenwulf (796--821) (item 3; M133).

The pottery recovered indicates a largely similar date range, from the early to the late Middle Saxon period.

## SOU 27 (SARC 27)

## INTRODUCTION

In the late Winter and Spring of 1979, British Rail realigned its track in the area running westwards from Northam Road Bridge to the approaches to Southampton Central Station. This work involved the cutting back of the topsoil and underlying brickearth by a mechanical digger. With the permission of British Rail, the opportunity was then taken to observe the exposed soils at SOU 78, and to combine observations with partial excavation at SOU 27. Work at SOU 27 was undertaken, in March 1979, by DF Devereux.

At that site the mechanical digger removed generally about 0.7m of the natural soil and any features dug into it. In the eastern extent (here named trench A) a width of only about 1m was exposed. Elsewhere, a width of up to 6.5m was exposed. Attention could not be dissipated through a close scrutiny of the entire area, and was concentrated therefore on an area measuring some 15m east--west by 6m north--south (here named trench B). The remaining area (trench C) was only cursorily examined. In all, the total area observed measured some 500m<sup>2</sup>, of which trench B comprised 60m<sup>2</sup>. Only features investigated in that trench were distinguished with numbers. These were numbered contexts 1--9.

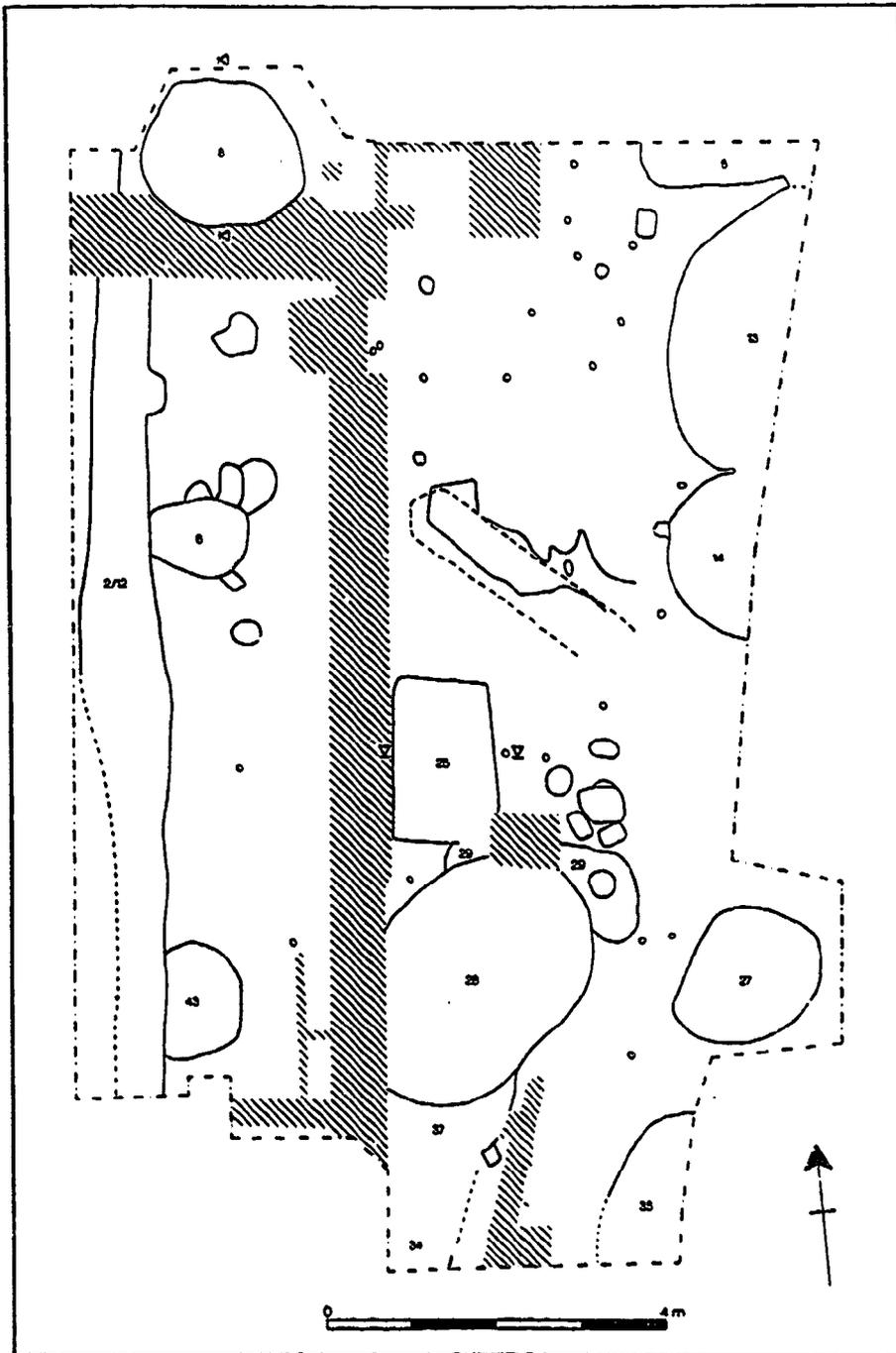
The natural soil, which was at least 0.8m thick, was a yellowish brown fine sandy silt loam (brickearth). Before truncation, its top surface would have appeared at about 0.55m below the top of the topsoil. One presumes that it overlay valley gravel, but this fact was not ascertained through excavation.

No modern disturbance was observed.

## PITS

The remains of at least six pits were noted in trench A. The exposed fills comprised various mixes of greyish brown soil, gravel, and brickearth. These were photographed but not planned. They were not further investigated and no dating evidence was recovered.

Similar features were noted in trench C, in the 25m just to the west of trench A. (It is not clear whether more



**Figure 107.** SOU 33, trench B: early features. Modern disturbance is indicated by hatching.

MF1:H1

**SOU 34 (HAM E: AH 16)**

See the main text of this volume. For supplementary reports, see immediately below.

Further into the site notebook was drawn the sketch plan reproduced as fig 115, dating on internal evidence from before June 1962. The drawing is unorientated and no dimension or scale is noted. Nevertheless, assuming for the moment that it conforms (however roughly) to a single scale, assuming also that the numbered lines refer to pits at most 2m or 3m across, it is evident that no very large area is planned. One would be wrong to presume that this was the extended site marked on fig 113 as area b.

The plan cannot show a new trench in what would shortly become the south-eastern corner of SOU 34, for instance marking a northern extension of SOU 35. Neither the indented edge nor the broken line coincides with the northern edge of SOU 35, and the features shown bear no resemblance to those found in the south-eastern corner of SOU 34 (compare fig 74).

It is likely that a limited extension to the original trench is shown. As we have seen, the trench had been set out in a larger machined area that measured some 18.3m by 6.1m; and Aberg may have extended that trench in places within the machined area. He did similar things elsewhere, at SOUs 35 and 43, where he first opened rectangular areas that he later extended at various places. It can be objected that a limited extension was not reported in print; but Aberg's silence is an objection to whatever interpretation is made of the F-shaped trench. Besides, SOU 34 was widely extended soon after this plan was drawn, and it may be that an intention to report the limited extension was overtaken by events.

Supposing that fig 115 shows the original trench with a few extensions, how was it oriented? The original trench measured some 12.2m east--west, as we have seen, and it is unlikely that such a measurement is preserved in either of the short sides, for instance as dimension 'x'. If dimension 'x' measured around 12m, the pits shown would have had a diameter of between 4m and 6m; which is implausible. Therefore, either north or south stands at the top of the plan. It is possible that south stands at the top: Aberg so oriented the other plan he drew of SOU 34 (reversed here as fig 114). In fact, best sense is made of the broken line drawn in the upper left corner, if one accepts that south stands at the top. The broken line would then mark the produced position of Edward Street, a feature that had been included on the earlier plan (fig 114). One may note that the broken line continues beyond the corner of the trench, as if a separate feature of the area had been mapped; also that the solid line along the edge of the trench seems to turn at its point of junction with the broken line. In the light of available data, the only sensible explanation is that Edward Street and an adjacent house are shown.

**SOU 35 and 36**

**SOU 35 (HAM D: AH 15)**

See the main text of this volume.

**SOU 36 (Kingsland: AH 11)**

See the main text of this volume.

## SOU 40 (HAM F: AH 17)

## INTRODUCTION

In September 1961, the topsoil was removed by machine from a roughly rectangular area measuring 20.2m by 11.8m. Excavation, which was directed by FA Aberg, continued with the cleaning by hand of the remaining topsoil down to the underlying natural soil. The features cutting this soil were then investigated through the stratigraphic removal of their layers. Eight Anglo-Saxon pits were uncovered, and numbered pits 117, 118, 121--5, and 131. 'By the middle of October 1962, . . . [the site] had suffered badly at the hands of vandals, and being nearly finished, it became necessary to fill it in' (Pallister 1963a, 12). An area of 238m<sup>2</sup> had been exposed by the excavations.

'No sign of bright yellow orange clay', Aberg noted. 'Grey-brown clay 1'0" [0.3m] thick over gravel. Scatter of gravel in clay.' The clay one presumes to have been brickearth. At other sites, for instance SOU 14, it was not yellowish brown in colour. Nevertheless, the 'scatter of gravel' might indicate that that the brickearth here was not an undisturbed natural deposit. The top of this deposit lay a little over '2 to 6 feet [0.6m--1.8m]' beneath the ground surface (SAS 1962b); probably at a height of somewhere between 1.9m and 2.1m OD.

Modern disturbance comprised a 'long line of disturbance east--west', which overran the southern edge of pit 122; and three pits that appear to have been dug for Anderson shelters. Virtually none of this disturbance is shown on the plan used as a basis for fig 121.

## ARCHIVE

Apart from some finds records, the written and drawn archive comprises Aberg's site notes, apparently compiled during the Winter of 1961 and the Spring of 1962; two short reports, already cited (SAS 1962b; Pallister 1963a); and a site plan, probably intended for publication and evidently based on lost originals. The site notes are concerned mainly with the preliminary stages in the excavation of pits 118 and

Slightly later, two smaller trenches were opened some 10m to the south-west of the main one. About 27m<sup>2</sup> were exposed in all. No Anglo-Saxon features were uncovered.

#### NATURAL DEPOSITS

'Silt' was found in all three trenches. In the two outlying trenches, the top of this deposit stood at a height of 1.94m OD.

In the main trench, below the modern deposits and an undistinguished 'medieval occupation layer' (all layer 1), were four layers of 'silt', distinguished by their coloration. Layer 2 was 'light grey'; layer 3 'very light grey with vertical yellow coloration'; layer 4 'grey with chocolate brown coloration'; and layer 5 'orange'. It is reasonable to suppose that these were all parts of one layer of brickearth, disturbed across its top by ploughing and merging into ploughsoil. The average thickness of the combined layers was 0.68m. The top of layer 2 was encountered at 2.22m OD, and the top of layer 3 at 2.06m OD.

Below these were layers composed mainly of gravel. Layer 6 was 'coarse gravel' encountered at 1.53m OD. Under it was 'reddish brown/orange clay with some coarse gravel' (layer 7). A number of gravel layers underlay that. In stratigraphic sequence, these were 'medium' and 'coarse gravel' (layers 13 and 17), differently described but both drawn in the same way; 'gravel and orange clay' (layer 18), perhaps the same as layer 7; 'coarse grey gravel' (layer 8); 'orange clay and medium gravel' (layer 14); 'coarse orange gravel' (layer 9); 'medium gravel' (layer 15); 'heavy' and 'medium gravel' (layers 16 and 19); 'white gravel with chalk' (layer 20); and 'coarse gravel' (layer 21). Despite the different mixes, nothing discredits the supposition that these were all naturally deposited valley gravels.

Below the gravels were 'fine, silver-grey gravel' (layer 10) and 'medium sand, coarse in the middle of the layer' (layer 11). Again, these seem to have been natural deposits.

Finally, 'coarse grey gravel with cobbles' was exposed (layer 12): apparently another natural deposit.

Addyman and Hill (1968, 75) suggested that 'a gravel filled former watercourse' contemporary with the Middle Saxon town had been located at SOU 44. Judging mainly from this section drawing, one finds no strong reason to accept this interpretation. The 'dip' in the southern corner, or that in the eastern corner, of the site may have been the putative water course. Even if both had continued in a straight line across the site, both are explicable as natural undulations in the underlying sand and grit.

was 'about a quarter of a mile east of . . . Clausentum'. As Crawford remarks, '"East" is clearly a slip for "west"'. The distance cannot be correct either. A quarter of a mile (0.4km) to the west of Clausentum lay in what in the 1860s was still part of the River Itchen. An equal distance to the south-west encompasses only the northern extremity of Northam, a point far removed from St Mary's Road.

Is there any significance in these errors? Although the discovery of Roman artefacts at SOU 52 would have been sufficient justification for mentioning the Roman town of Clausentum, we might also suppose that Kell was prompted to the reference by the fact that he could see the low-lying site of Clausentum, or at least the hill adjacent to the site. Further support for this interpretation is provided by the extreme inaccuracy of the measurements given. It is clear that Kell was not consulting a map. If he were looking at the site of Clausentum, or at a nearby point, it is perfectly likely that he would have wrongly estimated the distance between the two points. And if he were standing at SOU 52 while looking at the site of Clausentum he would have had to be standing at the northern end of the development area. Only there would the ground have been sufficiently high to allow a view of Clausentum; and only there would a view not have been obstructed by the intervening houses that had been built in certain areas of Northam. Furthermore, one must remember that Kell indicated that Clausentum lay to the east (or west!). Wherever one stands inside the relevant area, the Roman site lies to the north-east. However, unless one is consulting a map, one is more likely to confuse north-east with east the further north one goes.

For all these reasons, it is suggested that SOU 52 lay about the area marked C on fig 125.

## SOU 58 AND SOU 59

## SOU 58

In 1975, M Blades directed the removal by machine of the topsoil from an area intended to be excavated. Finding no early features there, he ordered the backfilling of the site, which is now numbered SOU 58.

No records were kept. The excavator informed this writer, on the day after the opening and closing of the trench, that SOU 58 had measured about 5m by about 15m. Probably it was aligned north--south. The site was located on the land between Radcliffe Road and the railways. The only likely space available was that piece of land between the now-demolished 185 and 199 Radcliffe Road; an area 26m long by at most 20m wide. (The grid reference might vary between 4294 and 4296, and between 1278 and 1281.)

Exposed was 'very clean brickearth', as Blades stated to this writer. Further details were not asked for. Observing a very small hole dug at Radcliffe Road in 1985 at SU 4296 1270 (an observation not numbered, and not shown on plan), this writer observed that the strata consisted of 0.3m of modern layers, over 0.1m of dark greyish brown soil (ploughsoil?), over a species of brickearth. This latter deposit, encountered at a height of about 3.3m OD, was a brown (10YR 4/4, tending to 10YR 5/4) loamy medium sand. It is possible that the 'very clean brickearth' of SOU 58, about 100m to the north, was of a similar constituency and encountered at a similar height.

## SOU 59

In 1979, D Devereux and this writer conducted the investigation of an area to the north-east of the corner of Radcliffe Road and Northam Road. The investigation consisted of the mechanical removal of the topsoil; a cleaning of the brickearth exposed; and a removal of that deposit down to the underlying gravel. Across an area measuring 100m north-east--south-west by 35m north-west--south-east, twenty test holes were dug, each measuring 2m by 1m. This work is numbered SOU 59.

### AREA OF EXCAVATIONS PRODUCING 'POSITIVE' EVIDENCE

Only archaeological excavations reported on in this volume are detailed here. Observations are generally excluded from the reckoning. However, where an archaeologist cleared an area and recorded it, but did not investigate it more closely, that work is deemed an archaeological excavation.

Also excluded are all but SOU 4 of the Melbourne Street sites; the Six Dials sites; SOU 177, where excavation only began in 1983; and all sites opened after 1983.

'Positive' evidence is taken to mean that evidence which points or probably points to Middle Saxon occupation.

In the following list, areas of sites have been rounded to the nearest 5m<sup>2</sup>.

SOU	m <sup>2</sup>						
4	330	14	345	22	220	37	25
7	120	15	435	27	60	38	235
8	200	16	210	32	2530	39	175
9	35	17	110	33	100	40	240
10	85	18	80	34	670	43	195
11	225	19	30	35	220	68	5
13	145	21	60	36	845	99	910

The total is 8940m<sup>2</sup> (2.2 acres). If, as was suggested in the main text, Hamwic spread over some 42ha (104 acres), the 'positive' sites listed above exposed about 2% of the town.

Including observations and all other excavations undertaken since 1946, perhaps a little over 3% of the town has been investigated in the last 40 years or so. It is impossible to calculate with any accuracy the extent of the town looked at before 1946.

**SOUs 1--11**

**SOU 1 (SRC I)**

See Hassall 1980.

**SOUs 2 and 3 (SRC II and III)**

Not Hamwic sites.

**SOU 4 (SRC IV)**

See Cottrell 1980. For a reassessment of the street,  
see the main text of this volume.

**SOUs 5 and 6 (SARC V and VI)**

See Cottrell 1980 and Holdsworth 1980a, 31--5.

**SOUs 7--11 (SARC VII--XI)**

See the main text of this volume.



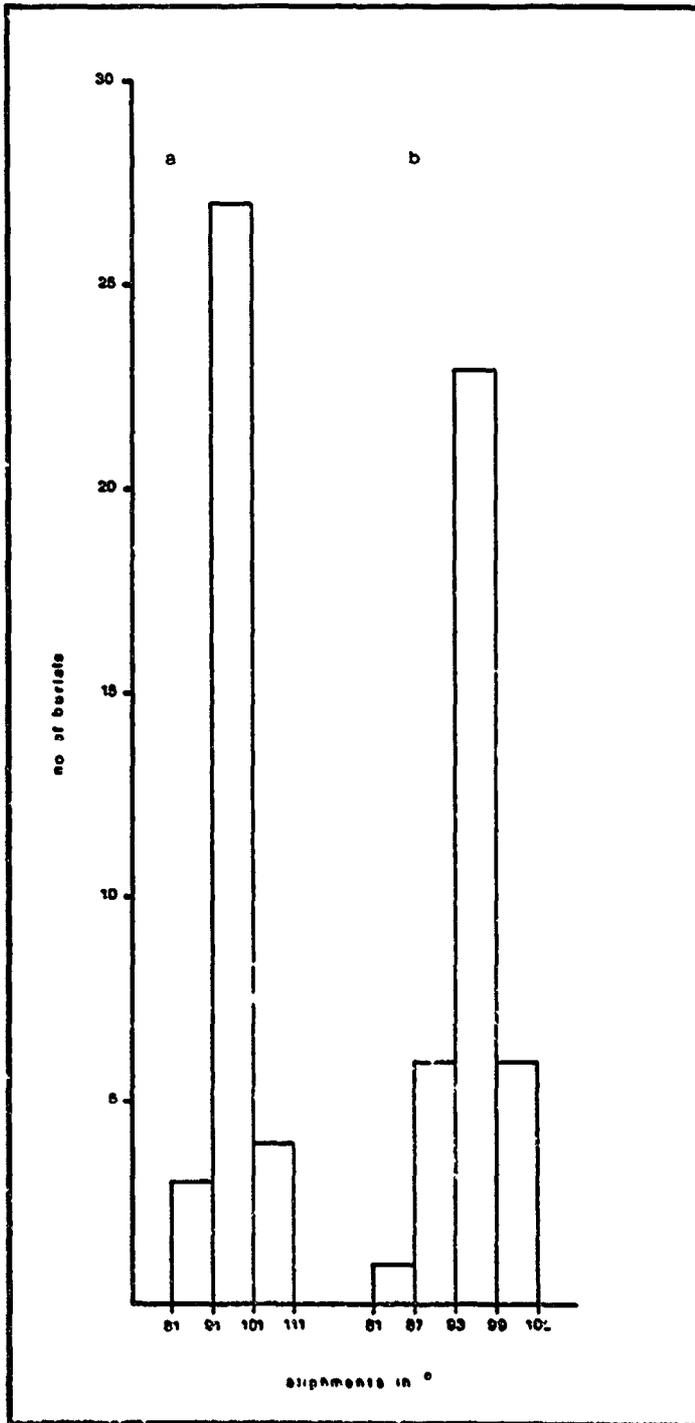


Figure 98. SOU 13: alignments in (a) 10° units, and (b) 6° units, centred on 96°.

the church, only the adults from trench C were further considered.

Of these 23 adults, thirteen (56.5%) were male, eight (34.8%) were female, and two (8.7%) were unsexable. Initially, these last two were discounted.

The distance of the males from the church varied between 0.4m and 4.9m (a mean distance of 2.8m, with 61.5% closer than this). The distance of females varied between 0.7m and 5.0m (a mean distance of 2.4m, with 62.5% closer). There was a significant clustering of burials close to the church in both sexes (Pearson's  $r$ , 95% confidence level). A chi-square test (at the 95% confidence level) showed no significant distinction between the sexes.

Depending on the sex assigned to the two unsexed adults, variations on these figures are obtainable. The reader will not be troubled with numbers. In no case do the revised figures affect the conclusions of the last paragraph.

These figures relate to overall groups. Restricting one's attention to separate burial groups, again one can safely only consider the burials exposed in trench C; and in practice only those of group VII. (The other groups are too small.) This leads to some difficulties, since it is not clear whether FF67, 70, and 89 were part of group VII or group VIII. Since, also, two of the adults in group VII may not be sexed, there are 32 permutations available: eight variables (depending on whether or not all, some, or none of FF67, 70, and 89 are held to be part of the group) multiplied by four variables (depending on the sex allocated to the two unsexed adults). The task of sorting out the probable make-up and sexual ratio of the group inspires no confidence of accuracy, and accordingly it is declined. Many of the problems indicated above would be removed if one considered the positions of group VII and group VIII burials as a block. However, all but two of the assessable 23 adults from trench C would be included in this block, and there is no profit in reconsidering virtually the same burials.

Was there any difference in the positioning of the children? Again ignoring F35, 22 (27.5%) of the 80 bodies were those of children. Eleven were recovered from each trench. In trench A, they comprised 25.0% of the assemblage, and 30.6% in trench C. These are not significant differences (chi-square at the 95% confidence level).

Regardless of which group FF67, 70, and 89 are assigned to, there is no significant variation in the numbers of children included in any particular burial group (this despite the fact that group VIII may have included only three adults with four children). In no group can any

MF1:C3

significant difference in positioning be found between that of the adults and that of the children; nor is any significant difference apparent between the overall assemblages. All of these statements depend on the result of chi-square tests at the 95% confidence level.

## SOU 15 (SARC XV)

## INTRODUCTION

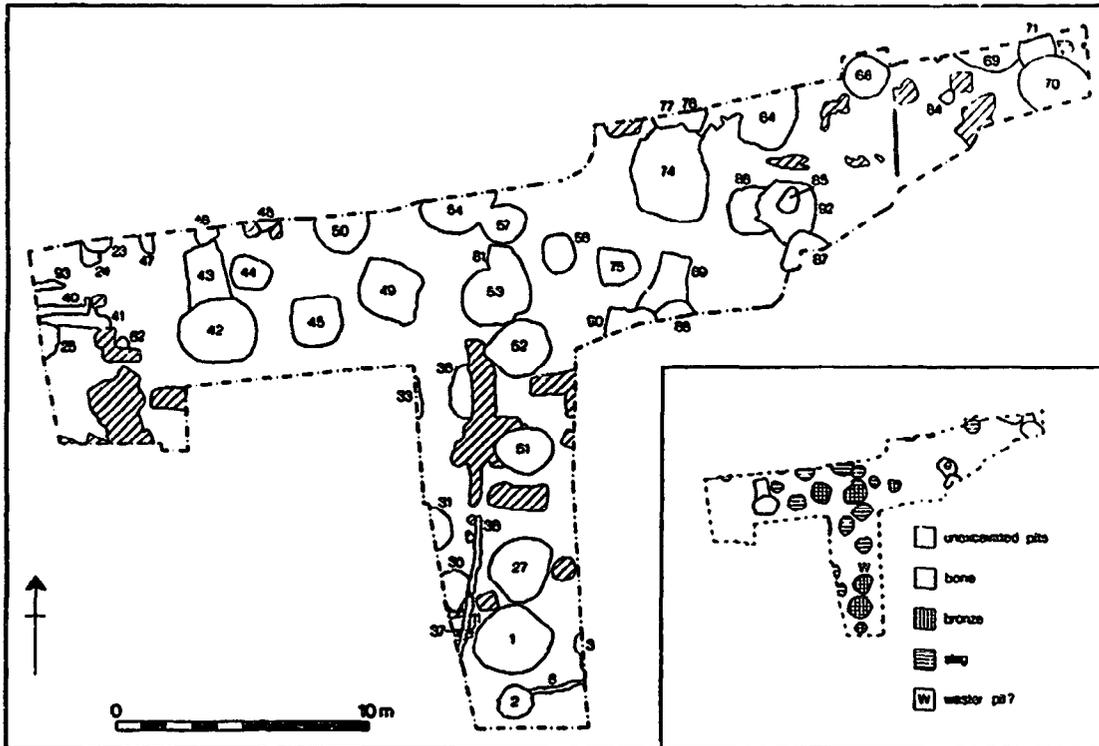
A full excavation report on this site will not appear until all the major groups of finds have been studied. The following is an interim report.

In order to augment the evidence already acquired through the excavation of SOU 32, SOU 15 was opened in January 1974. The site was located to the north of the western end of Clifford Street, its 'T' shape largely predetermined by the shape that street took in the 1970s. The eastern third of the site re-exposed the north-western corner of SOU 32. This accident proved to be advantageous since the features exposed in that area had not previously been investigated in much detail.

Some 0.8m of the overlying soils were mechanically removed across an area measuring 435m<sup>2</sup>. The exposed surface was then cleaned by hand and plans drawn. Excavation began with the removal by hand of 50mm spits, and the planning of each new surface, until the features of the site became clearly defined. They were then excavated in a more usual fashion. Most of the pits were half-sectioned, but FF23, 42, 43, 61, 63, 69--71, 86--89, and 92 were largely unexcavated. A 0.2m core was sampled from each excavated pit for later environmental examination. The rest of the excavated fill was wet-sieved through a 6mm ( $\frac{1}{4}$ " ) mesh. Features were numbered F1--F92. This writer had added F93.

Brickearth was encountered across the site at 4.65m OD. The disposition of the natural deposits, as dug through by the pits, was noted on three occasions. In F27, they were 1.65m of 'brickearth', 0.22m of 'green sand/clay', 0.22m of 'yellow fine clay', and gravel, the last of these encountered at a depth of 2.56m OD. In F45, they were 0.75m of 'brickearth', 1.05m of 'yellow moist sand', 0.5m of 'hard-packed, slightly iron-stained sand', and gravel, encountered at a depth of 2.85m OD. In F75, they appear to have been 2.02m of brickearth over gravel, the latter encountered at a depth of 2.63m OD. There is now no way of assessing the accuracy of each description.

The upper boundary of the brickearth probably had been lowered by later disturbance, for the topmost part of the



**Figure 101.** SOU 15: a site plan with (inset) a plan of features containing industrial evidence. The hatched areas on the main plan indicate modern disturbance.

pit fills had been spread outwards and contaminated with medieval and later finds; perhaps the effects of plough disturbance. Other modern disturbance mainly comprised soakaways, sewer trenches, and what may have been nine scaffolding post-holes. These features can be associated with the buildings erected to the north of Clifford Street in the 1850s.

## EARLY FEATURES

### Pits

Those pits that were not excavated to any significant extent

MF1:E2

**SOUs 16--18 (SARC XVI--XVIII)**

See the main text of this volume. For a supplementary report on SOU 18, see immediately below.

## AN ANALYSIS OF FAECAL SAMPLES FROM SOU 18

Six samples of varying size, all from the same context, were sent for analysis. They had originally been removed from the site because it was thought that they might consist of preserved dung. All were compressed faecal material. In some cases the material clearly consisted of individual coprolites. All the material was preserved by phosphatic mineralisation. More detailed analysis, involving the destruction of the material, should take place at a later date; but, for the present, only a macroscopic analysis of the external and broken surfaces of the coprolitic material has been made.

The species noted in the samples included Prunus sp, including plums and possibly sloes (P spinosa) and cherries (P avium), apple (Pyrus malus), and Rubus sp (blackberry and raspberry). Due to the nature of the preserved material, no specific quantification has been made.

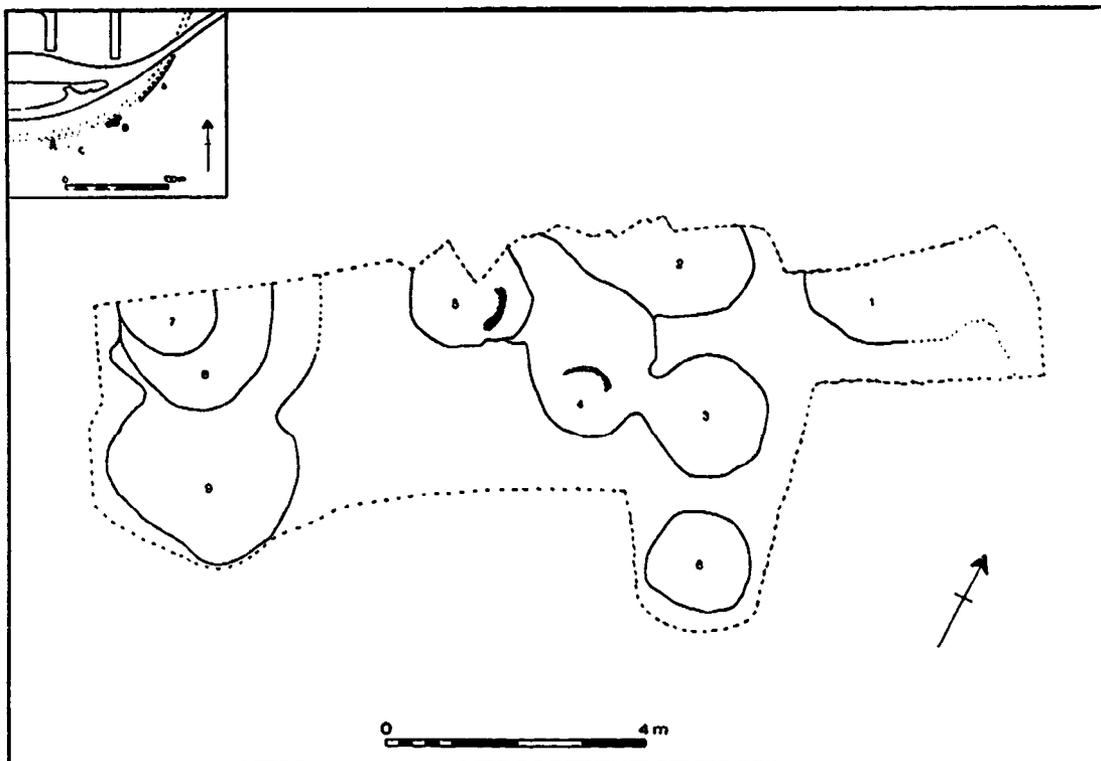
There was a pronounced colour difference in the coprolitic material. Some were a pale straw colour and others were specifically a darker orange-brown. It was observed that the darker coprolites predominantly contained large quantities of apple pips and the other, lighter-coloured specimens contained predominantly cereal-bran fragments.

The size and shape of the coprolites suggests that the mineralised and coprolitic material from this feature was of human rather than animal origin; and the fact that many of the specimens seemed to consist almost entirely of cereal bran (most likely originating from flour made into bread) is the strongest argument that the material is of human origin. Those coprolites containing large quantities of apple pips and other fragments of apple core are more difficult to interpret in the light of modern cultural attitudes, where it is rare to find individuals who consume an apple in its entirety. However, although it is possible that faecal material from a non-human source might be present, there is no hard evidence or certainty either way. Further detailed analysis of this material along with similar evidence from more recent excavations might throw light on this problem and provide a greater insight into the nature of the food consumed by people at Hamwic.

pits were exposed elsewhere in trench C.) These were not photographed in detail or planned. No further investigation was made of them.

Work in trench B consisted of trowelling over the area of pits 1--9 and removing samples from the exposed layers. In the short time available, one person could not excavate their fills. Small amounts of pottery were recovered from pits 1, 2, 6, and 8, as well as from the spoil heaps created by the mechanical digger. All may be assigned to the Middle Saxon period. No fabric was notably early or late within that period. It seems likely that all the pits were Middle Saxon features.

Given the slightness of the evidence recovered, little may be said of the function of the pits. The existence of apparently large quantities of animal bone and shell in certain fills of pits 1--5 and 7 probably indicates that these features had been used at some point for the disposal



**Figure 105.** SOU 27: the location of trenches A--C, showing the position of the gravel surface in trench C; also contexts 1--9 in trench B.

of domestic rubbish. 'Grey-white ash' formed layers in pits 3--5 (the layers are specifically marked on fig 105). This may have been burnt chalk, intended for some industrial purpose.

#### GRAVEL SURFACE

At the western extremity of trench C, a gravel surface was noted (fig 105). About 5.4m wide, it was aligned north--south. Composed of tightly packed flints, it was interpreted as an outcrop of the natural gravel -- an interpretation seconded at the time by this writer. This remains the most likely interpretation, for it is probable that the gravel had originally underlain about 0.4m of brickearth; but the regularity of the surface leaves open the possibility that it had been laid artificially and covered by redeposited brickearth.

However, because it was thought to be a natural deposit, the gravel was not closely examined and its relationship with the brickearth was not further investigated.

been primarily a cess layer. Over it was layer d, a 'dark layer of soil' which contained 'much animal bone, clay lumps, shell', and pottery which cross-matches (but does not cross-fit) some found in layer a. Layer c was similarly dark with animal bone, shell, and some 'lumps of clay'. Over this was a layer of mussel shell (layer b), and over that 'black soil with some [burnt] daub, quantities of pot, and not a great amount of animal bone'. This layer, layer a, also contained a lens of oyster shell. Layers a--d seem all to have been domestic rubbish layers. Over them was an unlettered layer of 'Victorian' soil which had slumped into the pit, or perhaps filled a hole dug into the top fill of the pit.

Of interest is the inordinately large amount of pottery (11.7kg) found in F8. Nothing in the assemblage or the conformation of the layers indicates an explanation for this.

F13 was cut by F14. Rounded in plan, perhaps half of it appeared in the area excavated. Of unknown depth and shape in section, it seems to have been filled with domestic rubbish. The high percentage of Roman pottery recovered from this feature -- 40%, as opposed to the site average of 1% -- might suggest that it had been dug through a Roman pit.

F14 was cut through F13 and a post-hole. Like F13, about half of it could be excavated. Its depth and shape in section are also unknown. Its main fill comprised 'black-brown loam with animal bone, charcoal flecks, [burnt] daub, and oyster shell' and seems to have been a layer of domestic rubbish.

F25 (fig 109) apparently was cut through F29. Soil overlying and adjacent to this pit, numbered FF7 and 9 (not illustrated), was 'later resolved to F25'. It may have been the ploughed-out top of the pit fill. The pit was sub-rectangular in plan and section, and 2.69m deep. Like F8, it was excavated by the wholesale removal of one half and the removal of the other half in stratigraphic units. These were numbered a--c, but most subsumed a number of layers within the unit. The separate layers are distinguished here by a number suffix.

The bottom layer (layer e6) was 'greeny clay' which may have been cess. Over this was the undescribed layer e5, a layer of 'clay' which was perhaps redeposited brickearth (layer e4), and a thin spread of shell (layer e3). Layer e2 was not described. Layer e1 consisted of 'clay' mixed with some animal bone. Layers d1--3 were not described. Layer c was a 'burnt layer', perhaps charcoal. Above this, layers b1--3 made up, in no known order, 'brown-black clay loam, charcoal, and [burnt] daub flecks', also animal bone. A layer of shell with some animal bone was layer a2. Layer a1

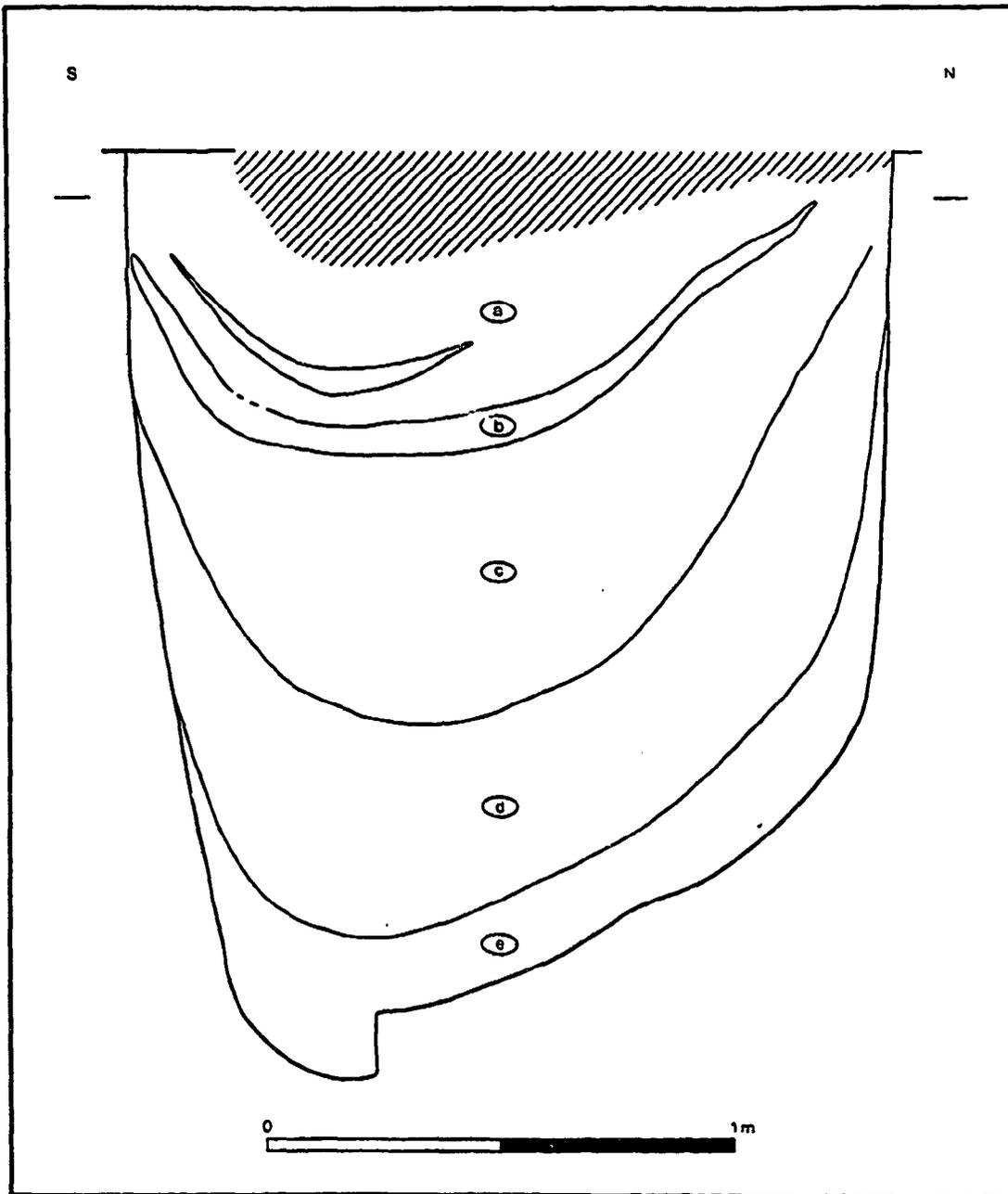


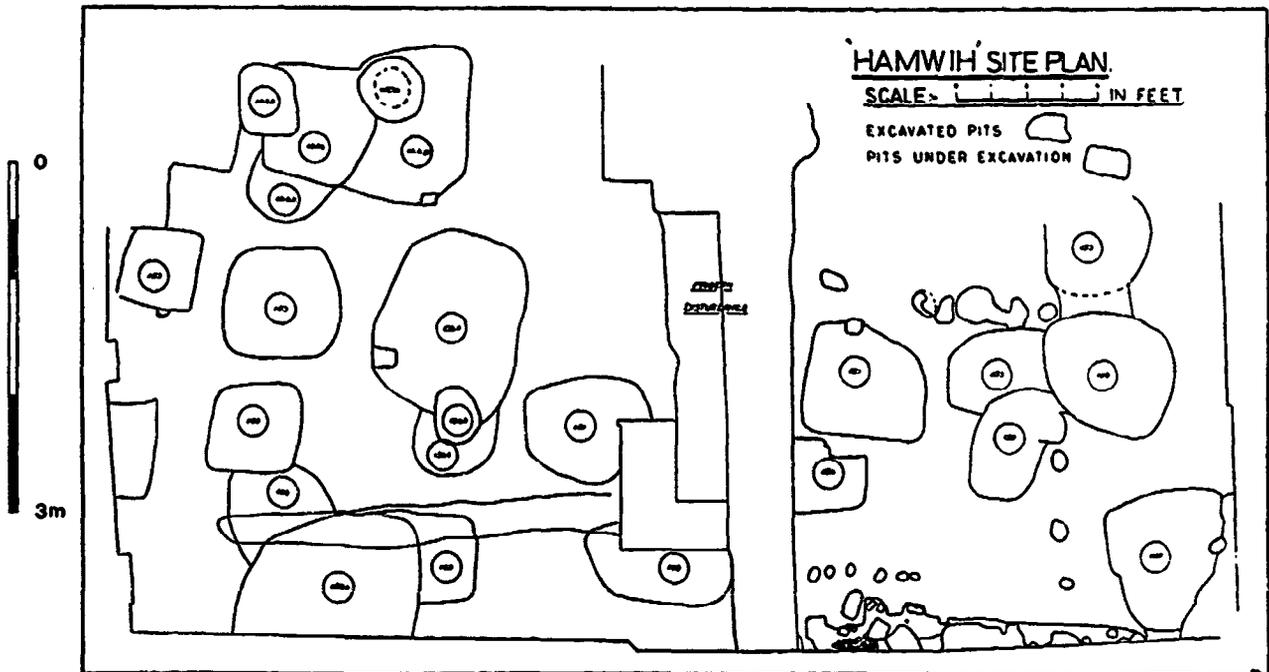
Figure 108. SOU 33, F8: section drawing.

unit, then removing the western half stratigraphically. The lowermost layer (layer e) was 'greeny decayed clay with some animal bone' and a fragment of a bone comb. It may have

**SOU 34: PUBLICATION PLAN**

The site plan reproduced here is part of a larger drawing that includes a site-location plan. The intention seems to have been to publish such a drawing with Pallister nd. But the work was probably not completed: the original, which is reproduced here as a tracing, was drawn in pencil. No inked version has been found and none may have existed (if a finished version had been created, one presumes that the differences between 'excavated' and 'unexcavated' pits would have been made apparent by shading).

Compare this with fig 74 in the main text and the explanation that accompanies it here.



**Figure 111.** Tracing of an undated site plan. The metric bar scale is a modern addition.

## THE AREA OF SOU 34

### ABERG'S LOCATION MAP

The location map (fig 112) was drawn in pencil directly onto a 1:500 street map produced by Southampton City Engineers. It was completed in two stages in 1962. These stages are explained below. In its final form, it shows a rectangular SOU 34 bounded to the north by Cumberland Street; to the east by Golden Grove; to the south by a property division and SOU 35; and to the west by no particular urban feature. The dimensions are some 30.6m east--west by some 20.0m north--south, and the area of the site would have been about 610m<sup>2</sup>.

It is argued in this report that these are only approximations to the true shape and dimensions of SOU 34, which was less of a regular rectangle (fig 113).

### THE EVOLUTION OF THE SITE'S SHAPE

SOU 34 was exposed in four main stages, indicated on fig 113 by the letters a--d.

1. A small area (area a1) was first opened in the south-west corner of SOU 34, and later extended (area a2). Neither of these areas is distinguished on the map copied as fig 112.
2. The area was then extended to the north and east (area b). This corresponds to the first shaded area of fig 112, although the dimensions and shape are not exactly the same.
3. Soon afterwards, the excavation was extended northwards (area c). This corresponds to the second shaded area of fig 112. The shape is nearly the same, but the dimensions are again different.
4. Finally, an eastern extension (area d) into the road comprised 'the excavation of Golden Grove' (SAS 1963d; 1964a). This area was opened after the map copied as fig 112 was drawn.

The eastern quarter of areas b and c is known from two

What were the dimensions of the trench? Producing a likely interpretation requires the balancing of several facts and opinions, none of which is conclusive by itself. Taken as a whole, these facts and opinions remain inconclusive; but it becomes very difficult to construct a more plausible interpretation. The arguments are as follows.

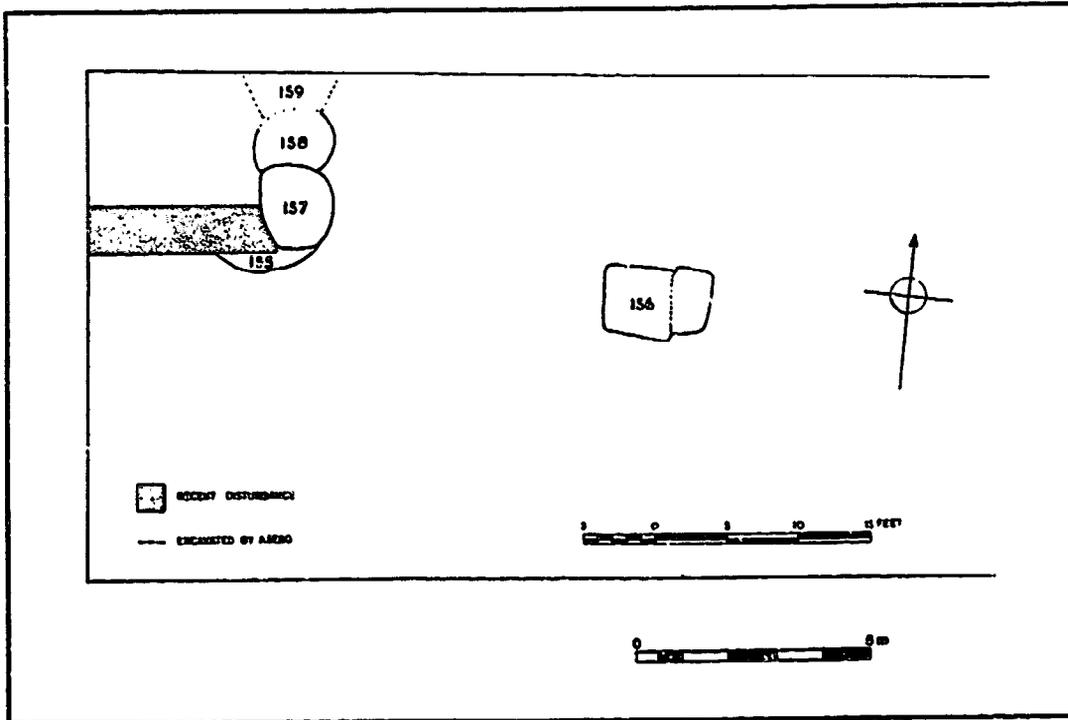
1. Fig 115 shows the original trench slightly extended. (This matter has already been considered.)
2. However roughly, the plan is drawn to a constant scale. (This has to be assumed. It cannot be proved.)
3. FF127, 130, and 132 were located in the original trench. (This is a reasonable guess: the original trench had been opened longest, and there was more chance for pits to have been exposed there and planned.)
4. The extensions of the site were therefore located outside the area where the three pits are shown.
5. The plan is upside-down. (This matter has already been considered.)
6. The broken line in the upper left corner marks the produced line of Edward Street. (This is the only explanation that makes sense of that line: see above.)
7. A later plan shows a blank area wholly taken up by the trench shown in fig 115. (This is considered later.)

Not to burden the reader with a host of contradictory computations, it will be pointed out only that the best concordance of distances occurs when length 'y' is taken to be around 12m, roughly the length of the original trench. Length 'x' would then be around 4.5m, roughly the original width. The overlap with Edward Street, represented by the broken line, would have been around 5m, comparable with the 4.6m denoted on fig 114. Length 'z' would then mark a western extension of the original trench, and the 'crenellations' two northern extensions.

#### THE FIRST MAJOR EXTENSION (AREA B)

The plan photographically reproduced as fig 116 is the original that was prepared for publication by Pallister (nd, fig 3). Reference on the plan to an area 'excavated by Aberg' probably locates the features in the south-western corner of the site, in the vicinity of the trench shown on

figs 114 and 115. An attempt will shortly be made to mark the boundaries that Pallister has failed to show. First, however, one must decide exactly what is depicted.

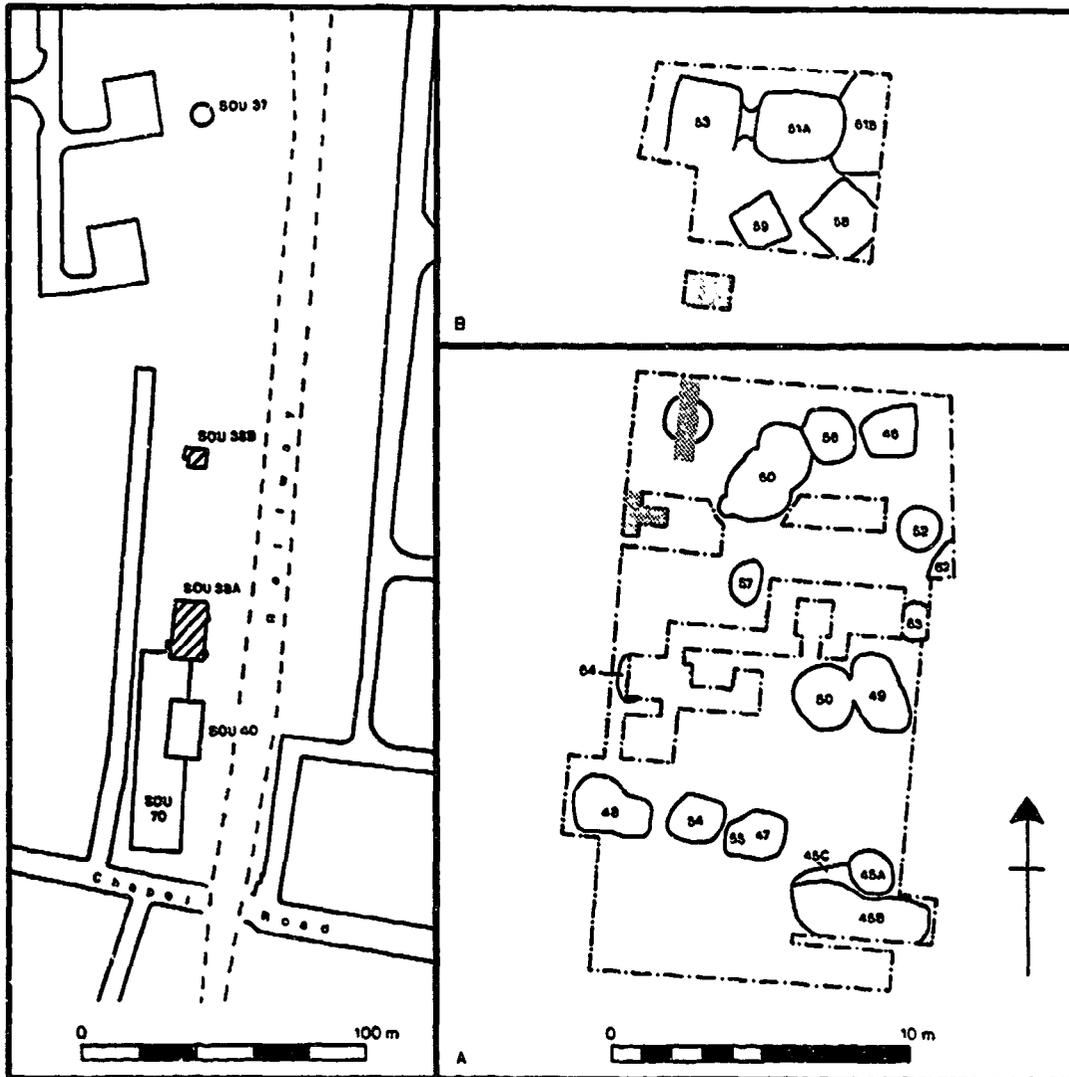


**Figure 116.** Plan of an area of SOU 34. The outer margin and the metric scale are recent additions.

It is unlikely that the three-sided margin was principally a margin. One would expect it to have been four-sided. It is not exactly square. And the upper length is slightly shorter than the lower length. The supposed margin is probably three edges of SOU 34, area b, after the first major extension of the site. The shape and dimensions of that area were described as

120 ft. [36.6m] by 38 ft. [11.6m], tapering from 38 ft. for half its length down to 25 ft. [7.6m] for the remaining half (SAS 1962b).

Half of 36.6m is 18.3m. The upper east--west line in fig 116 would have measured 19.2m. Since (one may suppose) the



**Figure 119.** SOUs 37 and 38: a location plan of the two sites in relation to other sites (the approximate position of SOU 37 is shown). Also, a more detailed plan of SOU 38 ('pit' prefixes are omitted).

### PITS

The two or three pits uncovered at SOU 37 seem not to have been fully exposed by the trench. They were 'apparently

SOU 60--64, SOU 79, SOU 81--82,  
SOU 94--95, SOU 98, AND SOU 176

During the early 1980s, intermittent rebuilding, the laying of electricity cables, and exploratory boring in advance of the construction of new roads allowed the opportunity to observe the underlying archaeology of the Newtown area. The sites mentioned in this report were all observed by P Andrews and the writer.

At every site, the natural soil was observed to be a yellowish brown fine sandy silt. Except at SOUs 81 and 82, it lay between 0.2m and 0.3m below the modern surface. At SOUs 62, 64, 94, and 95, a thin layer of dark greyish brown soil was interposed between the natural deposit and the modern makeup. This may have been ploughsoil: see the comments below on SOU 94. Other later disturbance comprised modern pipe trenches. This was so attenuated that it is not thought worthy of detailed mention here.

With the exception of SOUs 63, 81, and 94, separately discussed below, no possibly earlier features were observed apart from a gravel surface. This was observed in the sides of the trenches, SOUs 60, 62, 64, and 79. It consisted of a 5mm--10mm-thick layer of gravel in a matrix of dark greyish brown soil, laid directly above the natural soil. Laid under what is now the western half of Derby Road and the western pavement, at SOU 62 it was some 3m wide. Observations at the other three sites do not indicate a different width. Its supposed centre-line is shown on fig 128 as a broken line.

The gravel overlay a natural deposit and was cut by pipe trenches first dug in the last half of the 19th century. No other dating evidence was noted. It has been suggested in the main text that Derby Road was originally a Middle Saxon route, surviving to be mentioned in 1252 and shown on the 'Elizabethan' map of Southampton. It seems, however, that this gravel surface, which exactly coincides in position with the route shown on early-19th-century maps, was a late country lane.

SOU 63 was a 0.9m-deep excavation of the entire front garden of 197 Derby Road. This exposed yellowish brown brickearth, which one supposes to have been at least 0.6m thick at this point. Only one feature was noted; what

## SOU 12 (SARC XII)

## INTRODUCTION

In June 1973, L Gillibrand supervised the excavation of a small trench just to the north of Chapel Road. Topsoil was removed mechanically from an area measuring at most 5m north--south by at most 4.5m east--west. The exposed surface was trowelled clean and features were then excavated. Within the area of some 14m<sup>2</sup>, only two features were noted in detail. These were numbered FF1 and 2.

A yellowish brickearth was encountered at 1.74m OD. Its thickness is not known. Modern disturbance comprised two pipe trenches and a pit.

## FF1 AND 2

Two east--west linear features were found, running across the site. Both seem to have underlain the topsoil. Both were cut by 'Victorian features'. F1 (0.22m wide by at most 0.09m deep) was irregularly stepped in profile. F2 (between 0.26m and 0.42m wide, and 0.11m deep) was U-shaped in profile.

F1 contained no dating evidence. The pottery from F2, which has since been lost, comprised an 'oxidised sherd' and a 'small glazed sherd'. The latter may have been intrusive.

Although the features may have been dug for a structural purpose, equally they may have been field boundaries, associated with small baulks. Neither can be dated, except to a period before 1840. The excavator thought that the features were unrelated. There is no reason to doubt this.

Various sub-groups were then assessed relative to each other: adult males against adult females; trench A burials against trench C burials; and large, distinct burial groups against each other. It was not possible to compare adults against children, in the first place because it is not clear when an Anglo-Saxon child was looked upon as an adult (see the following report); and in the second place because the available sample was very small. The chi-square test was used to discover if any one sub-group was significantly closer aligned to 96° than any other. At the 95% confidence level, no significantly closer alignments were found.

It is possible, however, that the division of the alignments into 2° units is still too precise. Kendall (1983, 116) noted that graves he dug in an experiment varied by up to 5° from their intended alignment. If his findings were translated to the SOU 13 cemetery, one would have to study the grave alignments in 10° blocks. It would then be noted that only seven of the 34 burials (20.6%) varied by more than 5° from 96°; and only four of the 28 adult burials (14.3%). These data are shown as fig 98a, above. It is possible that 15° gives too large a unit. The grave diggers at SOU 13 were constrained, we may assume, in ways that Kendall was not: they were digging graves in a small area, where alignments might be limited by the pre-existence of earlier graves in the same row. One standard deviation of the adult burial alignments was in fact 3.2°. For most purposes one may probably divide the burials into 6° units centred on the mean (fig 98b, above). With such units, not surprisingly, no difference will be seen between any sub-group.

SOU 32

### Introduction

All sixteen graves and grave-like features were looked at. Where a skeleton had survived largely intact, its alignment was calculated, as in the SOU 13 examples. Where no skeleton survived, but the grave did, the east--west centre line of the grave was taken to be its alignment. Where only fractions of a skeleton or a grave survived, whatever was available for study was looked at. In the case of F462, this meant assuming that one side of an apparently rectangular grave preserved the alignment of that feature.

Such methods are more subject to error than those used in calculating the SOU 13 alignments. Accordingly, the alignments were grouped without any attempt at greater refinement into blocks of 6°, centred on the mean.

## SOU 13: COFFINS

### INTRODUCTION

The following 38 skeletons were sufficiently well recorded and thought sufficiently intact to merit study:

FF1, 2, 7, 10, 15, 17, 26, 27, 29--33, 37, 40, 44, and 47 in trench A;  
FF53, 58, 59, 65--7, 69, 70, 73--6, 78--80, 82, 83, 88, 89, 101, and 103 in trench C.

These represent 37.8% of the burials in trench A, 58.3% in trench C, and 46.9% overall.

The search for evidence that bodies had been encoffined was confined to five matters: the survival of wood stains; the survival of fittings; signs that bones had been shifted about or within a coffin-shaped area; and signs that a body had been tightly pent in its grave. These five areas, which are not all mutually exclusive, are considered separately below.

### WOOD STAINS

A wood stain was noted either side of F27. The presence of an upper covering is implied by the fact that the body was preserved intact from the digging of the pit, F34; also by the way the later burial, F2, seems eventually to have tilted into the earlier grave -- as if an upper covering had eventually collapsed into an underlying empty space.

No associated metal objects were found, and it may be presumed that the coffin was held together with wooden pegs.

It should also be noted that F27 was a parallel-sided burial, of a sort that can be associated with interment in a coffin (see below).

### COFFIN FITTINGS

Recovered from the area of the burials were some 30 nails (four with washers); two large rivets (one with a washer);

have been listed above. As is indicated in fig 102, there is only slight evidence that pits were distinguished by their depths, with one group no deeper than 0.34m deep, a second group between 0.8m and 2.49m deep, and a third group at least 2.95m deep. No correspondence can be noted between a pit's depth and its shape in plan or section.

Six pits had been dug into the natural gravel. None possessed any sign of a shaft; none can easily be interpreted as a well. However, four (FF27, 45, 49, and 54) had been infilled initially with redeposited brickearth and gravel, intermixed with small amounts of rubbish. It is estimated that, before slumping, none of these backfillings was less than 1m deep; and the initial fill of F49 probably had been over 1.7m deep. In line with the arguments about unfinished wells -- arguments to be found in the main text -- it is possible that these features had first been dug as wells but never completed as such.

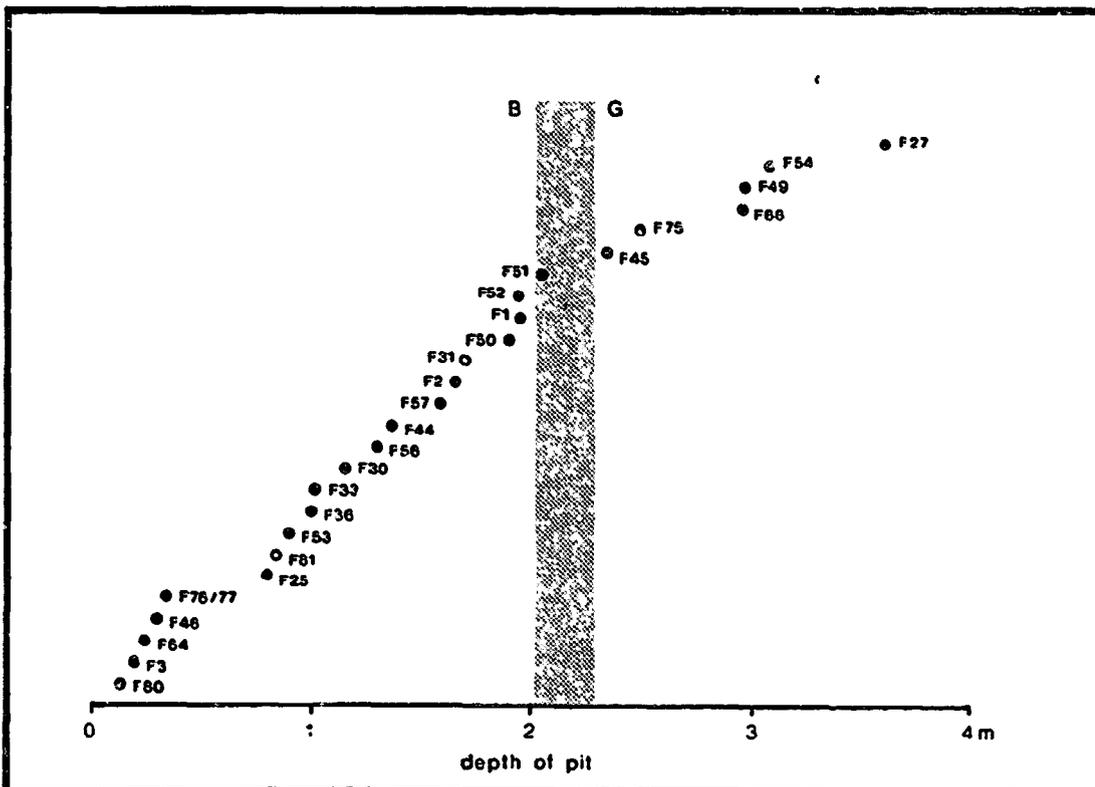


Figure 102. SOU 15: pit depths.

## SOU 19 (SARC XIX)

## INTRODUCTION

In June 1975, M Blades directed the excavation of a small and roughly square trench at the north-west corner of Wolverton Road and Northumberland Road. The area exposed measured 31m<sup>2</sup>. Initial clearance of the topsoil was by machine. All features (numbered F1--F5) were excavated after the trench surface was trowelled clean.

Fine sandy silt loam ('brickearth') appeared at a depth of 2.77m OD, was 0.88m thick, and overlay gravel. No certain evidence was found of post-Anglo-Saxon disturbance; but see FF2 and 4 below.

## EARLY FEATURES (fig 103)

F1 (fig 104), which was half-sectioned, was a large pit, irregular in plan and sub-rectangular in section. Most of its fill comprised redeposited brickearth (layers 5, 6, 11, 12, and 16), interspersed with two layers of dark earth (layers 9 and 14) and five very charcoaly layers (layers 4, 7/8, 10, 13, and 15). In the top of the pit a saucer-shaped hearth was found. This consisted of a lining of redeposited brickearth, burnt red in the eastern half (layers 2--3). Filling this was a layer of rubbish.

The hearth was presumably domestic. Although there were no other signs of in situ burning in the pit, it is just possible that the charcoal layers are the remains of earlier slow-burning surfaces. The sequence of layers and some aspects of the shape of this pit are similar to those found in SOU 16, F55.

The pottery found throughout F1 was mainly sand- and chalk-tempered, and probably indicates that the pit was filled in at some point in the mid Middle Saxon period. Two fragments of Anglo-Saxon vessel glass were also recovered.

F2 was fully excavated. It was only 0.18m deep and probably recut (the supposed recut being generally 0.1m deep). It was bowl-shaped in both cases. The lower layer, filling the original cut, also filled a post-hole, F4, which had been dug into the north-eastern edge of the feature.

**SOUs 28--32**

**SOUs 28 and 29 (SARC 28 and 29)**  
Not Hamwic sites.

**SOUs 30 and 31**  
Six Dials sites. See Andrews forthcoming.

**SOU 32 (AH 23)**  
See the main text of this volume. For a supplementary report, see MF1:A6--B6, above.

appears to have been a late infill of dark soil.

F27 was of unknown depth and shape in section. Its fill comprised 'dark brown clay loam, charcoal, and [burnt] daub flecks'.

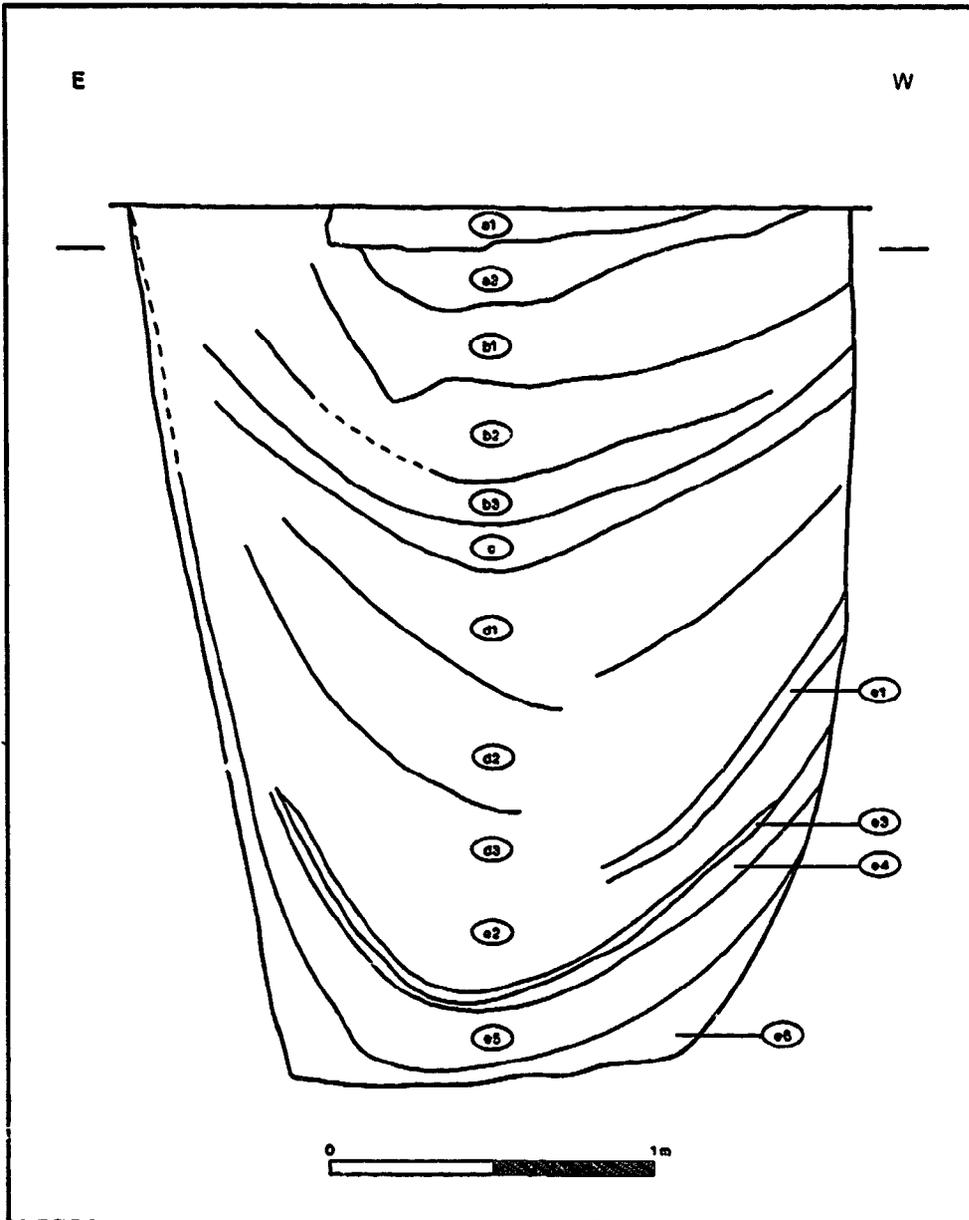
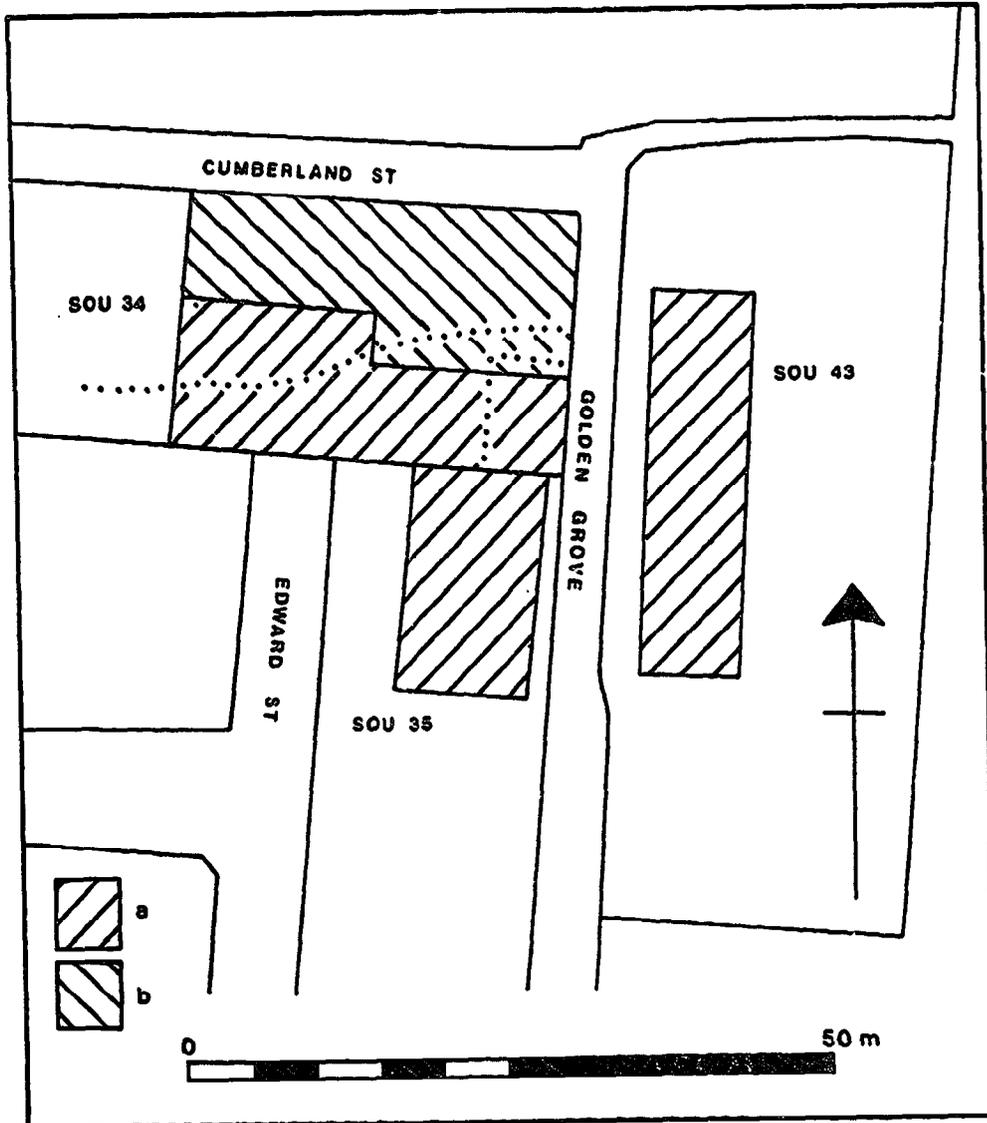


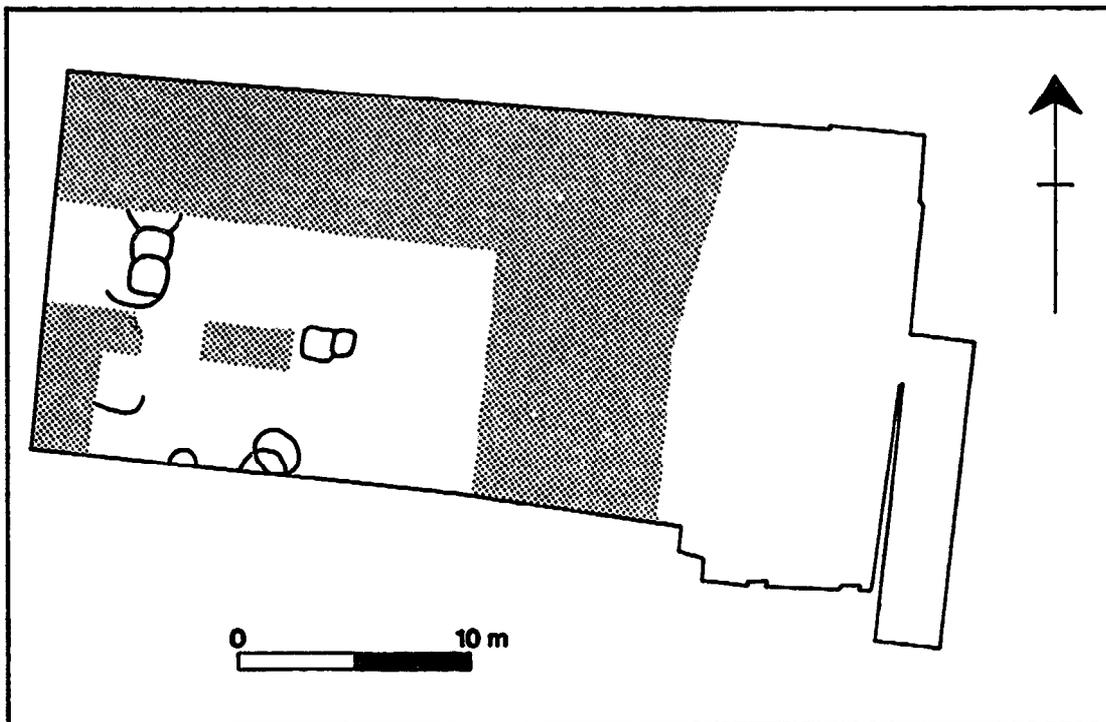
Figure 109. SOU 33, F25: section drawing.



**Figure 112.** Aberg's location map of SOUs 34, 35, and 43. The street pattern of the early 1960s is shown. A metric scale has been added to this copy. The site numbers are further additions. The hatched shading indicates (a) the first stage of the drawing and (b) a later stage. The dotted lines represent solid lines drawn on the original plan, probably marking pipe trenches.

reference in the bulletin to 'half' of 36.6m is only an approximation, the difference of about a metre between the stated and drawn measurements is probably unimportant. The north-south line in fig 116 would have measured 10.1m. According to the bulletin, the width was 11.6m. Again, the discrepancy (which, in Imperial measurements, amounts to two feet) might be ascribed to a looseness of description in the bulletin. Alternatively, or in addition, the written description may refer to the top of sloping trench edges, and the plan may show the area eventually exposed at the bottom of the slope.

Because of the similarities of measurement, it is supposed that fig 116 depicts the western half of the area known here as extension b. It seems that this area incorporates the original, smaller trench. Given all the assumptions so far made, the only possible combination of figs 115 and 116 is that shown on fig 117.



**Figure 117.** The supposed area of SOU 34, showing the likely positions of the pits drawn on figs 115 and 116. Areas not planned in detail are stippled.

some 6 feet [2m] in diameter' (ibid). Reference to diameters implies that they were circular or perhaps oval. Only 'partially explored[, their] fillings consisted generally of occupation debris. Objects from the pits included many animal bones' (ibid). They seem to have been filled with domestic rubbish.

One of these pits produced a coin, described below. There is a reference to 'timbers lining' that pit (Schove 1955, 371), but the authority is a poor one. The informant, AWG Lowther, based his comments on a preliminary report on the excavations at SOUs 36 and 37 (Maitland Muller 1949b) -- which does not in fact include any reference to such a lining. It is possible, therefore, that there has been some confusion between the coin-bearing pit of SOU 37 and the lined pits of SOU 36; or even the lined well of SOU 38.

Of the 23 pits exposed at SOU 38, only pits 61B, 62, and 64 lay extensively outside the excavated area. With the exception of pits 63 and 64, only the tops of which were investigated, all pits appear to have been fully excavated within the confines of the site.

Although section drawings were made, none has been seen by this writer, and little can be said of the pits individually. Their shape in plan is evident on fig 119.

One feature contained 'an inner wooden shaft [like those] discovered in past years at the Kingsland site [SOU 36]' (Maitland Muller and Waterman 1951a, 134). Presumably it was a well. There were also 'three ones with vertical sides and the preserved stumps, a foot [0.3m] or so high, of three posts rising from the floor in two cases' (ibid). The syntax leaves it unclear whether three pits each contained a post, 'rising from the floor in two cases' (and, in the third case, presumably contained within the fill); or whether two of the three pits contained the three posts rising from the floor. The pits, which were rectangular features, may have been pits 53, 58, and 59; an intriguing concentration if true.

It was also reported (ibid) that 'Several pits contained much organic matter at the bottom: grass, twigs and over a thousand fruit stones.' Unfortunately, none of this material is available for study now. Some of the 'organic material' may have been cess.

#### DATING AND DISCUSSION

The pits of SOU 37 contained Middle Saxon pottery. One also contained a coin (item 4; M135) of Berhtwulf (840--52). According to AWG Lowther (cited in Schove 1955, 371) the coin 'was in an upper part of the filling'. No other authority exists for that statement.

**SOU 41 (HAM A: AH 20) AND SOU 42 (HAM B: AH 19)**

SOU 41 and 42 were opened almost contemporaneously either side of the now defunct Grove Inn. Excavations, which were directed by FA Aberg, took place in August 1961. These consisted of removing the overburden by hand, cleaning the underlying surface, and searching in vain for Anglo-Saxon features. SOU 41 was formed from two north--south-aligned trenches, 'each 10 x 24 ft [3m by 7.3m]' (SAS 1961a); and SOU 42 from two trenches 3m square. The area exposed at these two sites measured 62m<sup>2</sup>.

'Natural clay' was encountered at a depth of 1.1m below the ground surface at SOU 41 and 0.9m at SOU 42 (probably somewhere about 2m OD). This was brickearth, presumably. It was reportedly 'orange', perhaps yellowish brown.

Both sites had been heavily disturbed by sewer trenches and by 'modern pits from recent disturbances' (which were probably pits for Anderson shelters). Had there been Anglo-Saxon pits, one would have expected some portion to have survived. The absence of such features may be taken as a genuine one, therefore. But the absence of shallower features or possibly above-ground layers might be ascribed to the considerable disturbance of the area.

[Map on following sheet]

modern features were discovered. In the other trench, 5m to the north of East Street, a great many features were discovered. Unfortunately, the plans and section drawings that were made have all been lost. It seems that the majority of the evidence comprised structural features, pits, and layers relating to post-medieval and later uses of the area. A few of these features appear to have been medieval. It is overstating the case to claim that 'the earliest occupation [evidence found was] of the c. 12--13th centuries' (Addyman and Hill 1968, 75). Nevertheless, the earliest datable evidence appears to have been early medieval.

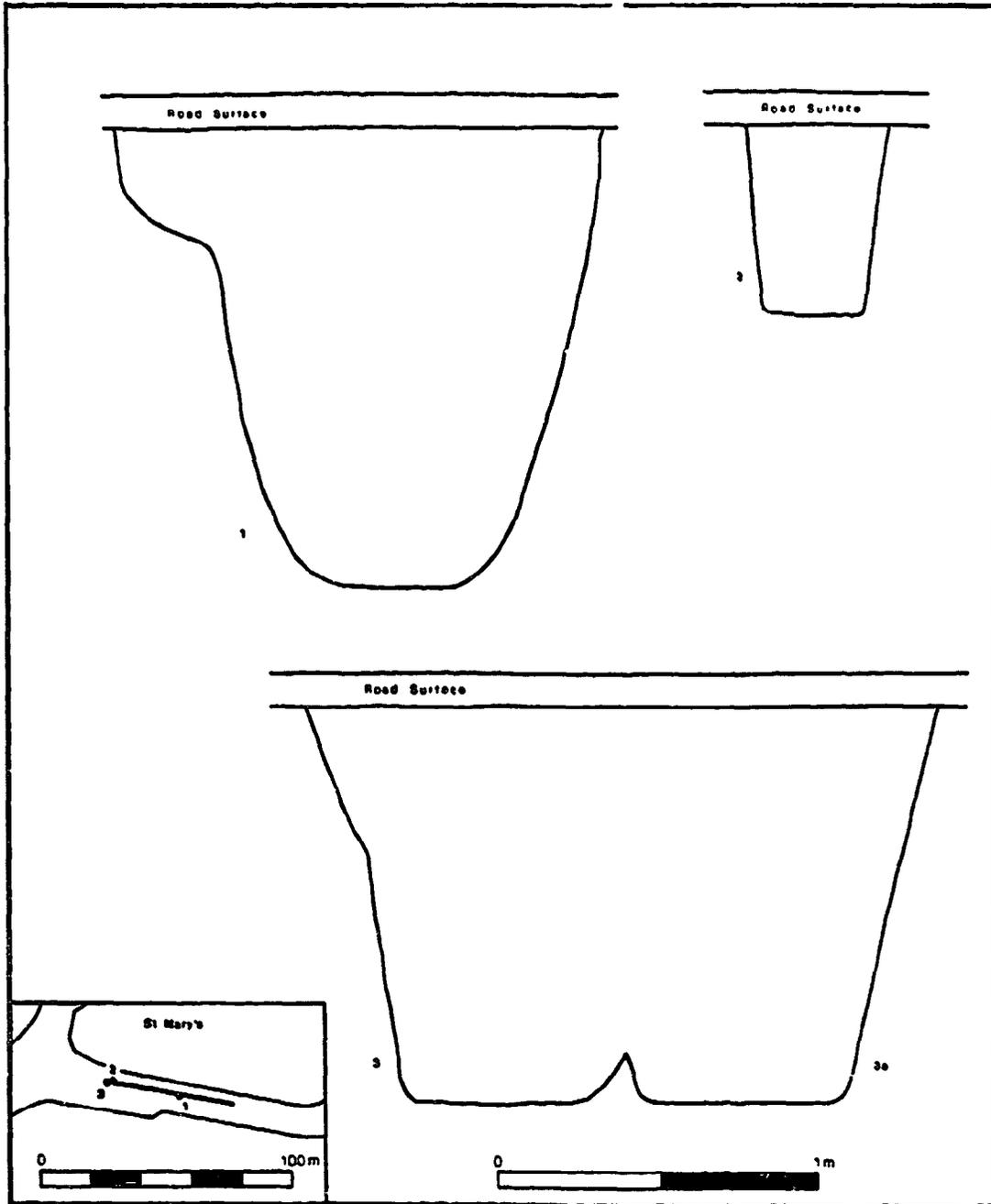
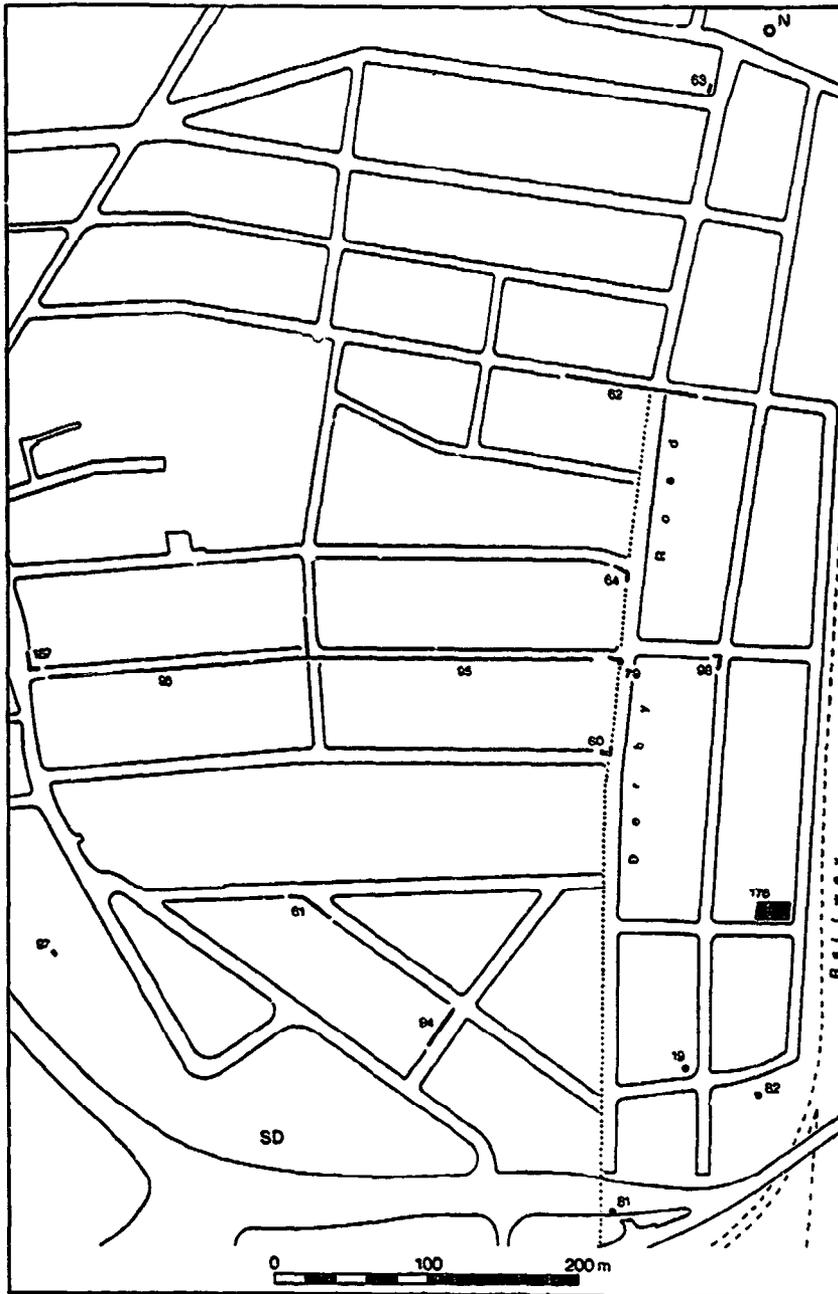


Figure 126. SOU 56: a location map and section sketch ('pit' prefixes are omitted).



**Figure 128.** SOU 60 etc: a sites-location map ('SOU' prefixes are omitted from site numbers). The dotted line indicates the probable course of part of a gravel surface. Key: N Northam Farmhouse, SD Six Dials.

MF1:A5

**SOU 13 (SARC XIII)**

See the main text of this volume. For supplementary reports, see immediately below.

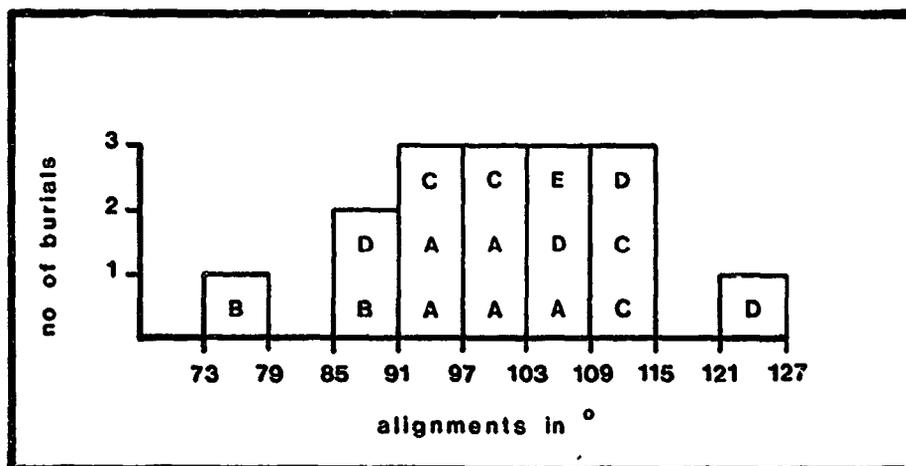


Figure 99. SOU 32: grave alignments in 6° groups. Letters indicate grave rows.

## Results

(As before, 0° represents OS grid north.) The alignments of the sixteen graves and grave-like features varied between 76° and 126°, but the main spread was between 86° and 114°. A difference of 28° scarcely warrants speculation about solar burial practices.

Whether or not the two eccentrically oriented graves are included in the calculation, the mean alignment and semi-interquartile mean were 100° (sd 12 and 5 respectively). Accordingly, the 6° blocks have been centred on 100°.

The resultant histogram (fig 99) does not display a normal density function about that point. This may be because the sample was a small one; but may indicate, instead, a tendency to bimodal distribution -- perhaps the differences in alignment between graves in different rows.

The two graves in two B were both aligned at less than 90°, and the mean alignments of the more compactly grouped graves of rows A and C were aligned either side of 100° -- respectively, at 98° (sd 5) and 103° (sd 8). Row D, which was widespread, had a mean alignment of 108° (sd 15). To put this matter another way, the two rows to the west of the supposed church were generally aligned at less than 100°, and the two rows grouped around the church were generally aligned at more than 100°. Given the extreme range of a row such as row D, it is difficult to assert that such differences were real. However, a scattergram of the same information (fig 100) does show a positive correlation

perhaps two more washers; and perhaps six coffin-clamps. With the exception of four objects, mentioned below, none was found in a primary context. It is possible that the rest had been used principally in the fastening of coffins; but equally possible that there was no such association. An intermediate possibility is that the objects had been used to fasten timbers reused in the construction of coffins.

This last interpretation seems the most likely one to make of items 23, 24, 28, and 29, three nails and one possible coffin-clamp found in a line just above the southern side of F83 (fig 47). It is difficult to see how these objects could have fastened a lid to a side of the coffin, and it is reasonable to suppose that they had fastened together two timbers out of which the lid had been constructed. Possibly, these had been ship's timbers, such as were found at Caistor-by-Yarmouth (Green 1963, 57, n128).

Again, it should be noted that F83 was a parallel-sided burial and seems therefore to have been buried within a coffin.

#### MOVEMENT OF BONES

The burial of F17 was the last stage in the redeposition of a large number of skeletal fragments, F9 etc. Much of this material seems to have been thrown back into the grave, where it formed two lines either side of F17. The straightness of these lines (except where they rose above, and slightly overlapped, F17) is best explained if one assumes that the bones had been packed partly around a coffin. Certainly, the parallel-sidedness of F17 suggests that it had been encoffined.

It may be that other bones were similarly redeposited in other graves, outside a coffin; but their numbers are generally too few to allow any certainty in this matter. One may note the disposition of FF20 and 21, all but the uppermost of which forms a straight line of redeposited bone to the south of F10 (F10 also being mentioned in the next section); and perhaps the disposition of F39, a line of redeposited bone by the side of F41 and slightly over it.

F30 had been disturbed in its upper half by the digging of the pit, F110. As a result of this disturbance, its skull came to rest over its midriff; something suggesting that the skull was free to move in an open space such as a coffin. Unfortunately, the disturbance was considerable enough to mask any clear evidence that F30 was a parallel-sided burial -- but at least the surviving evidence does not discount this possibility. On the balance of probabilities, it is likely that F30 had been buried in a coffin.

All pits of a depth of 0.8m or more appear to have been filled over a considerable length of time, largely with rubbish. It is unclear how to interpret the six shallowest pits, some of which covered a wide area, and all of which contained rubbish. The slightest of these features may have been trampled areas alongside rubbish pits rather than deliberate excavations.

Notable amongst the rubbish thrown into the pits were the remains of perhaps four industries.

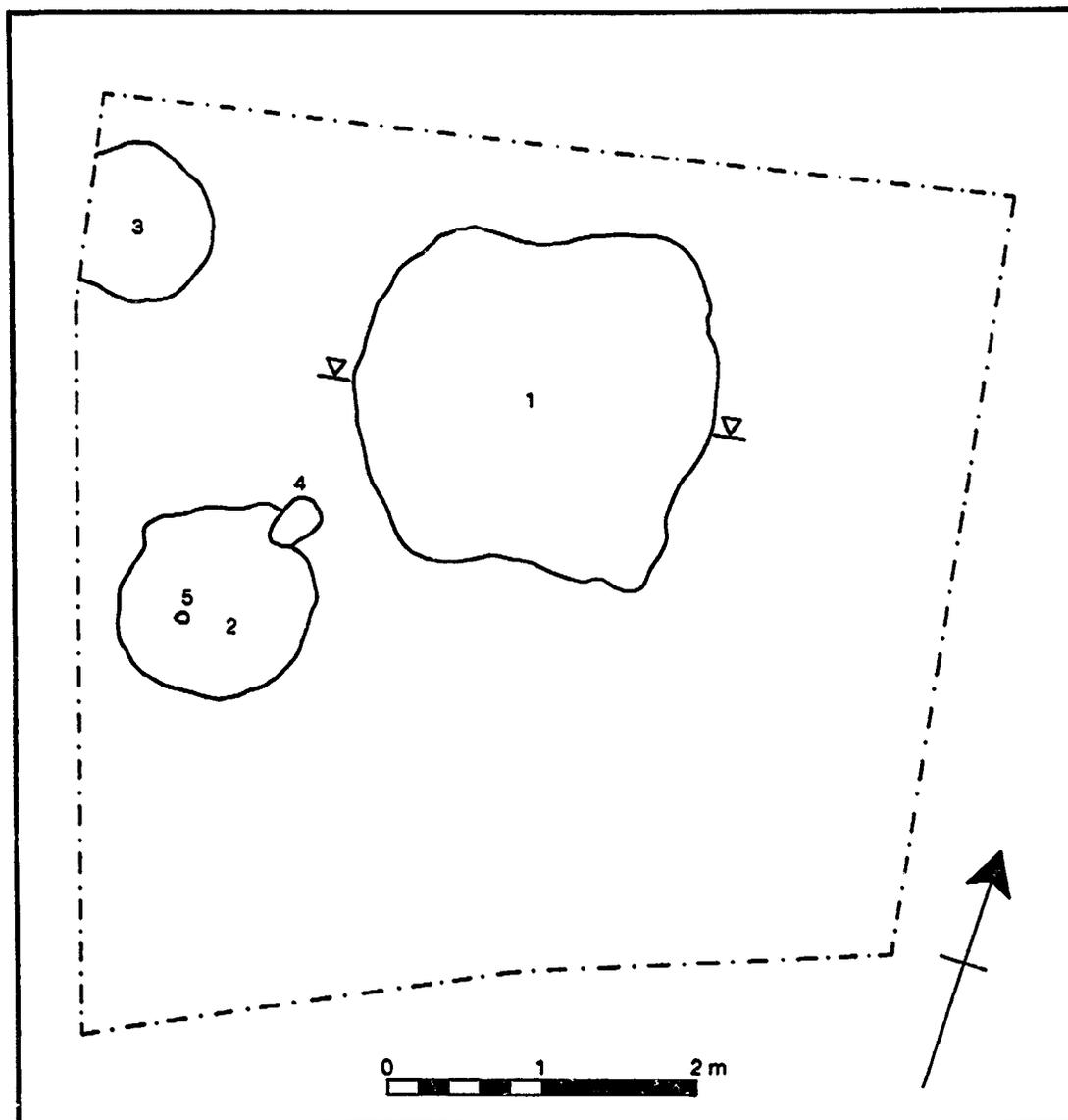
### Copper-alloy Working

Evidence of copper-alloy working survives as a fragment of a heating tray from an unknown layer in F1 (item 474), a fragment of a crucible rim from F49,2 (item 475); three crucible body fragments, two from F27,5 (items 477 and 478) and one from F75,1 (item 476); and the fragmentary remains of a crucible base and body from a context listed only as 'unstratified' (item 479). Five other 'crucible fragments' prove to have been fragments of hearth lining. Another seven 'crucible fragments' cannot now be identified. Probably, they too were pieces of hearth lining, but it is just possible that some were fragments of crucible. These were recovered from F1,2 (two pieces); F2,1 (one piece); and F53,1 (four pieces).

The copper-alloy-working evidence was recovered generally from the upper fills of the seven pits. Regardless of the dating of the main infill of the features, these late deposits may have been roughly contemporary. The disposition of the pits containing that evidence is a curious one (fig 101). One should be cautious in one's interpretation of it, for not all the features on SOU 15 were excavated, and the disposition may anyway be said to conform to the shape of the site. Even so, the pits do seem to fall into two lines within separate areas. These may have been lines of pits dug on the edges of properties, a phenomenon remarked upon in the main text. Alternatively, the pits were disposed perhaps either side of a central building or working area. For there to be any certainty in this matter, a larger trench would have had to be opened, and structural evidence preserved far better than it seems to have been (see below).

### Smithing

'Slag' was recovered from many of the layers infilling 25 negative features; effectively from nearly all of the pits excavated, and in the case of F69 from one of the pits only



**Figure 103.** SOU 19: a site plan. 'F' prefixes are omitted from the feature numbers.

The upper layer, associated with the recut, also filled a stake-hole, F5, cut into the bottom of F2. Both layers contained flecks of charcoal, much charcoal being found in the upper layer.

Although it may have served some industrial purpose, the particular use to which this shallow feature was put is

## SOU 33 (AH 24)

## INTRODUCTION

Demolition of the houses immediately to the north of Chapel Road and east of St Mary's churchyard provided the opportunity for the investigation of this area, in 1969, under the direction of RG Thomson. The investigation took three forms: the preliminary opening of four small test holes, in which four 'Saxon pits' were uncovered but not excavated (this, properly speaking, is the entirety of Addyman's and Hill's Site 24); the excavation of a small trench (marked B on fig 106), 0.5m east of the churchyard, at SU 4267 1166; and the observation of foundation and service trenches dug further to the east as a first stage in the erection of a new building for Southampton Technical College (marked C on fig 106).

The excavated trench measured at most 13.8m north--south and 8.4m east--west, and exposed an area of some 97m<sup>2</sup>. Overlying the area was concrete, nearly all of which was mechanically removed. The underlying soils were removed by hand until features cut into the natural brickearth were exposed. These features, numbered F1--F43, were then excavated. The digging of foundation and service trenches proceeded at the pace determined by the contractors, who nevertheless did allow short interruptions of their work for archaeological reasons. The trenches were spread over an area measuring 60.5m north--south by 48.0m east--west. In all, about 160m<sup>2</sup> were observed. Features here were numbered only if finds were recovered from them. These numbers were F50--F71. This writer has added F49.

The natural soil, usually described as 'clay' by the excavator, was probably brickearth. The digging of F8, which was 1.97m deep, appears not to have exposed the gravel that one may suppose underlay the brickearth.

Modern disturbance in trench B comprised a number of rectilinear features in the southernmost portion, a post-hole in the north, and the robbing of a wall in the west. Some of the rectilinear features (not all of which are illustrated in fig 107) were pipe trenches. The function of the others, called 'beam slots' by the excavator, is unclear. They and the solitary post-hole may

F28 was cut through F37, and probably through F29. The section drawing made of this pit no longer exists. Its fill, which appears from the following description to have derived from domestic refuse, was 'dark brown clay loam, pebbles, charcoal and daub flecks, and some animal bone; with tip lines of oyster shell and brown-black clay loam.'

F29 reportedly was cut by FF25 and 28. A post-hole may also have been cut through its fill. There is now no record of its depth and shape in section. Somewhat amorphous in plan, it may have been not an independent feature but an area of weathering between the pits that are supposed to have postdated it. Its fill of 'brown-black clay loam, charcoal, and [burnt] daub flecks' may have derived therefore from the upper fills of FF25 and 28.

F34, also numbered F37, was cut by F28 and modern linear features. It was excavated as an adjunct of F28 and its fills were not separately distinguished. Its shape in section and depth were not recorded.

F35 seems to have been only cursorily investigated.

F43 was probably cut by the robber trench, F2. All that is recorded of the feature is that it contained a central 'black fill' of about 0.4m diameter, surrounded by 'brown-grey' soil. This unusual combination, and perhaps the overall dimensions of the feature, led the excavator to suspect that F43 was a large post-hole. No further information is available.

FF49--71 were 23 of the 71 features exposed during the redevelopment of area C (fig 110). The concentration of pits into two lines in the southern part of the site, if it is not to be ascribed to chance, may indicate the existence of property divisions. The excavator distinguished a line of square pits, FF54, 60, 61, and 64, which appeared different from the other pits; and a similar line indicated by the presence of FF49 and 58, which were interpreted as large post-pits (RG Thomson, pers comm).

From a pit known as F47 (not otherwise distinguished in the records) were

glass fragments of Ceramic [Germanic] origin and a fragment from a glass crucible which might be taken as evidence for glass making at Hamwih but . . . is more likely to be a stray fragment from the German glass workshops brought into Hamwih in the packing material around the imported glasses (Thomson 1970, 17).

The imitation coin of Offa, provenanced in the finds records to F8, in fact was found in F50 (ibid).

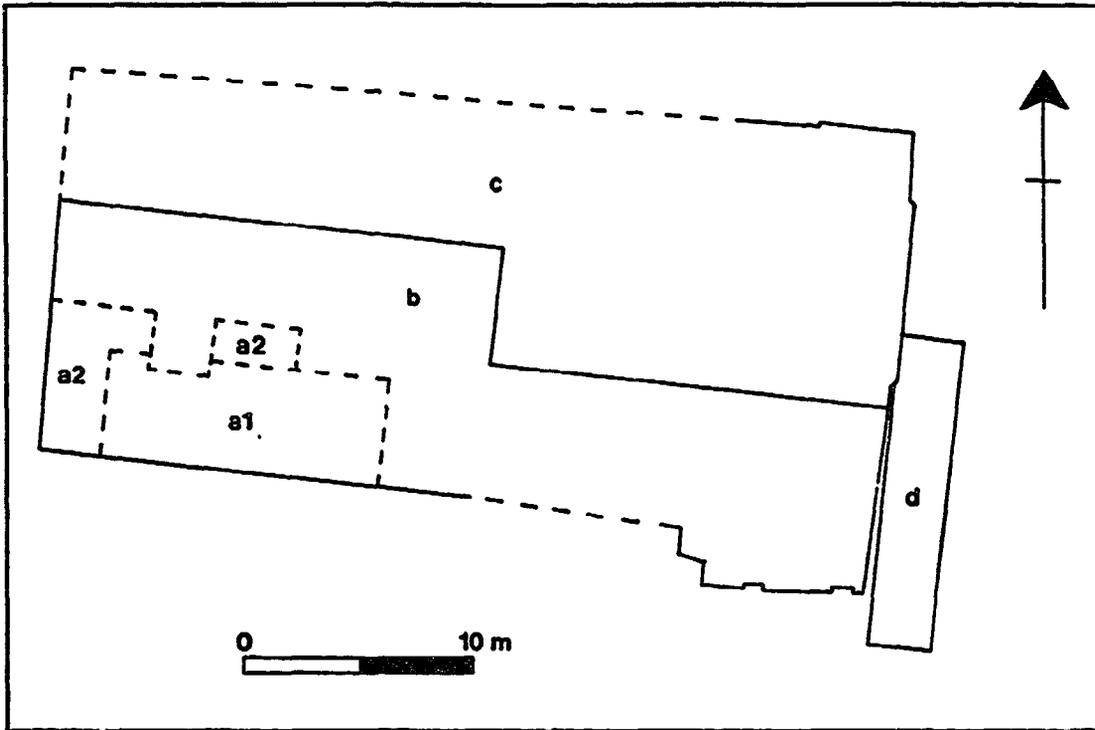


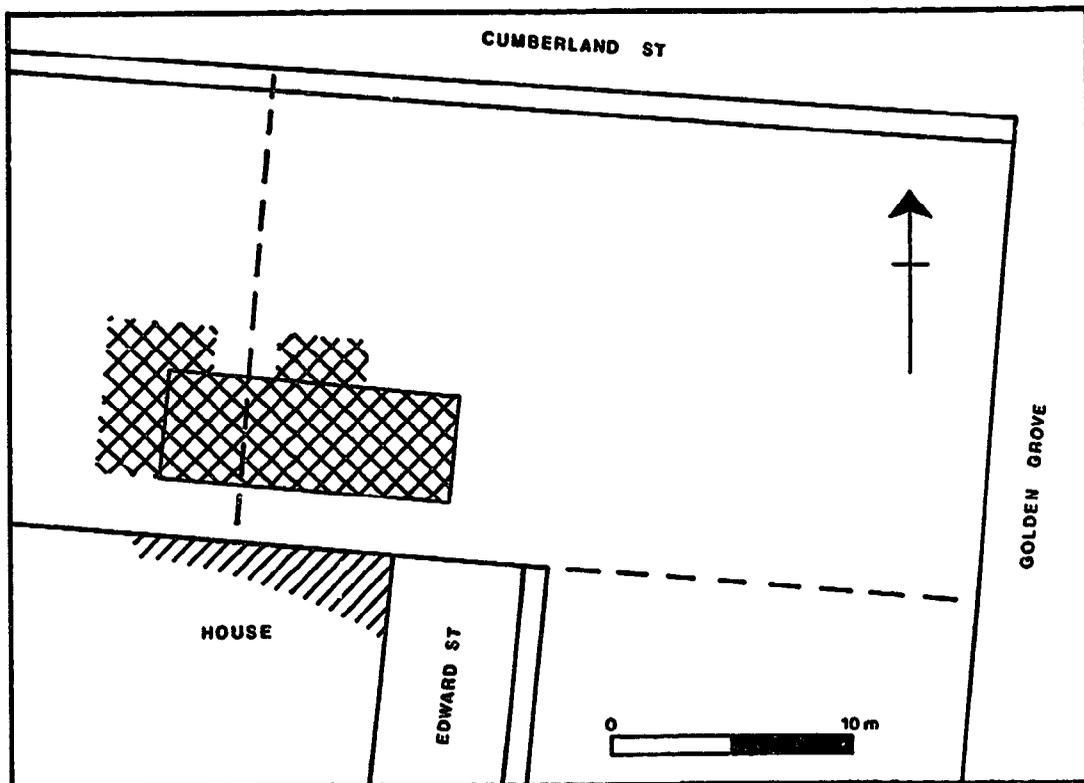
Figure 113. A reconstruction of SOU 34, showing the main phases of expansion of the site (a--d).

difficulties in getting the plans to agree, there are no great problems involved in exactly locating this quarter just to the north of SOU 35 (fig 73) and inside what was then the edges of Cumberland Street and Golden Grove. (The location of SOU 35 is taken from a careful sketch included by Aberg in his excavations notebook, a plan more accurate than that shown here as fig 112.) Similarly, the shape of area d is known from a site plan, and its position relative to the eastern quarter can be calculated fairly closely (see fig 74). Little needs to be written here about the eastern quarter and area d. Little can be written about the rest of area c. Therefore, the following pages are largely concerned with areas a1 and a2 as well as the remaining three-quarters of area b.

#### THE EARLY EXCAVATIONS (AREAS A1 AND A2)

Aberg drew a location map of 'Site E' in his site notebook,

Pallister, in his excavation report, described in detail only those pits excavated under his direction: his one description of pits excavated before he took over consists of the statement that pit 144C was 'One of a group of pits excavated by Aberg' (Pallister nd, 4). Clearly (if strangely) he seems to have had no access to any detailed information about the excavations he inherited, and this ignorance probably extended to the boundaries of the original trench -- an area incorporated into extension b. The boundary he meant to mark probably lay in fig 116's open area below pits 155--9 and to the side of pit 156. The configuration shown on fig 117 allows the tightest possible fit between the two plans without any overlap of detail. It will be appreciated that the fit is very tight indeed.



**Figure 118.** A comparison of area a, as shown in figs 114 and 115 (the cross-hatched areas), and the entire site, as shown in fig 112 (outlined with a broken line). Topographical features are taken from figs 112 and 114.

It is not clear whether or not a wooden lining was found at SOU 37, or whether at SOU 36 or 38 (see above). Certainly, a dendrochronological date was obtained which, after several revisions, may have been  $758 \pm 30$  (Schove 1955, passim; Schove 1959, passim; Schove and Lowther 1957, 80--2; Schove 1973, 44).

At SOU 38, pottery was recovered from all features except pits 55, 57, 62, and 64. The pottery from 'pit 45' was not distinguished by a letter suffix; and pottery from pits 61A and 63 was recovered from each feature's top fill only. Nothing suggests, however, that pits 55, 57, 62, and 64 were not Middle Saxon; nor that one may discount any of the pits 45A--C as Middle Saxon.

The pottery from pits 61A and 63 indicates that their final fills accumulated in the Middle Saxon period. More precise relative dates for the infilling of other pits can be suggested. Pit 48 contained early Middle Saxon pottery; pits 49 and 50 early or mid Middle Saxon pottery; and pits '45' and 60 mid or late Middle Saxon pottery. It is likely, therefore, that occupation at SOU 38 lasted throughout most of the 8th century and into part of the 9th century.

There appear to have been east--west lines of pits, the most obvious of which ran east from pit 45A in site A and pit 61B in site B. Perhaps pits 44 and 46 marked the eastern limits of their lines. It is suggested in the main text that such pits were dug over a period of time between properties. This may be the explanation of SOU 38's lines. No post-holes cut into the brickearth were observed, however; probably because any that had existed in the area had been destroyed by brickearth digging.

The 'three posts' found in certain pits are difficult to interpret, principally because of gaps in the archive. If they were similar to those found at SOU 11, in FF44 and 66, probably they served no structural function. On the other hand, if they were more substantial, it is possible that they 'could have supported the roof of the pit or been part of stairs or some sort of storage structure', as Maitland Muller and Waterman (1951a, 134) suggest. It is surmised in the main text that rectangular pits were originally storage pits, and these posts were found in rectangular pits.

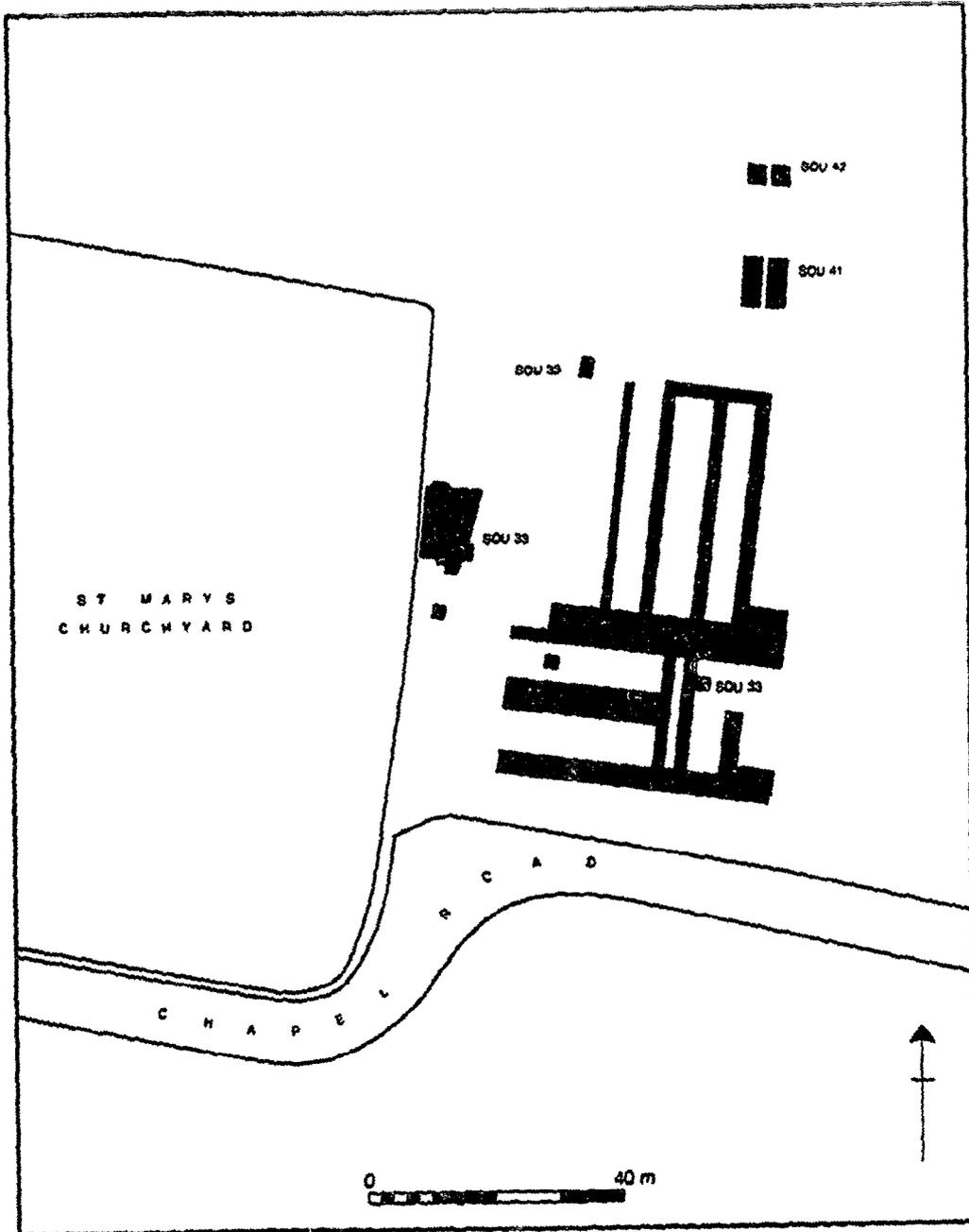


Figure 122. SOUs 41 and 42: a sites-location plan.

**SOU 46--52 (AH 1--7)**

Nineteenth-century sites. See Addyman and Hill 1968, 66--9 and their references. See also the main text of this volume. For a supplementary report on SOU 52, see immediately below.

## SOU 57 (AH 26), SOU 73, SOU 74, AND SOU 75

### INTRODUCTION

In February 1969, a test hole (SOU 57) was dug into what was then thought to have been part of the lagoon, at a point 95m south of Anglesea Terrace and roughly equidistant between Glebe Road and Anderson's Road. The trench, aligned north--south, measured 5m by 3m. The east-facing section was drawn (fig 127). This drawing and the accompanying notes provide most of the evidence about what was found.

In June 1973, a second test hole (SOU 73) was dug some 5m south of Anglesea Terrace. This was 3m square. In March 1976, a 5m-square test hole (SOU 74) was dug roughly equidistant between Albert Road and Ryde Terrace and some 50m north of Chantry Road. This excavation was directed by M Blades. Two months later, D Barrett and the writer directed the digging of SOU 75, a 3m-by-2m test hole at the south end of Ryde Terrace.

### STRATIGRAPHY

The records of SOU 57 provide the best evidence about the stratigraphy of the area. The layers are shown in fig 127. Direct quotations in the following list are from either the original notes on the drawing (D) or from notes in the site notebook (N). Where the quotation is unacknowledged, it is from D and effectively the same description appears in N. This writer's comments are underlined.

- Layer 1: 'Victorian levels'.
- Layer 2: 'Pale yellow silt with occasional flint. Separated from layer 1 by a thin layer of stones. Lightens in colour towards the bottom; also small, 1--2cm flint evenly dispersed over bottom third'. Encountered at a height of about 1.52m OD. Brickearth?
- Layer 3: 'Gravel and grey silt' (D). 'Grey silt and gravel' (N). Encountered at a height of about 1.09m OD. Valley gravel?

seemed to be a quarter of a circular pit in the south-east corner of the site. This pit, which may have been some 2m in diameter, contained a moderately gravelly, dark yellowish brown soil. Cut into the natural brickearth, it was sealed beneath a 19th- or 20th-century layer. It proved impossible to investigate the contents of the pit, and the date of its infilling is unknown.

SOU 81 was observed when Southampton City Engineers sank a borehole to test the natural soils at the southern end of Derby Road. The ground level has been considerably and artificially augmented at this point, and modern soils comprised the first 1.75m or so of the sample. At about 4m OD, a thin layer of dark greyish brown sandy silt loam was encountered. Below that were three layers very like a pit fill. These were mainly dark greyish brown fine sandy silt loam, moderately gravelly, and containing small fragments of burnt clay and charcoal, as well as some fragments of bone and shell. No dating evidence was obtained. Beneath the supposed pit fills, at about 3m OD, natural brickearth was reached. This was yellowish brown fine sandy silt.

SOU 82 was another borehole, dug to the south of Wolverton Road. Beneath 1.2m of modern deposits, 0.8m of brickearth overlay gravel.

SOU 94 was a trench dug in front of the Salvation Army Citadel in Nichols Road. The top 0.25m of two pits were observed. The pits lay 17m from each other. One, about 1.5m across, contained some charcoal and flecks of burnt clay or brickearth in a matrix of dark greyish brown, moderately gravelly, fine sandy silt. The other, about 3m across, was filled with very dark greyish brown, moderately gravelly, fine sandy silt. This contained much bone, some fragments of burnt daub, smaller fragments of burnt clay or brickearth, and some flecks of charcoal.

Close dating evidence could not be obtained. Both pits had been cut into the natural brickearth. Over the brickearth, and graduating in colour into it, was a 0.3m-thick band of soil. This layer also merged in colour into the two pits -- and was dark greyish brown for about a 0.5m around one pit, and very dark greyish brown for a similar distance about the other. It was cut by a 19th-century feature and underlay the modern makeup. One assumes that it was a ploughsoil.

**SOUs 13 AND 32  
BURIAL ALIGNMENTS**

The burial alignments of the two cemeteries are considered as separate groups.

**SOU 13**

**Introduction**

The following skeletons were thought complete enough to provide information:

FF1, 2, 7, 10, 15, 17, 26--9, 31--3, 38, 40, 41, and 47 from trench A;  
FF53, 58, 59, 64, 66, 67, 73--6, 78--80, 82, 83, 89, and 101 from trench C.

These represent 37.8% of the burials in trench A, 47.2% in trench C, and 42.0% overall.

Wherever possible, alignments were assessed by drawing a line from the neck or base of the skull to a point mid-way between the knees. Twenty-nine of the 34 burials were so judged. In five other cases, although less of the body survived or appeared within the excavated area, enough of the body was visible for there to be a reasonable certainty about its alignment.

The alignment of the grave was not assessed, therefore, but the alignment of the body within it. There may easily have been a disparity of  $\pm 1^\circ$  between the two alignments. Therefore, the orientations are given here to the nearest two whole degrees. In fact, it is argued below that even this may prove to have been too precise a measurement.

In the following report, angles are calculated from west to east as a deviation from  $0^\circ$  which is OS grid north ( $90^\circ$  is therefore OS grid east.)

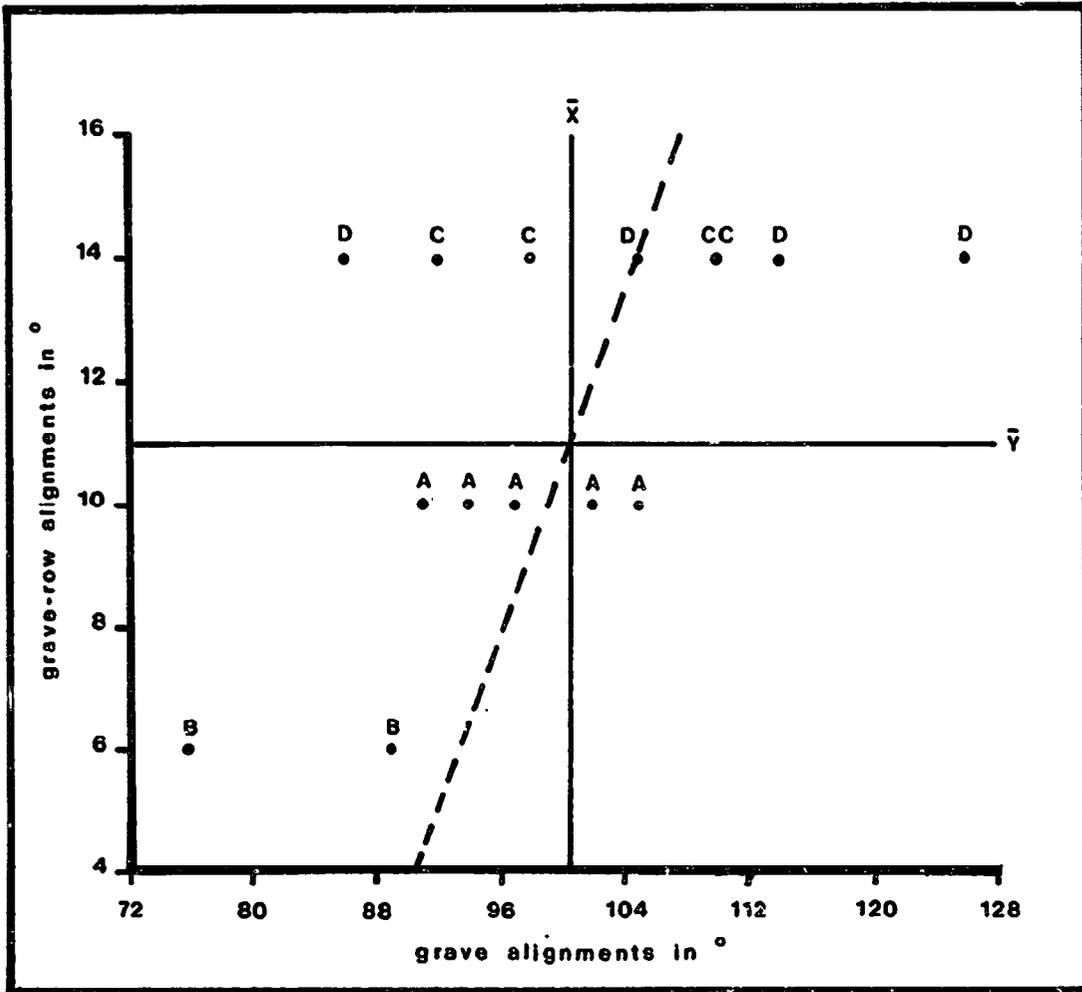


Figure 100. SOU 32: a scattergram showing grave alignments plotted against grave row alignments. Letters indicate rows A--D.

between grave alignment and row alignment. The correlation is significant at the 95% confidence level (Pearson's r).

It may be relevant that the alignment of the supposed church was 108°, which was the mean alignment of the graves in row D, either side of it.

Less dramatic bone movements are considered in the next section.

#### PARALLEL-SIDED BURIALS

Of the 33 adults studied, twenty (60.6%) seem to have been tightly pent and been parallel-sided (FF2, 10, 15, 17, 26, 27, 32, 33, 40, 58, 59, 66, 67, 73, 74, 79, 80, 82, 83, and 89). Included within this group are up to four with which other evidence was found -- FF17, 27, 83, and perhaps 10.

Such tight penning should be associated, one presumes, with the encoffining or enshrouding of the body. (The absence of shroud hooks probably has as little significance as the general absence of 'coffin nails'.) In all but one of these cases (F83, where other evidence exists), parts of the skeleton had shifted to an extent possible only within an open space like that of a coffin.

One skeleton, F30, has been considered above. It is suggested that it was buried in a coffin. The other twelve skeletons have been excluded from the above summary because a variety of factors leads to some uncertainty. According to Dr WJ Rodwell (pers comm), the best indicator of such tightly constrained burials is the position of the shoulders and arms. The upper body of three skeletons (FF37, 44, and 47) lay outside the excavated area; the arms of two skeletons besides F30 (FF7 and 88) had been cut away by later graves; and three other skeletons (FF53, 76, and 103) had lost a single arm to later disturbance. However, it also appears that various major parts of these eight skeletons had been shifted freely within an open space. And, where an arm did survive in place, it was tightly pent and straight against the body. It is likely, therefore, that eight other burials (24.2%) had been made in a coffin.

Three skeletons (FF65, 70, and 101) were parallel-sided, but there was no sign that any bones had moved. This may reflect the poverty of the evidence (two skeletons had been crushed and pulverised in situ, and the abdominal area of the third had completely disappeared); but the absence of any notable movement might indicate that the bodies had been enshrouded only.

In only one case, that of F69, can there exist the strong suspicion that the limbs had not been encased in a coffin. To summarise all this information, of the 33 adults looked at, 21 (63.6%) seem to have been buried in a coffin, probably 29 (87.9%), and possibly 32 (97.0%). (These figures represent a minimum of 35.6%, 49.2%, and 54.2% of the 59 adults uncovered at SOU 13.)

cursorily examined. The weight of this material amounted to some 102.5kg. Virtually all of it appears to have been smithing slag -- the possible exception being three small pieces of what may have been tap slag, recovered from F1,2 and F31,3. If this were tap slag, no greater significance is accorded to it. Interspersed among the smithing slag were hearth bottoms, occasionally with oxidised brickearth still adhering.

Most of the slag was recovered in fact from the upper layers of nine pits: from FF1, 49, 52--4, 56, 66, 75, and 81. These upper layers contained more than three-quarters of the material recovered. Of these, four contexts contained vastly more than the others. By weight, F1,2 contained 36.2% of the slag recovered from all contexts; F75,1 22.2%; F75,2 5.7%; and F81,1 6.7% (total 70.8%).

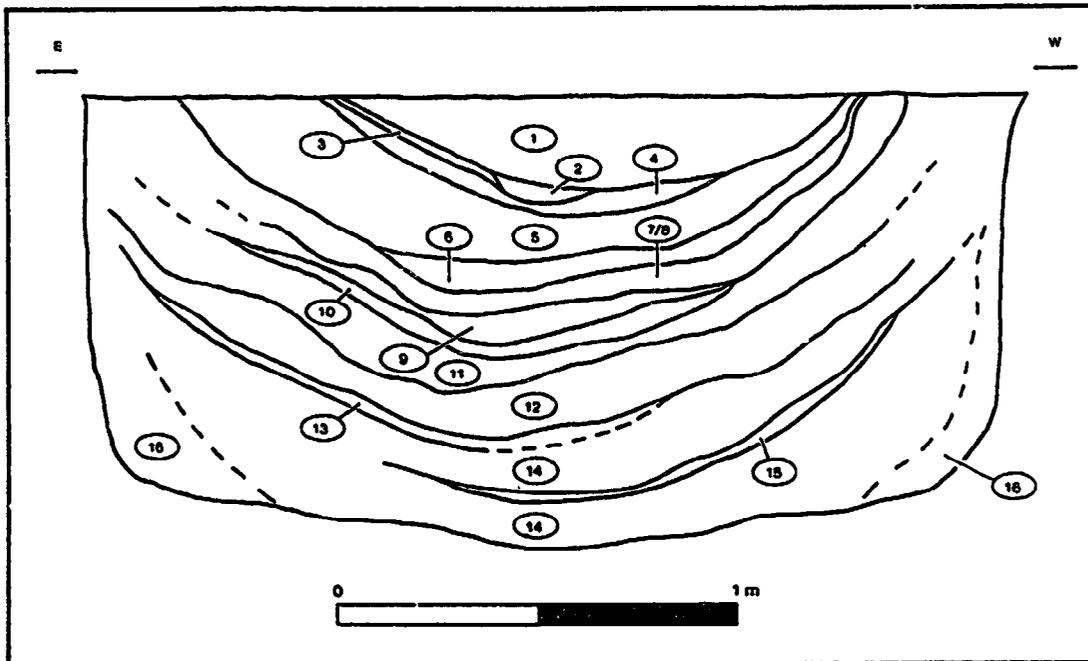
Thus, although present as 'background noise' in contexts of various dates, the slag was recovered in significant quantities only from late deposits in two or three areas: from F1 in the south of SOU 15; from FF75 and 81 in the centre, as well as the surrounding pits FF49, 52--4 and 56; and perhaps from F66 in the east of the site. The copper-alloy-working evidence was found in the first two of these areas. In itself, this is unsurprising: since the smithing slag was so widespread it is entirely predictable that pits with copper-alloy-working crucibles would also contain slag. However, the fact that both materials were recovered from virtually the same contexts suggests that the two industrial activities were carried on together, perhaps by the same individuals.

It was suggested that copper-alloy-working was carried out either in a central area or in two discrete areas. One may say the same about smithing, also that the slag recovered from F66 perhaps indicates the existence of another smithing area to the north of SOU 15.

### Potting

It has been argued tentatively that the early infills of F1 represent its use as a possible waster pit. The argument depends on two propositions: that the proportion of sandy-tempered pottery found in the lower layers of F1 was unusually high; and the presence of malformed sherds indicates the disposal of wasters (Hodges 1981, 7).

Hodges points out that the bottom layers of F1 contained 5kg of pottery, 91% of which was sandy-tempered; which tends to suggest that the layers were early deposits. However, the pottery was found in association with two coins. (He calls them secondary-series BMC Type 49 sceattas. They were in fact other secondary-issue sceattas,



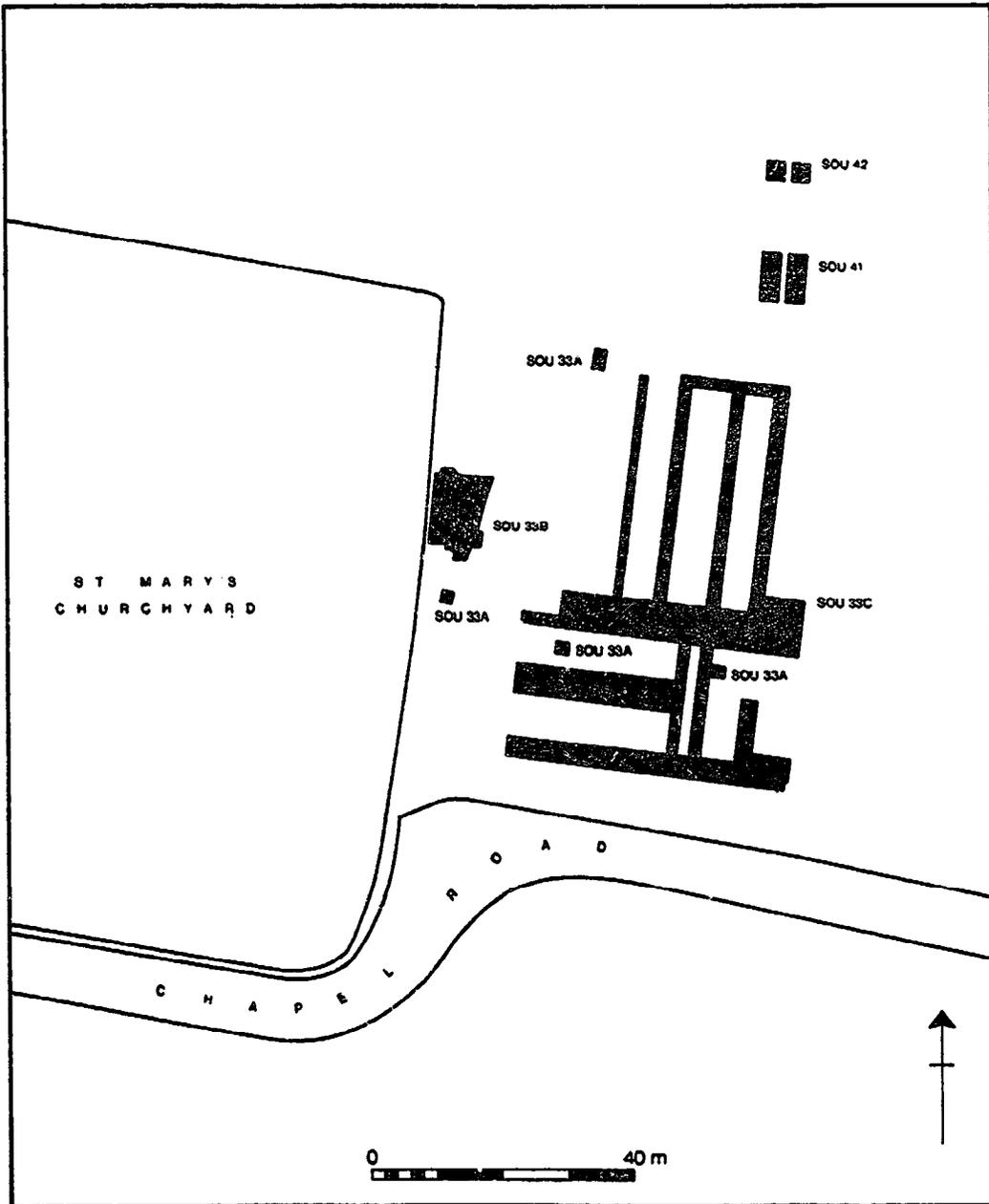
**Figure 104.** SOU 19: F1. Broken lines indicate unclear boundaries.

unknown. Its upper layer contained four sherds of pottery, two of them Anglo-Saxon imports, one medieval, and one Roman. Positive dating of this feature is impossible.

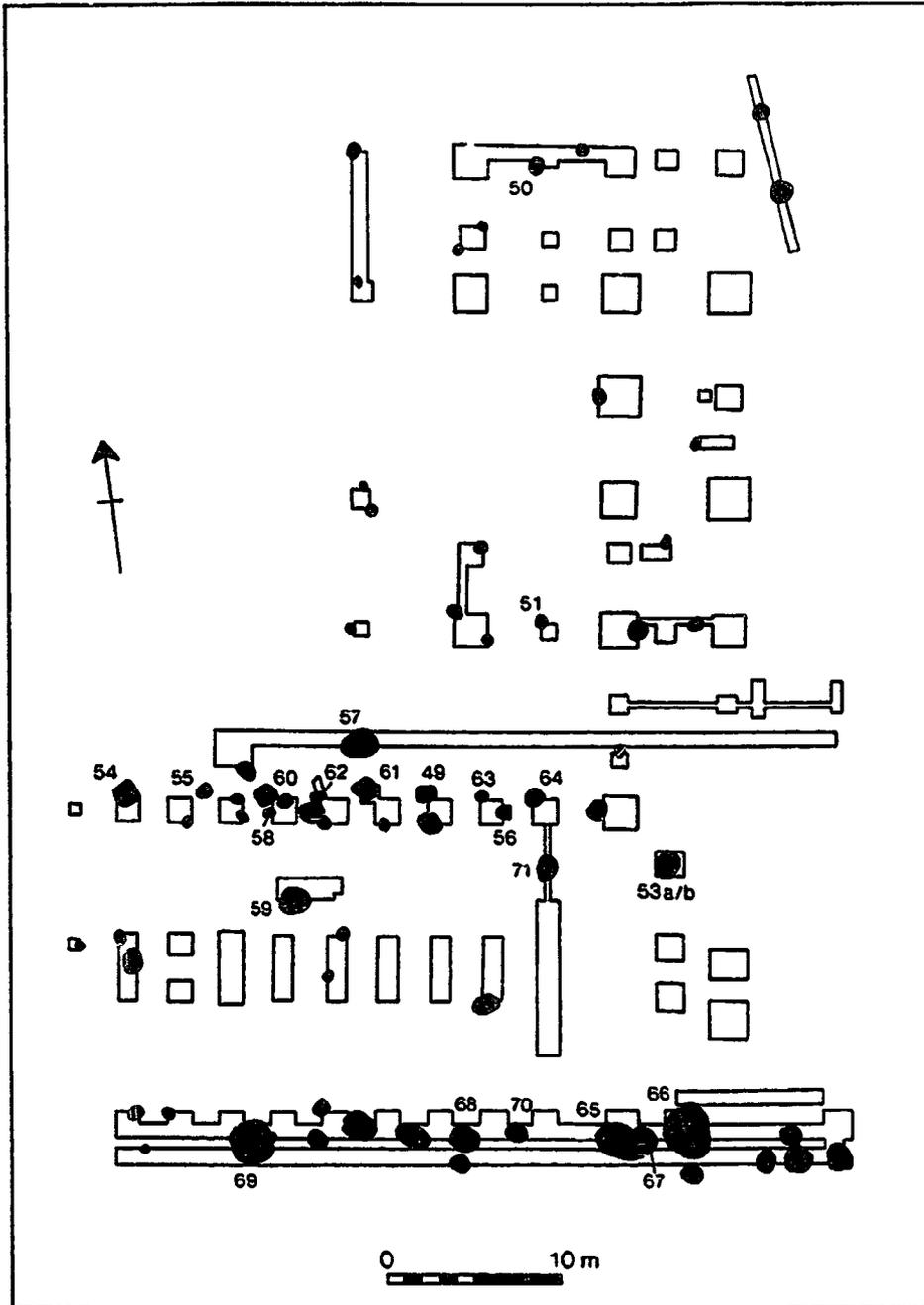
F3 was fully excavated within the limits of the site. Round in plan, and a rounded V in section, it was 1m deep. It seems to have been used first as a cess pit and, after a sealing layer of brickearth had been thrown in, to have been finally filled with a thick layer of domestic refuse. The only dating evidence was a single sherd of Anglo-Saxon imported pottery recovered from the upper fill.

## CONCLUSIONS

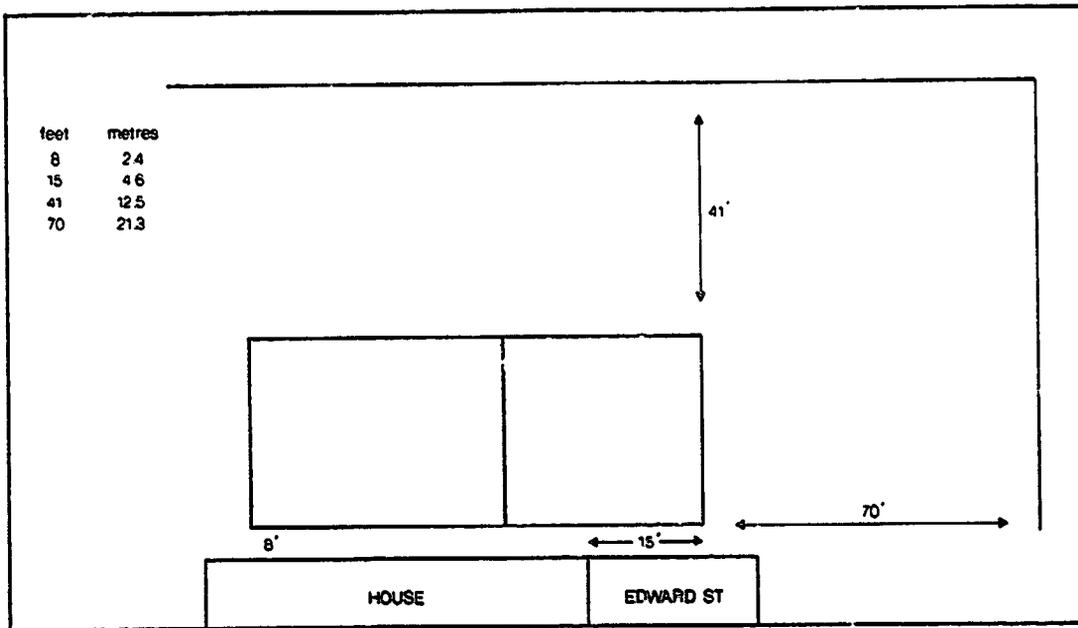
With the exception of F1, there is no certainty that these pits were Middle Saxon. The hearth in F1 and the existence of the cesspit, F3, presumably indicate that at least one building stood nearby, but the only structural features found formed part of the shallow pit, F2.



**Figure 106.** SOU 33 and other nearby sites, showing (A) the four test holes, (B) the excavated trench and (C) the areas observed (schematic representation).



**Figure 110.** SOU 33, area C: features observed. Solid lines mark trench edges. The blacked-in shapes are pits (as observed and as projected). Modern disturbance was not noted during excavation.



**Figure 114.** A redrawing of Aberg's site-location sketch map. A conversion table has been added. North is at the top.

which differs from fig 114 mainly in that the original drawing was oriented with north to the bottom. He added that the site had measured about 60 feet (18.3m) by 20 feet (6.1m), inside which was dug an excavation trench 40 feet (12.2m) by 15 feet (4.6m). The map is clearly not to scale.

As far as can be gauged (measuring from a 1:1250 OS map, sheet SU 4211 NE, revised in 1958), Aberg's long measurements were not exact, for those marked on the sketch map cannot all be reconciled with each other, and differ by about a metre. Because of this, greater trust has been placed in the shorter measurements which were probably obtained with little error. It is supposed, therefore, that the trench did lie some eight feet (2.4m) from the house wall and Edward Street, and some fifteen feet (4.6m) beyond the produced edge of Edward Street. The importance of this point will be explored further below.

The division of the trench shown in fig 114 was mentioned by Aberg in the site notebook, where it is explained that '2 halves' existed, the eastern half about eighteen inches (0.5m) deep, and the other about twenty-seven inches (0.7m) deep.

Perhaps the same trench was referred to as a 'trench

## THE TOTAL AREA OF SOU 34

Fig 117 also shows the complete outline of SOU 34, as this writer supposes it to have been. The shape has been arrived at by balancing probabilities. Other combinations are less likely. One must note, in the first place, that the whole of the eastern side of the site is fixed. (This matter has already been summarised.) Secondly, there are good reasons for supposing that the south-western quarter of the site lay where it is shown in fig 117: the position of the original trench (area a1) is fixed; it is likely that that area was slightly extended (area a2); and it is likely that it was enormously extended (area b), a plan of part of which still survives. According to this writer's reconstruction of the evidence, area b would have measured 36.5m east--west, a distance that is very close to the 36.6m derived from the SAS bulletin (SAS 1962b). The similarity could be a coincidence: the plan reproduced as fig 112 allows a distance of only 30.6m. However, there is good reason to suppose that the distance is underrepresented in fig 112. The evidence to support this claim is presented as fig 118.

If figs 112 and 114 are both to be believed, the original trench (area a1) projected 3.4m to the west of what eventually became the entire site. If figs 112 and 115 are both to be believed, the first extension (area a2) projected 5.9m. Effectively, only two explanations are possible. Either nothing was found in the original trench and its western extreme was omitted so as not to spoil the geometrical perfection of the overall site-location plan, or the location plan is wrong. Since it appears from fig 115 that at least one pit existed in the westernmost part of the original trench (pit 130), the first alternative is unlikely. It seems that fig 112 is inaccurate here.

However, in the absence of other information, fig 112 has been used as a basis when drawing certain other details of the site boundary on fig 117, principally that of area c, which was opened when the site was extended 'northwards towards Cumberland Street' (SAS 1962c). The rectangular shape of area c is taken from fig 112; but not the exact dimensions. According to fig 112, area c included the pavement of Cumberland Street. Since that street was defunct, such a detail may be correct. However, according to fig 112, areas b and c included the pavement of Golden Grove. One knows from other sources (more detailed plans, and photographs -- for instance, pl 7) that this was not the case: the edge of areas b and c ran inside the line of the pavement. Extending the trench edge to the outer edge of the pavements was probably a convenient simplification in fig 112. Here, the northern edge of the site has been drawn inside the line of the Cumberland Street pavement.

## SOU 39 (CLS: AH 14)

## INTRODUCTION

In Easter 1951, three trenches (Sites A--C) were opened under the direction of MR Maitland Muller and DM Waterman in two bombsites adjacent to what was Clifford Street. The topsoil was removed by a mechanical shovel, and probably also by two labourers. Thirteen pits were uncovered. These were numbered pits 64, 65A, 65B, 66A, 66B, 67A--C, and 68--72. The total area exposed measured about 174m<sup>2</sup>.

The top of the site had been disturbed, apparently as a result of brickearth digging (Maitland Muller and Waterman 1951b, 62). Other disturbance comprised a pipe trench, a pit, and another pit dig for an Anderson shelter.

## PITS

Some of the pits lay partly outside the excavated area. It appears that, as far as possible, all were fully excavated. Section drawings were made, but have not been seen by this writer. The pits were 'rectangular or circular in plan and from two to eight feet [0.6m--2.4m] in depth' (*ibid*).

The upper layer of pit 66A contained a cattle bone on which had been cut a four-character runic inscription, catæ. RI Page (in Addyman and Hill 1969, 86 and 88) suggests that the inscription 'was rather a casual piece of work -- a personal or animal name -- cut merely as a pastime.' He adds that 'the letter forms and their lay-out are hardly a novice's', and finds some similarity (perhaps accidental) with Frisian runes.

## DATING AND DISCUSSION

Pottery was recovered from all pits except pits 65C and 72. This seems to indicate that the pits were filled in throughout the Middle Saxon Period; pit 68 early in that period, and the rest in the middle or late part. The main phase of occupation might be dated, therefore, to the last half of the 8th century and part of the 9th century. A

MF1:K6

SOU 43 (HAM C: AH 18)

See the main text of this volume.

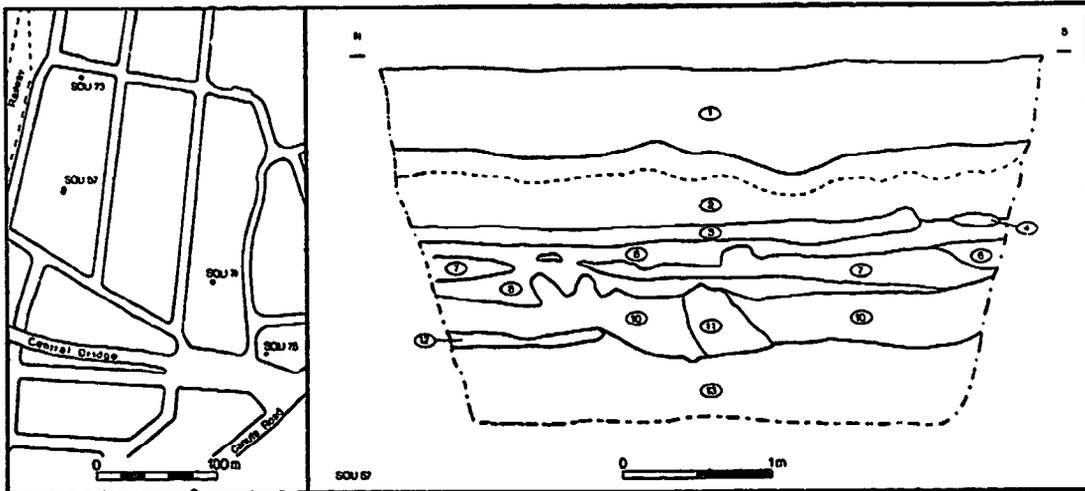
### THE LOCATION OF SOU 52

Kell (1866, 455) described the recovery of variously dated finds from pits uncovered as a result of the redevelopment of SOU 52 in 1863--6. The finds and the pits are of no immediate interest here. Some were Roman; and Crawford (1942, 43) and Addyman and Hill (1968, 69) have argued clearly enough that others were Anglo-Saxon. What is of interest is the location of the site, for it is possible that 20th-century commentators have consistently placed it too far to the south-east.

Kell stated that the discoveries were made during the construction of 'some new streets on the east side of St Mary's road, Southampton, belonging to Queen's College, Oxford, long occupied as a market garden'. Queen's College owned extensive tracts of land in Southampton which, by 1862, had largely been built over. Two areas remained, shown as A and E on fig 125. Comparison of maps of 1862 and 1866 (Brannon 1862; OS 1866) shows that, in the intervening years, streets had been laid out within area A, and the northernmost part of area E.

However, one must ignore area E. The streets in the north were designed to serve the Infirmary (D), now the Royal South Hants Hospital. If Kell could mention market gardens, we might reasonably expect him to have mentioned the Infirmary; also the cricket ground which then lay immediately to the south of the new streets.

Crawford (1942, 43) was the first to focus attention on area A, the Nicholstown area. He suggested that the discoveries were made in a parcel of land bounded to the west by St Mary's Road, with 'Argyle road on the north, Derby road on the east, and New road [Northam Road] on the south.' His successors contented themselves with marking only the centre point of this area -- point B on fig 125 (Maitland Muller 1949, 69, fig 2; Burgess 1964, frontis; Addyman and Hill 1968, 66, fig 26). Although none of them meant to give this impression, it is now often thought that the point marked was the exact place of the discoveries. In fact, it does not lie within the developed area: the 1866 map shows that only a small portion of Nicholstown had been given over to streets. (That portion is marked on fig 125 with double shading.) One must locate SOU 52 within the smaller, triangular area; and perhaps only within the northern part of that triangle.



**Figure 127.** SOUs 57 and 73--5: a sites-location plan (the 1975 and 1976 street system is shown: refer to fig 1 for the present system). SOU 57: the west-facing section.

- Layer 4: 'Yellow/grey gravel; some silt'. Same as layer 3?
- Layer 5: 'Yellow/brown silt and clay; occasional flint'.
- Layer 6: 'Medium gravel and brown silt' (D). 'Reddish brown silt with flint pebbles' (N).
- Layer 7: 'Reddish brown gravel and clay/silt' (D). 'Reddish brown silt with flint pebbles' (N).
- Layer 8: 'Yellow brown silt and clay, occasional flint, similar to layer 5'.
- Layer 9: 'Non existent' (D). 'Yellow clay and fine grit' (N). Not shown on drawing. Seen as subdivision of layer 8?
- Layer 10: 'Medium gravel and red/brown silt; some flints' (D). N mentions 'small flints' among the gravel.
- Layer 11: 'Dark grey medium gravel pocket with sand'.
- Layer 12: 'Coarse grey gravel and yellow brown silt' (D). N has 'pebbles'.
- Layer 13: 'Fine gravel, yellow orange, sandy in texture' (D). 'Very fine yellow orange sandy silt' (N). Not numbered on the section: the lowermost layer, one presumes.

The sequence of layers from layer 2 downwards is



# SOUTHAMPTON CITY COUNCIL

Archaeology and  
Heritage Management  
Section

Results

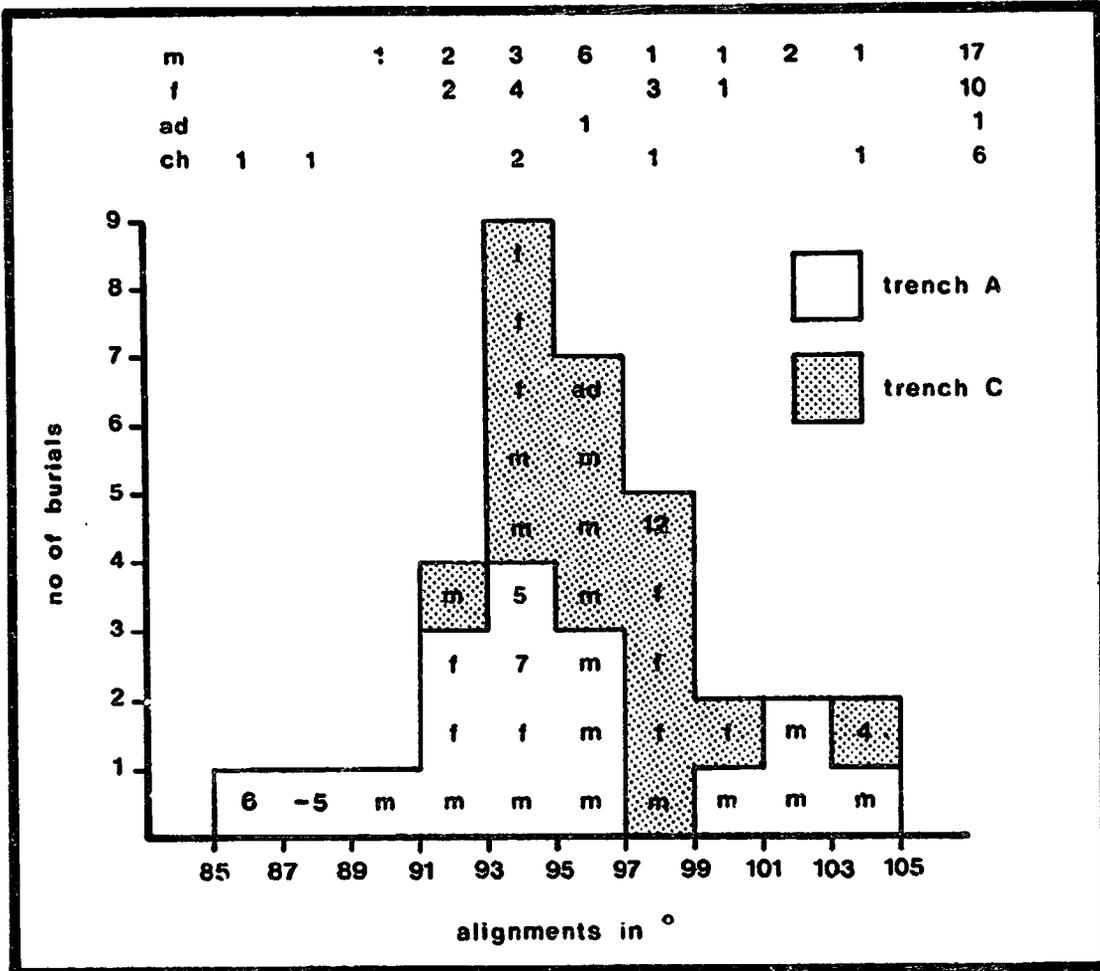


Figure 96. SOU 13: grave alignments in 2° groups, differentiated according to sex, age, and trench.

Alignments varied between 84° and 104°. It is clear that this variation is unlikely to have been due to chance; but is unlikely to represent solar burial practice.

The details shown in fig 96 can be broken down in table 7 (where means and standard deviations are both shown to the nearest two whole degrees).

## SOU 13: GRAVE POSITIONS

### INTRODUCTION

For certain purposes all 81 of the skeletons recovered were considered. Generally, however, the following were looked at:

FF1, 2, 7, 10, 15, 17, 26--33, 37, 38, 40, 41, 44, and 47 in trench A;  
 FF53, 56, 58, 59, 64--70, 72--80, 82, 83, 85--9, 101, 103, 106, and 111 in trench C.

These represent 44.4% of the trench A burials, 88.9% of the trench C burials, and 64.2% overall.

In this report, the writer investigates the evidence for any separation of the adults by sex, or the favouring of one sex in the choice of burial location, and any separation of adults from children, or the favouring of one group over another. Several assumptions have had to be made.

- 1) The age differences between adults have been ignored, not only because they are difficult to assess accurately, but also because the sample sizes would be infinitely minimised.
- 2) The age differences between children also have been ignored, although this leads to extreme difficulties, and may make any comparison with children pointless. The modern osteologist interprets childhood as the period between infancy and the age of 21. Such a view may not have been that of the Middle Saxon buriers (for example, there exists a West Saxon legal view that individuals over the age of ten were adult enough to be responsible for their crimes); but it derives, however faintly, from the obsession medieval theologians had with the number 7. Infantia lasted up to the age of seven, pueritia usually up to the age of fourteen, and iuentus usually up to the age of 28 (although sometimes it was subsumed into pueritia). If some such view prevailed when bodies were being buried at SOU 13, it is possible that several individuals here

## CHILDREN

None of the skeletons so far mentioned was that of a child. Five children were considered, their ages ranging from 4 years to 12 years. With the exception of F75, all showed signs of bone movement within an open space: their ribs and skulls had been displaced. Only the skeleton of F78 was clearly parallel-sided. It is probably no coincidence that this was the oldest of the five, for the evidence became less ambiguous as the child developed.

F31 was the next oldest (7 years). Its left side appeared straight and tight, but not its right which had in places moved outwards from the body. All this evidence, taken in conjunction with that for other bone movement in the burial, seems to indicate that F31 had been buried in a coffin which was not so narrow that it tightly constrained the body.

Applying this argument to the younger children, one notices that the skeleton of F1 was tight and straight on its right (almost a straight line might be drawn from the edge of its skull, along its right arm, down to its right knee); that a straight line could be drawn along the left side of F29 (although here it is likely that the left humerus had fallen outwards from the body to rest against the edge of a coffin); and that the left side of F75 was similarly straight. These phenomena may indicate in every case that the body came to rest against the side of an overly large coffin.

In summary, of the five children, one (20.0%) was clearly parallel-sided with evidence for bone movement; four (80.0%) displayed a straightness of alignment with evidence for bone movement; and all (100%) displayed a straightness of alignment. (These figures represent a minimum of 4.5%, 18.2%, and 22.7% of the 22 children uncovered at SOU 13.)

## AGE AND SEX DIFFERENTIATION

Not surprisingly, given the fact that up to 97.4% of the 38 bodies had been buried in coffins, there was no evidence that one sex or age group was favoured with encoffining.

but this does not affect the argument.) This association, he argues, indicates that the assemblage should be dated to about the middle of the 8th century, a time when one would expect only some 30%--55% of the pottery to have been tempered with sand. Therefore the lower layers of F1 contained an anomalously high percentage of sandy-tempered pottery. This might be resolved if one supposed that wasters had been thrown away. The assemblage contained some sherds of malformed pots, which might be accounted wasters.

Against this interpretation, one must point out that the malformations (an example is illustrated as *ibid*, 10, fig 2,3.7) are few in number and are not sufficient evidence of the disposal of wasters. This possibility exists only if the percentage of sandy-tempered pottery was disproportionately high; but in fact it is far from certain that this was the case. The pottery was recovered from layers 4--9, but the coins were recovered from layers 2 and 4; in other words, from the uppermost of the 'sandy-temper-dominant' layers and from a layer above those. (For a section drawing, see *ibid*, 53, fig 5,7.) And 60% of the pottery from layer 4 was sandy-tempered, not a significantly higher amount than the 30%--55% expected by Hodges. Therefore, there seems no reason to suppose that the lower layers were other than early, and in consequence no reason to think F1 a waster pit.

#### Bone- And Antler-working

Recovered from the upper two layers of F2 (these comprising about two-thirds of the pit) were many offcuts of bone and antler. These await further study. The assemblage may be connected with similar material found in the adjacent pits of SOU 32, the nearest of which lay 15m to the east of F2 (fig 68).

#### Structural Evidence

That structural evidence which survived later disturbance and was noted by the excavators is shown on fig 101. It forms no coherent pattern.

#### Dating

Two radiocarbon dates were obtained (HAR 1164 and HAR 1166). Amended, these calibrate at 1 sd as 625--936 and 415--741.

Ten coins were recovered from the pit fills. One (item 86) cannot be found now. One was a 4th-century Roman coin

**SOUs 20--26**

**SOU 20 (SARC XX)**

See Barrett and Holdsworth 1980. For comments on the burials found there, see the main text of this volume.

**SOUs 21 and 22 (SARC XXI and XXII)**

See the main text of this volume.

**SOUs 23 and 24 (SARC XXIII and XXIV)**

Six Dials sites. See Andrews forthcoming.

**SOU 25 (SARC 25)**

Not a Hamwic site.

**SOU 26 (SARC 26)**

A Six Dials site. See Andrews forthcoming.

all have been associated with the houses erected here in the 1940s. Fragments of limestone found in some of these features suggests an association with the robber trench, F2. One might date all the features to the 1840s, however, when houses were built to the south of the area; or later in the 19th century, when houses were built to the east. No note was made of modern disturbance exposed at area C.

#### LIMESTONE WALL

Part of a north--south wall in trench A survived as F12, in situ blocks of colitic limestone rubble. Its line was preserved as F2, a robber trench, from the backfill of which were recovered such modern artefacts as roofing slate. The digging of F2 had obliterated any sign of a relationship between the wall and the pits, FF6 and 43; but it seems unlikely that the pits were later features.

The wall may be dated, therefore, to any point between the Middle Saxon and modern periods. Speeds's map of 1611 (pl 3) shows a north--south route running just to the east of the churchyard, perhaps bounded to the east by a wall. It may be that part of an unmetalled route and its boundary wall was uncovered at SOU 33; but it is not certain that Speed's map was correct in the detail. Alternative interpretations are difficult to sustain however. The extent of the churchyard was not wholly accurately shown on any map drawn before 1846, and there is no means of checking on its earlier dimensions. But it is hard to believe that F12 was the eastern wall of a cemetery which later contracted.

#### PITS

F5 scarcely appeared in the area excavated. It is not certain that its fill of 'dark brown loam containing [burnt] daub, animal bone, and charcoal flecks' was removed.

F6 was probably cut by F12 and cut through some structural features. Described as 'rectangular', it was drawn as more nearly oval in shape. It was 1.02m deep. Its shape in section is unknown. All but the upper 0.25m of the pit were filled with burnt daub. Presumably it had been opportunely used, or dug specifically, for the clearance of a destruction layer. The upper fill was a 'dark brown loam with much animal bone', presumably derived from domestic refuse.

F8 (fig 108) was a large pit, 1.97m deep. Its shape in section is more easily illustrated than described. It was excavated by first removing the eastern half as a single

## STRUCTURAL REMAINS

No building plan can be discerned in the confusion of post-holes and stake-holes uncovered in trench B.

## DATING AND DISCUSSION

Pottery was recovered from all the numbered pits except FF5, 6, 29, and 49. The small quantities found in FF14, 28, 34, 43, 57--9, and 62--4 are sufficient only to indicate that they were infilled in the Middle Saxon period.

According to this evidence, the infilling of FF13 and 50 began early in that period. In F50's case, the infilling was a protracted process: recovered from unspecified layers of the pit were the imitation coin of Offa already mentioned (item 138, M132) and a rimsherd of a 'red-painted decorated bowl' (ibid).

The pottery provenanced to FF53, 54, and 65 indicates that the infilling of these pits began slightly later than FF13 and 50. FF25, 27, 35, 51, 52, 56, 61, 68, and 70 were all probably mid Middle Saxon in date. Found in F25 was 'a coin' which presumably was item 81, M59, a now-unprovenanced BMC Type 49 sceat. Later dates are indicated for the fills of the five other pits, which may be chronologically arranged in the order FF67, 66, 55, 8, and 71; the latter fill being datable to the late Middle Saxon period. FF7 and 9, interpreted as the plough-disturbed upper fill of F25, contained a mixture of pottery, the latest of which was a sherd of a medieval scratch-marked vessel.

The dating evidence suggests that the pits uncovered at SOU 33 were dug and infilled throughout the early and mid Middle Saxon periods, but declined in numbers in the late Middle Saxon period, at some point in the 9th century.

On average, 19% (by weight) of the site's pottery had been imported. This figure is little different from the average of the town's assemblage (Timby 1988, 90). However, the true SOU 33 percentage has been reduced, one suspects, through the inclusion of the pottery from F8, which comprised nearly a third (by weight) of all the pottery recovered. Removing this pit's assemblage from the reckoning cannot be sanctioned; but one may note that four pits, together nearly spanning the range of occupation at SOU 33, contained much higher percentages of imported pottery. These were FF13, 53, 54, and 67.

Apart from the glass pot recovered from F47, an object which may have been imported with a consignment of glass vessels, as Thomson suggested, nothing else in the site assemblage indicates that SOU 33 exposed an area located close to a commercial waterfront.

20' x 10' [6.1m by 3.1m] . . . excavated to a depth of one foot [0.3m]. One half of this trench has been further excavated to a depth of two feet [0.6m]' (SAS 1962a). The measurements published differ totally from those recorded in the site notebook, and the bulletin may contain a reference to a different site. If this is the case, nothing else can be said of the trench other than that it was located near Cumberland Street, a name used as the heading to this entry in the SAS bulletin: the trench is not elsewhere referred to. This failure to refer to it, and the fact that the 'trench 20' x 10'' was opened at the same time as the original trench mentioned by Aberg, leads this writer to suppose that the excavations were one and the same, despite the difference in their given dimensions. In many respects, the question is an academic one, for we know nothing of the progress of the excavation mentioned in the SAS bulletin.

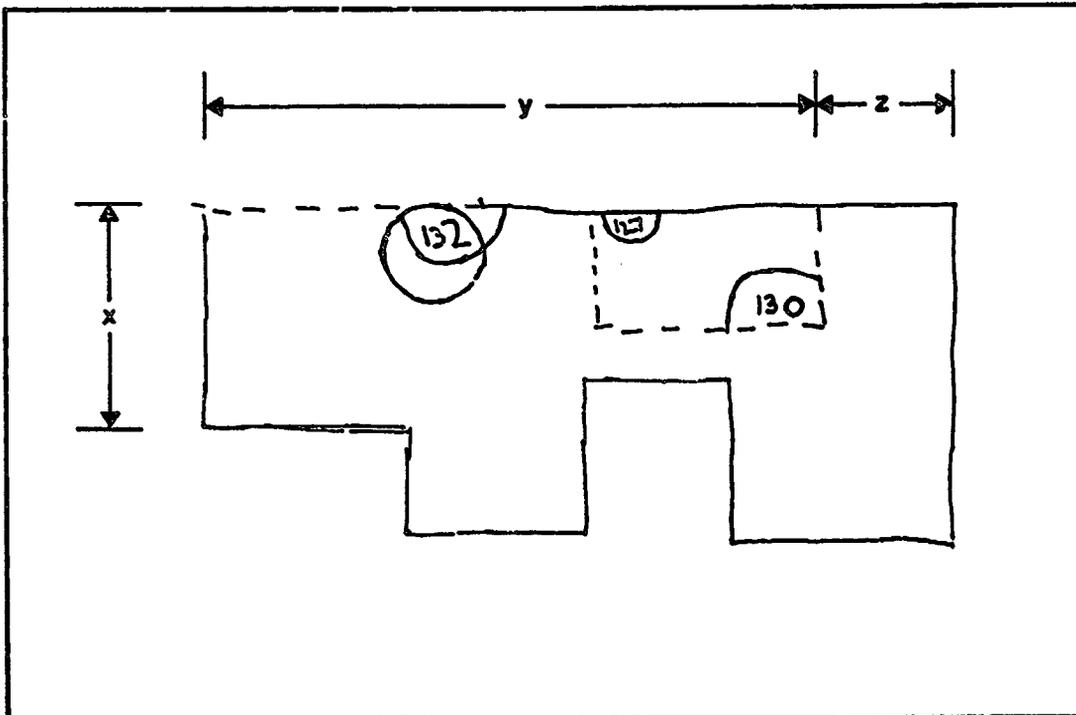


Figure 115. A tracing of Aberg's sketch plan of 'Site E' (SOU 34). Dimensions x--z are a recent addition.

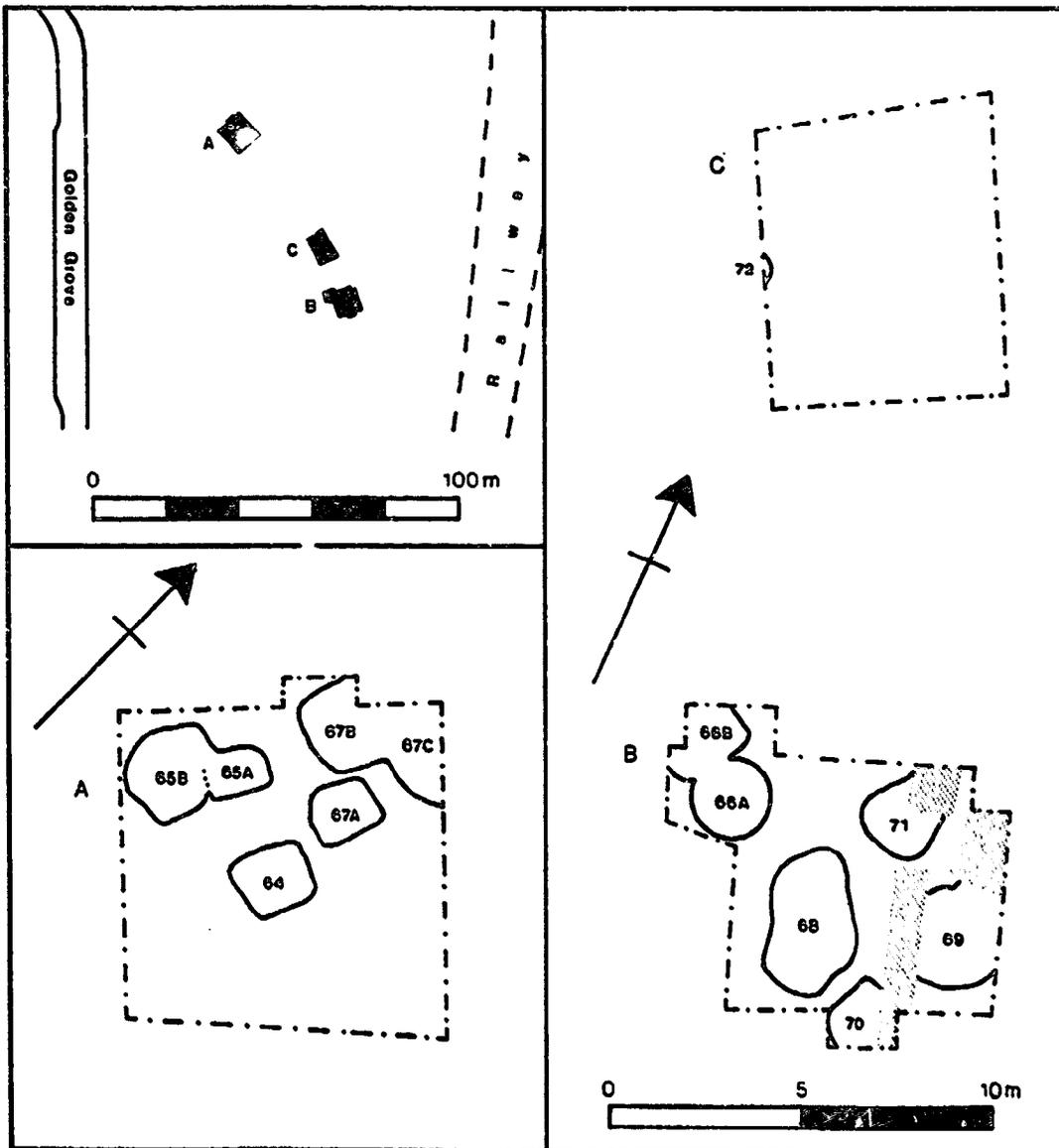
Figure 112 has also been used to justify the roughly straight southern edge of the site shown on fig 117. According to fig 112, the southern edge ran alongside Edward Street and a property boundary, 2.4m south of the boundary shown on fig 117 (compare also fig 118). There is nothing implausible about this, except that it runs counter to the arguments developed with figs 114--16. Again, it is possible that a convenient (but slightly inaccurate) edge has been chosen in fig 112. In support of this view, one may note that the shapes and dimensions of SOUs 35 and 43 shown in that figure are less than completely accurate.

One must consider also the boundary between SOUs 34 and 35. According to a map of the eastern area (copied as fig 74), the boundary ran more or less east--west for roughly 7m; but the edge of SOU 34 then dog-legged north-westwards until it was slightly more than 2m north of the junction with SOU 35. Because of this dog-legging, virtually a straight line can be drawn, extending the southern edge of area a eastwards until it joins the other known edge of SOU 34. (But this explanation generally reverses the probable order of events. The southern edge of area a probably was extended eastwards until it reached the vicinity of SOU 35, where it was turned to the south to meet the other trench.)

These are no more than hints that the southern edge of the original trench formed the basis of the southern extension of area b when it was decided 'to remove the top soil over as large an area as possible' (SAS 1962b). However, the hints are somewhat stronger than the plan copied as fig 112. Although that plan may be correct, there is no reason to accept it.

According to this writer's reconstruction, an area of some 670m<sup>2</sup> was exposed. Shown in any detailed site plans are only about 330m<sup>2</sup> -- just under half of the total area.

coin, recovered from somewhere in pit 64 (unitemised; M70), is a BMC Type 49 sceat. Structures had existed in the vicinity of the pits, one presumes, perhaps in the featureless areas of trenches A and C, but 'any traces of Saxon houses and floors had been removed by the brick earth diggers' (Maitland Muller and Waterman, *ibid*).



**Figure 120.** SOU 39: detailed plans of sites A--C ('pit' prefixes are omitted).

SOU 44 (AH 27)

INTRODUCTION

In 1969, under the direction of RG Thomson, a trial trench 5m square was dug in the centre of the triangular block bounded by Cook Street, St Mary Street, and Evans Street.

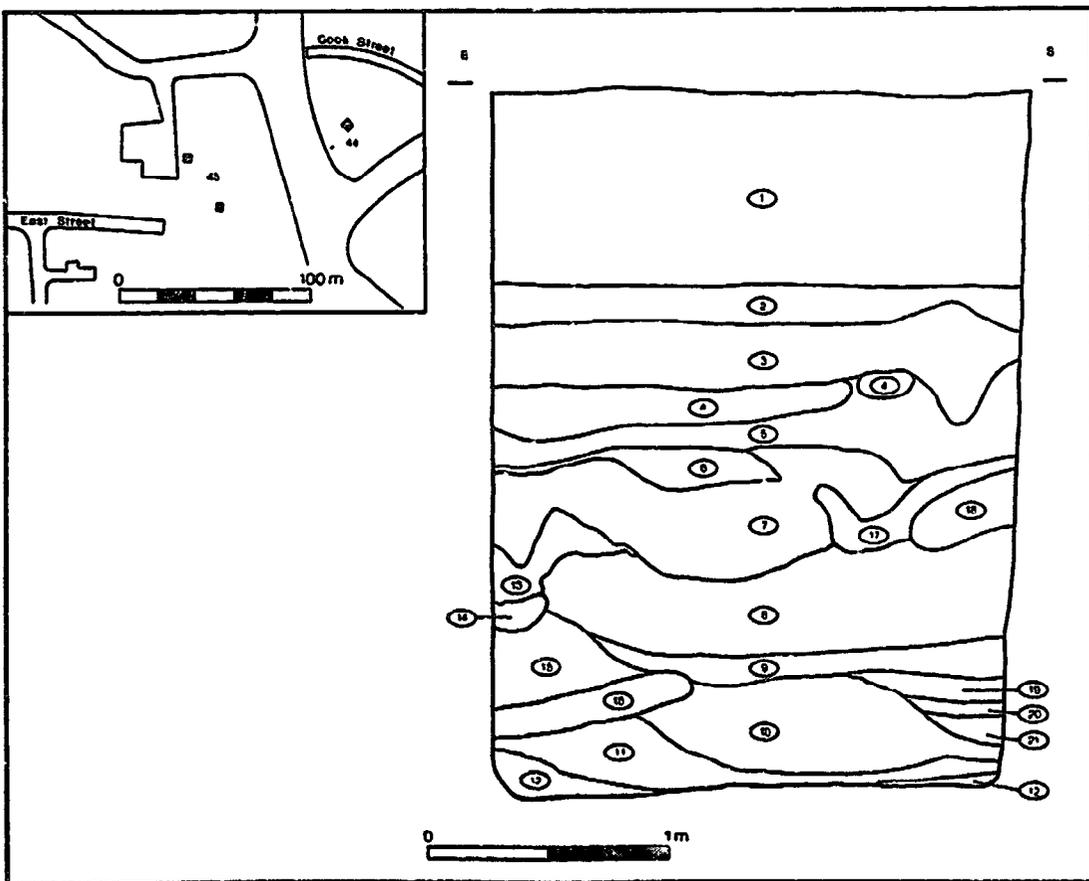
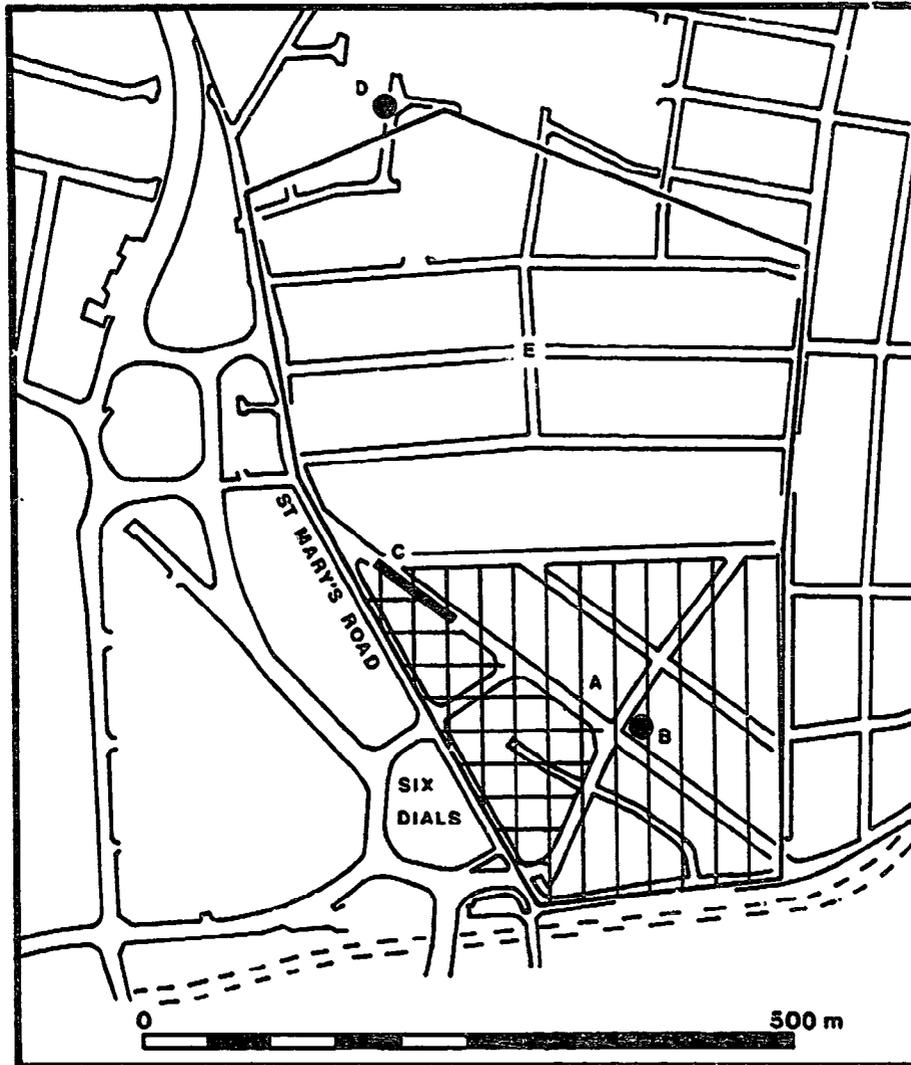


Figure 123. SOU 44: main trench, north-west-facing section.



**Figure 125.** SOU 52: possible locations. Key: A the area suggested by Crawford (single and double shading), B the centre point shown by all later commentators, C the place of discoveries suggested here, D the Infirmary, E market gardens and the old cricket ground. The old arrangement of streets at Six Dials is shown here.

Kell leaves no doubt that the site lay to the east of St Mary's Road. Unhelpfully, he also stated that the site

strikingly similar to that noted at SOU 44, about 410m to the north-west (fig 123: MF1:K7). That being the case, it is likely that the same geological processes led to the deposition of the strata exposed at the two sites. Addyman and Hill (1968, 75) referred to 'silts, presumably lagoon silts' found at SOU 57. It has been noted in the main text, first that the brickearth is a redeposited loess, and secondly that elsewhere Addyman mistook brickearth for lagoonal silts. Since, also, the same deposits were found well inland at SOU 44 as were found here, there is no pressing reason to suppose that layer 2 was deposited in a lagoon.

Information from SOUs 73 and 74 is far more restricted. In the Summer of 1975, PE Holdsworth told the writer that 'nothing' was found; 'nothing but brickearth' one supposes. The day after SOU 74 was backfilled, M Blades told the writer that only 'brickearth' was uncovered. If the interpretation offered above of the layers in SOU 57 is correct probably neither Holdsworth nor Blades mistook the evidence.

Different deposits were uncovered at SCU 75. Under a 0.8m-thick layer of modern soils was found at least 1.5m of blue-grey clay. This was not followed to its bottom. The layer contained a considerable number of what seemed the shells of freshwater snails: unfortunately, none was sampled. No dating evidence was found. The layer had filled at least part of the pond that had been infilled early in the 19th century.

It is possible that the clay had not accumulated naturally in the pond, but was part of an initial reclamation of the area, using soils that had been dredged from the riverbed. A hint of what may have underlain this deposit is contained in the report (Hodson 1975, 54) that two boreholes sunk close to SOU 75 revealed

alluvium below made ground down to about 9ft (2.7m) below O.D., that is to say down to the level of low spring tides in Southampton Water.

**EXCAVATIONS AT HAMWIC,  
VOLUME 1:  
EXCAVATIONS 1946--83,  
EXCLUDING SIX DIALS  
AND MELBOURNE STREET**

**MICROFICHE CONTENTS: SHEET 2**

This is a list of all reports contained in this sheet of the microfiche supplement. See the contents pages in the main text for the full list. The microfiche figures and tables are listed on the contents pages. There are no microfiche plates.

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The <u>Vita Wynnebaldi</u> ( <u>ADM</u> )	K1
<u>Ships</u> ( <u>ADM</u> )	K3

SOU 67

In 1975, pipe trenches were dug at several places in Kingsland Market. D Barrett, who observed this work, reported verbally at the time that several 'Saxon pits' were exposed. No written or drawn record survives.

Pit 8 was at least 0.9m deep and cut at least 0.3m into the gravel. The two layers seen to fill it were both dark soils; the upper with 'some charcoal flecking'; the lower 'with much decayed bone and much charcoal'. One sherd of a Middle Saxon vessel was recovered.

Pit 9 was probably only a little deeper than the 1.4m of it that were exposed. It had been cut at least 0.7m into gravel, and perhaps was subrectangular in plan and section. Four layers were observed, the lowest of which was 'lightish, green-stained medium brown clay', perhaps cess or a sealing layer. Over it was 'waterlogged and decayed wood and seeds'. This thin layer was sealed by a layer exactly like the lowermost one. The top layer, about 1.3m deep at its deepest point, was a dark but 'greenish-stained' soil. Some animal bone was observed in the waterlogged layer.

Pits 10 and 11 were exposed but could not be investigated. Pit 10 was, and pit 11 was at least, 1m deep. Both had been cut through some 0.7m of gravel, and were filled with dark soil.

Pit 12 was observed in plan at the bottom of a 1.4m-deep trench. It had been cut at least 0.4m into gravel. Dark fills were observed at this point, 'with some decayed bone'. The rest of the pit was then mechanically removed, and proved to have survived to a total depth of about 2m below the modern topsoil. Dark layers containing charcoal, animal bone, and 'apparently compressed organic material' were indiscriminately removed. Recovered from these layers were fifteen sherds of Middle Saxon pottery and a bronze pin.

Pit 13 was at least 0.7m deep and cut at least 0.4m into gravel. Two layers were observed, the main one of which was dark soil containing 'much decayed bone'.

Pit 14 was 1.35m deep, cut 0.85m into gravel, and U-shaped in section. Two layers were observed. Both were dark soils containing charcoal. A more detailed investigation was not possible.

Pit 15 underlay 0.9m of modern disturbance, and was at least 0.3m deep. It was seen to have been filled with 'grey brown clayey soil' in which were 'some charcoal, shell fragments, and some decayed bone'.

Pit 16 was observed at the bottom of the trench (of unstated depth). Fully excavated by machine to a depth of 'c 1.80m below the present ground surface', it may have been a little over 1m deep. It was observed to have been filled with dark soil in which were flecks of charcoal and 'some fragments of decayed bone'.

Pit 17 was recorded as 'signs of a possible pit in the south-facing section: investigation not possible.'

Pit 18 was observed in the bottom of the trench, at a depth of about 1.5m below the present ground surface.

when complaints were made that it had not been scoured (Hearnshaw and Hearnshaw 1906--8, I, 131). No certain reference to the southern ditch exists before Englefield mentions it -- which, of course, is no proof that it was not equally old. It is possible that the ditch dug in 1603, sufficiently deep to float 'a boate of good burthen' as far as the churchyard (ibid, III, 382), was dug on the south side of Chapel Road. In the first place, the offender was Michael Nettley, not John Capelin as would have been the case if the ditch had been dug on the north side. Secondly, the ditch is said to have run 'under the wall' of the churchyard, a phrase that might be reconciled with the digging of a ditch to the south. Thirdly, the ditch to the north of Chapel Road was treated in 1602, 1603, and 1604 as a separate feature that had to be scoured and provided with a bank on the landward side (ibid, II, 362; III, 376; III, 399). A 'foot causey' to the south of Chapel Road is mentioned in the same three years (ibid, II, 362; III, 377; III, 399). If it lay immediately to the south, this gravelled path must have been earlier than the southern ditch. But there is no reason to suppose that a path lay so close to Chapel Road: this would have been a needless duplication of function. If the path lay further to the south, it is possible that the southern ditch existed early in the 17th century at the latest.

Effectively, however, the ditch may be dated to some point after the Middle Saxon period, when pit 24 was infilled, or perhaps after the medieval period, when pit 25 may have been infilled, and before the end of the 18th century. Curiously, given Englefield's unambiguous comments, no ditch is shown on maps of Southampton published about this time (Mazell 1771; Milne 1791; Baker 1802). It is assumed that the surveyors overlooked what may have become a heavily silted pair of features.

## GRAVEL SURFACES

The gravel surfaces are described in their numerical sequence.

Context 5 was about 0.1m thick. It overspread, and sank slightly into, pit 4. Later than the Middle Saxon pit, it lay beneath 19th-century layers. No other dating evidence was available, unless one supposes that it was the same as context 20 (described below), and was perhaps a post-medieval or early modern layer therefore.

Context 11 was at least 0.2m thick and at least 3m wide. It appeared to have a north--south alignment and was at least 6m long. Laid on top of the natural brickearth, it was disturbed across its top, perhaps by ploughing, and

**SOU 79--84**

SOU 79

See MF1:N3--5.

SOU 80

A Six Dials borehole. See Andrews forthcoming.

SOU 81 and 82

See MF1:N3--5.

SOU 83

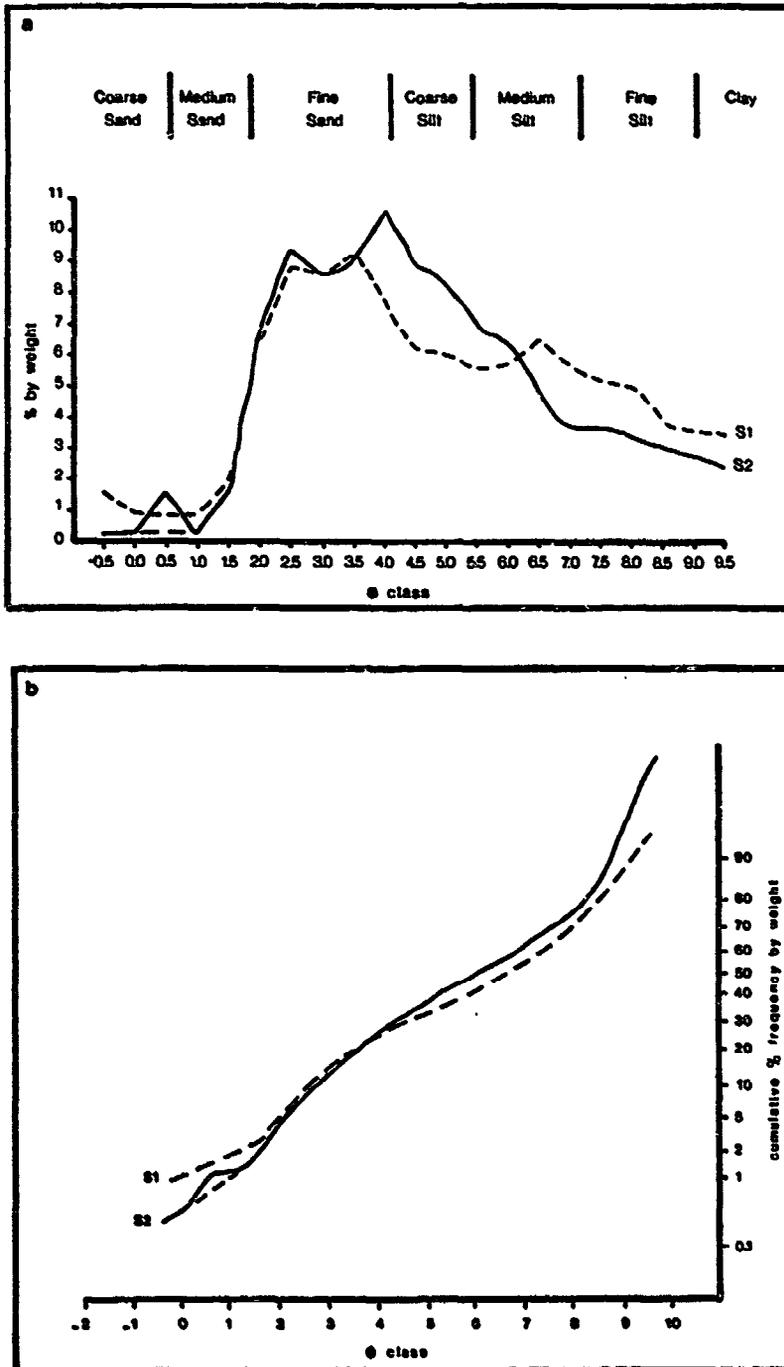
A Six Dials borehole. See Andrews forthcoming.

SOU 84

Site number issued in error.

SOU 96

In the 1950s, Charlotte Place car park was built and equipped with pedestrian underpasses. This involved the excavation of a hole some 80m long by some 75m wide. In 1983, M Budd of Southampton City Engineers reported to P Andrews that this work had not exposed any archaeological features. It is likely, at the least, that no extensive pit fillings were exposed.

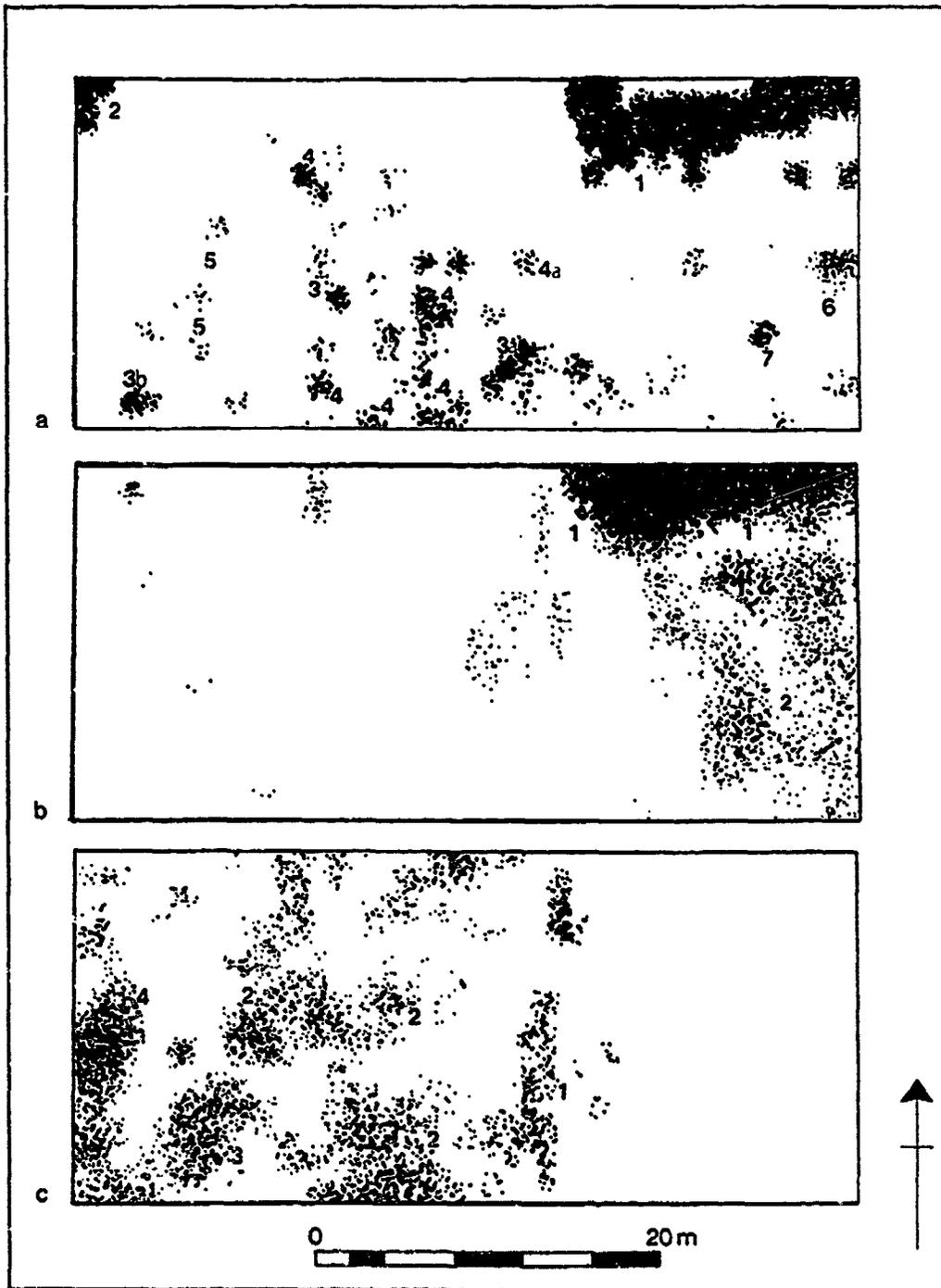


**Figure 139.** The percentage-frequency curves (a) and cumulative-percentage-frequency curves (b) of the four descriptive grades (Wentworth) for samples S1 and S2.

**MF2:H1**

**SOU 169**

**A Six Dials site. See Andrews forthcoming.**



**Figure 143.** SOU 186, grid D. (a) The magnetometer survey  $>2$  NT; (b) the resistivity survey  $>35$  ohms; and (c) the resistivity survey  $<29$  ohms. Numbers refer to anomalies.

fill (through which water would percolate more easily), the water content of the matrix surrounding the pits would conduct an electrical current more easily. In other words, the pit material would offer a higher resistance than the surrounding brickearth.

Using the information available as a result of the survey, the western limit of Hamwic has been tentatively identified as the linear feature of grid A (anomaly 2, fig 142). This might be projected through the low-magnetic features in the west of grid D, or pass to the west of that grid. It would appear that grid G does not traverse the boundary, though the decreasing magnetic intensity of the anomalies towards the west of the grid suggests that the boundary is quite close.

VITA WYNNEBALDI

Besides the text found in the Hodoeporicon, there exists another narrative of the Channel crossing, which is to be found in the Life of Wynnebald, Willibald's brother and travelling companion. The narrative structure of this second version, the Vita, is even more episodic and the style even more hyperbolic than that of the Hodoeporicon. Somewhat to shorten the tale, the pilgrims gathered, travelled to an unnamed mercimonium, on the advice of sailors moved on to a place of shipping, boarded a ship, and set sail:

Statimque ille suaviter suorum sociatus est comitatu patris et fratris, et sic agiliter cum sumpturis atque stipendiis ad loca venerunt venalia, quod est mercimonium, et statim illi cum consilio et consultu nautorum navilia adepti fuerant loca, et oceo tunc illi marginem scandentes, navem competebant ceruleaque lympharum invaderunt liquida (Holder-Egger 1887, 107).

How does this narrative square with that found in the Hodoeporicon, according to which the travellers embarked at Hamblemouth, close to a mercimonium? In theory, there might be no difference between the two versions: one could read the Vita as stating that the travellers went first to Hamwic (the unnamed mercimonium), took advice, and moved on to Hamblemouth (the unnamed navilia loca). But this interpretation seems most unlikely. It is supported in the Vita only by the fact that Huneberc separates the sailors from the place of shipping, and two reasons suggest that this navilia loca was to be found in the mercimonium. In the first place, the entire narrative structure is episodic, as is clear from a reading of the passage quoted above, or from its precis, and no momentous significance should be read into the separation of the sailors from the ships. Secondly, however, one can read some significance into Huneberc's words, which describe events in a logical sequence; and this is that the sailors were not ranged at the river's edge, alongside their ships. Seeking information on what ships were sailing where, and when, and at what price, the pilgrims gathered their information most conveniently, one supposes, at the Anglo-Saxon equivalent of

and that the Sutton Hoo Ship, therefore,

may represent a main stream of the migrants' boatbuilding techniques at the time of the invasion of Britain by the Angles, Saxons and Jutes, even though she may represent it in one of its most refined and luxurious forms.

The typicality or otherwise of these two finds can be checked in part by a study of the written evidence. Gildas, writing in the middle of the 6th century, states that the Saxons arrived in Britain once they had 'favourable winds' (Mommsen 1898, 38; Winterbottom 1978, 26). This implies that the Saxons' ships were sailed. The words could be explained away as the empty following of a literary formula; but another text makes the same point. In a letter, written in the second half of the 5th century by Sidonius Apollinaris to a naval officer serving on the Atlantic coast of Visigothic Gaul, there are references to the 'curving ships of the Saxons' and to the Saxons 'unfurling their sails, raising anchor', and sailing home (Lütjohm 1887, 132).

Sidonius's descriptions can also be explained away. He may have been extrapolating from his knowledge of Mediterranean ships, or he may not have been distinguishing the barbarian pirates as nicely as we think (compare Myres 1986, 105--6). Even so, these two texts stand as a warning not to argue solely from the archaeological evidence.

Also to be remembered in this respect is a reference, in a metrical history written by Sidonius, to the Saxons' use of skin boats in their migrations; more precisely, to the Saxon pirates 'furling the British water with hides, cleaving the blue sea in a stitched boat' (Lütjohm 1887, 212). Nobody has suggested that skin boats were in use in southern Scandinavia anywhere as late as the 5th century AD: Sidonius perhaps had confounded the Saxon raiders with raiders from Ireland. However, again the possibility remains that the two finds described above are not wholly typical of the vessels used in the Migration Period.

There are three reasons why this initial discussion has been permitted to sprawl across several pages. In the first place, and obviously, any discussion of the English role in the Scandinavian tradition must begin with a discussion of early vessels. Secondly, however, the length of this discussion is sufficient excuse for not treating all the evidence in the same manner: there will be no mention of the Swedish evidence in the following pages, and only abbreviated mention of other, selected finds. Thirdly, the initial discussion has largely revolved around uncertainties of interpretation: it must be borne in mind that an equal

## SOU 65

Trenches dug either side of Northam Road in 1981 were observed by the writer. A yellowish brown deposit of fine sandy silt loam (brickearth) lay about 0.6m below the modern surface, at about 6m OD. Although it is probable that the brickearth was redeposited to augment the height of the street, there was no direct evidence that it was not a wholly natural deposit. Except in two places, it was overlain by clearly modern layers and makeup.

The only other layers visible were two spreads of gravel. Both overlay the brickearth and underlay the clearly modern deposits. Neither contained any finds.

One was observed in the west end of the northern trench, at SU 42515 12159. It was a thin gravel spread, about 15mm thick by about 2.5m wide. The other was observed 63m away, in the east end of the southern trench, opposite 22 Northam Road, at SU 42577 12161. This took the form of another thin spread, about 15mm thick, sporadically scattered across a width of about 3m. It is possible that the gravel was aligned east--west and the two trenches had been cut slantwise across it; but equally possible that two separate spreads were revealed.

## SOU 68

In 1978, under the direction of the writer, two trenches were mechanically excavated in the area later dug as SOU 99. Both trenches, which measured 2m by 1m, exposed and dug into the top fills of rubbish pits. These lay about 0.5m below the ground surface and were sealed beneath modern deposits. A sherd of Middle Saxon pottery was recovered from each.

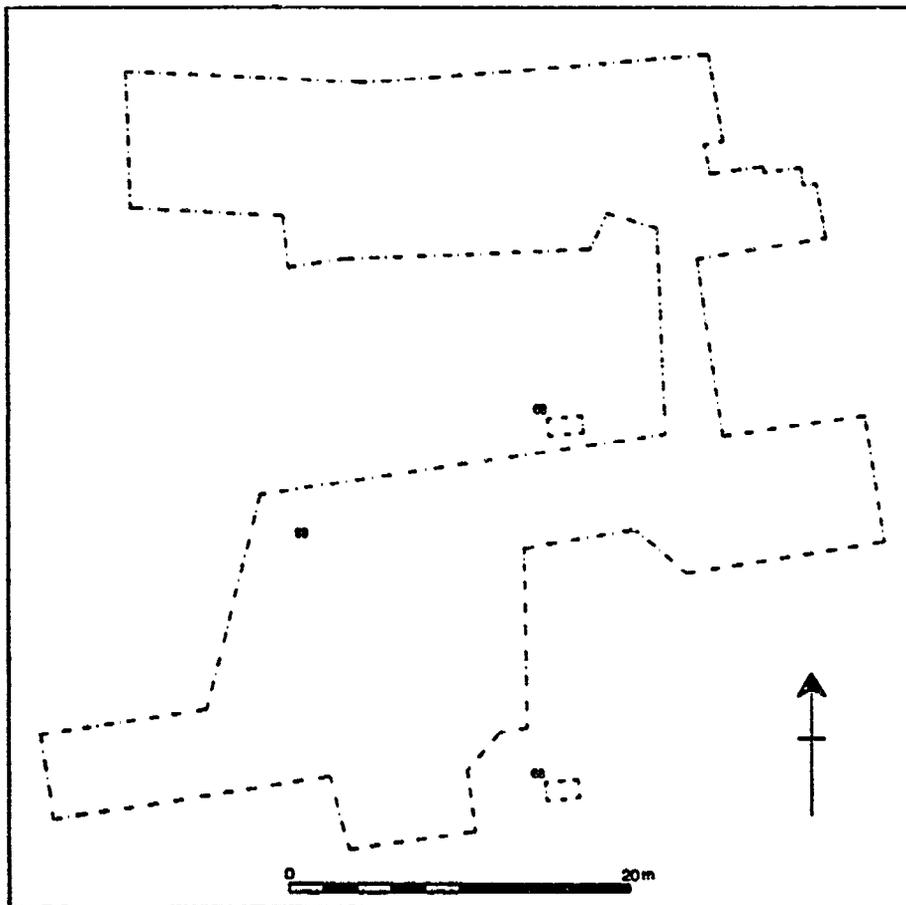


Figure 132. SOUs 68 and 99: a sites-location map.

Probably, it had been dug through at least 0.7m of brickearth and 0.1m of gravel. It was then excavated to an overall depth of about 2m below the present ground surface -- some 1.3m below the top of the brickearth. Various dark soils were noted in its fill; all containing charcoal fragments, and one with a 'high content of decayed bone'. Three sherds of Middle Saxon pottery were recovered.

Pit 19 survived to a depth of about 1m. Rounded in section, it had been cut through perhaps 0.4m of brickearth and perhaps 0.6m of gravel. It contained four layers. The upper two were dark soils, one containing charcoal and 'some burnt daub'. Below were two layers perhaps derived in part from cess. The upper one was dark soil 'and what appears to be organic material'. This also contained animal bones. The lower layer, at the bottom of the pit, was 'greenish (cess) stained clay and some gravel.'

Pit 20 survived to a depth of 1.2m, and probably had been cut at least 0.8m into gravel. Its fill appeared 'to be mainly one layer of greyish brown clay [brickearth?]', but closer scrutiny proved impossible.

Pit 21 was at least 0.6m deep and cut at least 0.3m into gravel. Two layers of dark soil were noted, one containing 'some decayed bone', the other with 'heavy charcoal'.

Pit 22 was a 'possible pit' exposed in plan, 'but totally excavated before investigation'.

In summary, it may be that these 22 pits or possible pits represent only a small fraction of the features dug at SOU 70. Middle Saxon dating evidence was recovered from only four pits, and in small quantities. Nevertheless, Walker had no doubt that the pits looked to be 'O.K. Saxon'; and this writer agrees with him. Most had the appearance of rubbish or cess pits, and the absence of modern material from their fills is a strong reason for supposing that they were dug when Hamwic was in existence.

underlay 19th-century deposits. The likelihood is strong that this was a Middle Saxon feature, perhaps a street but more probably an alley.

Context 17 was 0.1m thick, about 1.1m wide (although some extra width may have been removed by later disturbance), and apparently aligned east--west. Laid on brickearth, the feature was cut by a modern pipe trench and underlay 19th-century deposits. It may have been a continuation of context 20.

Context 20 is not illustrated, but see context 5, above. It was 0.1m thick, 2.2m wide, and apparently aligned east--west. Overlying the supposed ploughsoil, and underlying 19th-century deposits, it may have been a comparatively late feature. If it continued eastwards as context 17, it would seem to have been a metalled path running roughly parallel to the southern ditch; and may have been the 'foot causey' mentioned in 1602--4.

Context 22 (fig 137) comprised at least five metallings of Chapel Road, distinguished principally by the different gravels used and not by any intervening layers of soil. Together, these metallings were at most 0.5m thick by at most 6.4m wide. They appear to have been aligned east--west.

They were separated from the natural brickearth by a 0.1m thick layer of greyish brown sandy silt loam, presumably a stain in the brickearth. Cut by the ditch, 21; by sewer trenches; and probably by the ditch, 8, their dating remains uncertain. There is almost no evidence that the route usually referred to in the Middle Ages as a via, and in the Tudor period as a 'way', was ever metalled, except possibly for three references.

The earliest of these is a reference, probably in the 1260s, to Chapel Road as a vicus ferratus (Blake 1981, 82). This can be translated as 'hard road' (Latham 1965, 189, sv ferrum: strata ferrata), or 'metalled way'. If the phrase correctly describes the state of Chapel Road, we may conclude only that it had been metalled some time in or before the 1260s.

There are occasional references from 1509 onwards to the 'causey of our Lady of Grace' in Stewards' books. These might describe Chapel Road, but it is more likely that they refer to a street just to the south-west of St Mary's Church that was regularly called a calcetum in the Middle Ages and a causey in the 16th century.

An agreement relating to Chapel Road was recorded in 1581 (Hearnshaw and Hearnshaw 1906--8, II, 207): John Capelin, who had persistently refused to scour a bourney and thus save Chapel Road from damage caused by flooding, had

promest to raysse the ground with gravell in suche sort

SOU 85 (AH 22)

Part at least of a sewer trench dug along Bevois Street in November 1963 was observed. No original records of that observation survive. Found, presumably in the upcast fills of pits, were 'Roman pottery, Saxon hand-made pottery and continental imported pottery' (Addyman and Hill 1968, 72). Also found was

a small corroded Roman coin which appears to be one of the common GLORIA ROMANORUM issues of the House of Valentinian from the 360's and 370's with mint-signature predictably TRP (Dolley nd, 25).

## SOU 97

In August 1982, P Andrews directed the excavation of a small area between St Andrew's Road and St Mary's Road. The trench measured 2.7m north-west--south-east by 1.7m north-east--south-west. Several structural features probably datable to the late Iron Age were uncovered and excavated. (A report on these will appear elsewhere.) Apart from a modern pipe trench, which destroyed the north-westernmost 0.5m of the site, no other features were found.

of a high proportion of coarse particles ( $>1.0\phi$ ) or very fine particles ( $<8.0\phi$ ) within the distribution suggests that the sediment is not of fluvial origin. The peak in the distribution at  $2.5\phi$  is indicative of an addition of aeolian sand. With the additional evidence of the presence of carbonates in the sediments, an aeolian origin for the sediment is preferred.

It is possible that after deposition the sediments may have been weathered in situ, in which case one would expect an increase of the clay fraction and a decrease in the sand fraction (compare Shackley 1980, 6). The results show the opposite, however. Therefore an addition of aeolian sand to the original loess deposit would seem likely.

SOU 170

In November 1982, a pipe trench dug along the north side of William Street was observed by P Andrews and DH Brown. At 0.4m below the present ground surface (at about 1.7m OD), 'a sticky, greyish blue, silty clay' was uncovered. It was sealed by modern layers. It may have been part of Northam Marsh.

display a response characteristic of smaller metal fragments, and are interpreted as such.

Of interest in this grid are anomalies 2 and 3, varying in size and shape, but on average around 1m in diameter. The linear nature of anomaly 2 suggests the presence of a section of ditch, with features in the surrounding area.

#### Grid D (fig 143a)

1. Similar to anomaly 1 of grid A, very highly magnetic.
2. A very highly magnetic region, proximal and parallel to a tarmac footpath.
3. Smaller, highly magnetic areas, >20 NT and about 1m in diameter.
4. Groups of moderately magnetic material, 6--12 NT.
5. A group of low magnetic anomalies, 3--4 NT.
6. An isolated, moderately magnetic anomaly similar to anomaly 4 but sited at the extreme east of the grid, in the area affected by anomaly 1.
7. A high 'spike' value, >30 NT.

As with grid A, the presence of anomaly 1 dominates and swamps a considerable portion of the east section of the grid. The presence of something like a gun emplacement is again suspected.

Anomaly 2 is interpreted as the effect of conduits carrying services to the central buildings of the park.

Anomaly 7 is characteristic of a metal fragment (like anomaly 4 of grid A). Anomalies 3, 4, and 5 are of interest, the group 4 anomalies being very similar to the group 3 anomalies of grid A. Anomaly 6 could possibly be included in group 4, but its presence in the area affected by anomaly 1 makes interpretation difficult. There is also some doubt about the westernmost anomaly of group 3 (anomaly 3b), with a peak of 27 NT, which may result from metal. There is an apparent decrease in the number and magnitude of the magnetic anomalies towards the western edge of the grid.

#### Grid G (fig 144a)

1. A very highly magnetic anomaly, 50--100 NT, at the east end of the grid.
2. High magnetic values, 15--20 NT, some 2m square.
3. A group of moderately magnetic anomalies, 4--10 NT, similar to group 4 of grid D (see above).
4. High 'spike' values, >30 NT.

**MF2:J2**

**SOU's 187 onwards**

**No concern of this volume.**

an inn, where they could expect to find sailors.

In short, according to the Vita, the travellers sailed from the anonymous mercimonium. That the pilgrims sailed from Hamblemouth is virtually certain: the fact is stated in the Hodoeporicon, Hamblemouth's location is carefully specified, and Huneberc took her story from Willibald himself. It is possible, then, that Hamblemouth was also distinguished as a mercimonium; but there are reasons to suppose otherwise.

Authorial concerns are different in the two narratives. In many respects, the Hodoeporicon is an itinerary, in which the specifying of places is important; but the Vita is a far more straightforward piece of hagiography, in which attention to such detail is largely irrelevant. In the Vita, the travellers are conducted over the Channel and across France without a single place being named. If names are of little intrinsic importance in the Vita, probably details of location are equally irrelevant: there is no need to establish the credentials of an out-of-the-way landing place like Hamblemouth, and it is enough to write that Wynnebald took ship somewhere. It seems, therefore, that in the Vita Huneberc was accepting her role as author and obscuring the irrelevant fact that the embarkation point was at Hamblemouth. Her intended audience would not have been woefully misled if it was led to assume that the embarkation point was a mercimonium or was Hamwic.

number of uncertainties, although they are largely unmentioned in the following pages, could be mentioned in any discussion of any vessel.

One leaps forward, therefore, to Viking-age ships. Crumlin-Pedersen (1969, 24--7; 1972, 185) has identified a number of features common to these vessels. These are a T-shaped keel, broader than it is deep; clinker planking; a 'handsomely swung line which forms a double-pointed hull, built up round the keel, stem and stern'; and a mast stepped in a floor timber or in a step next to a floor timber. certain of these features, most notably the clinker planking and the hull shape, are common to a Scandinavian tradition lasting for at least a millenium from 300 at the latest.

Other features perhaps emerged slowly. Of most interest here is the incorporation of a mast and the adoption of sail. The oldest vessel containing evidence of a mast is the Oseberg Ship, built around 800 and found in Norway. However, even if we disregard the written evidence of Sidonius and Gildas, there is some reason to suppose that Scandinavian ships had been sailing for a considerable period before 800. The best evidence is provided by the Kvalsund-2 Boat, perhaps built around 700 in western Norway. Although there was no evidence for a mast, and although it was certainly propelled by oars, the ship has a T-shaped keel and is comparatively wide in the beam. It is clear that a sailing vessel with a similar hull was quite practicable. Much the same can be said of the Sutton Hoo Ship. Again the vessel was rowed and there is no evidence for a mast (just possibly such a feature had been removed before the vessel was used in a burial: see Evans and Bruce-Mitford 1975, 422). However, with a length of about 27m and a beam of a little over 4m, it possessed virtually the same length--beam ratio as the (smaller) Kvalsund-2 Boat. The Sutton Hoo Boat was built around a keel plank, not a keel. Yet

The absence of a projecting keel in no way carries the implication that the vessel was not sailed (ibid).

It may also be relevant to note that the two craft were the oldest to be found with evidence for the use of side rudders (the existence of such a feature being inferred in the case of the Sutton Hoo Ship). Not only does a sailing ship require some form of rudder, but the side rudder seems to have functioned very efficiently in this shallow-hulled type of vessel (Marcus 1980, 181, n6; Christensen 1986, 76--7).

There remains a problem, however. Although he takes such evidence to mean that Scandinavian ships were sailing in the 7th century, Christensen (1972, 165) points out that the low freeboard of ships built like the Sutton Hoo and

**SOU 66, SOU 88, AND SOU 89****INTRODUCTION**

The three sites reported on here are linked by their geographical closeness, but in fact may be divided into two groups: SOUs 66 and 88, which were 'negative' sites; and SOU 89, which produced evidence of occupation. Each is separately described below, in numerical order, although their chronological order is 88 : 66 : 89.

**SOU 66**

In 1979, after the demolition and removal of Kingsland Baptist Chapel, South Front, preparatory to redevelopment, this writer inspected the sides of the hole that had been left behind. (The base was obscured with rubbish.)

Yellowish brown fine sandy silt loam was observed at an approximate height of 5m OD. Its thickness could not be ascertained. No features cutting into this natural deposit were seen. Effectively, this means only that no large features had existed at the points observed.

In addition, a quick inspection was made by this writer of the north, west, and east sides of two hollows once occupied by 10--26 South front. Much the same things were noted: brickearth of unknown thickness at about 5m OD; with no evidence visible of intrusive features.

These two further observations bracketed the area investigated eight years earlier, at SOU 88.

**SOU 88**

As 1971 turned into 1972, MF Hughes and the South Hampshire Archaeological Research Group undertook small exploratory excavations at what had been the site of 16--27 South Front. These comprised three narrow trenches and two larger holes, the latter measuring 5m square and 4m by 2m.

The discoveries are described in the following terms.

## SOU 69

Probably in 1973 or 1974, SARC excavated three trial trenches in land to the south of Coleman Street, where houses had been demolished in advance of the expansion of Southampton Technical College. The trenches seem each to have been about 5m square. As was the practice at the time, no site code was given to this work.

It is not known what was found. However, certain finds were provenanced by SARC to 'TT 1, 2, and 3'. One supposes that 'TT' means 'trial trench'. Since no other uncoded SARC site is known to have comprised three trial trenches, it is likely that these finds were recovered at SOU 69. They include Middle Saxon pottery.

## SOU 71 AND SOU 92

### INTRODUCTION

SOU 71 was a 4m-square test hole dug, in a search for the lagoon, at the southern corner of Chapel Road and Albert Road (North). Probably, the hole was probably excavated mechanically in 1974, and exposed the rubble infill of a 19th-century cellar. In June 1982, the construction of a new building at the same corner began with the digging of stanchion bases and a pipe trench. This work (SOU 92) was observed by P Andrews and the writer.

Natural deposits comprised a layer of yellowish brown sandy silt (brickearth) over gravel. The brickearth was observed at a depth of between 0.7m and 1m below the ground surface -- at an average height, therefore, of some 1.6m OD. It usually was about 0.45m thick, of which the top 0.15m--0.25m was darker. The top, a brown soil, merged fairly imperceptibly into the underlying brickearth, although in places a fairly sharp and sinuous boundary could be seen. It is possible that this upper half was ploughsoil. The gravel was at least 0.8m thick. Several strata were observed within it, largely distinguished by the dominant size of the stones, which varied between 25mm and 100mm in diameter.

### STRUCTURAL FEATURES

A few post-holes and stake-holes were observed. They are shown but not numbered on fig 135.

### PITS

Nine pits were observed and numbered contexts 1, 2, 4, 6, 10, 19, and 24--6.

Pit 1 was rounded in plan and in section, and was about 0.75m deep. Three layers were observed, the upper and lower ones being dark greyish brown soil with some rubbish (animal bone and charcoal in the upper one; shell fragments and much charcoal in the lower). Separating them was a 0.15m-thick

as the water shall no more anoye the heighway by his deffault on this syde of pentecost next in consideration of which his promes we have left his payne [fine] which was 40/- to your worships discretions.

Two questions must be asked here: what was the 'ground' that was to be raised, and was the work ever done? It is most likely that the 'ground' was Chapel Road, or some part of it, but there is no certain indication that the work was completed. Capelin had spent five years refusing to dig a bourny (which is how he came to be fined 40s), and still had not dug it in 1582. However, this is special pleading. There is a reasonable possibility that some of context 21's gravel surfaces were laid down in the 13th and 16th centuries; but it remains probable that the earliest surfaces were part of one of Hamwic's streets.

Further excavation is clearly necessary.

## SOU 86

In 1979, a service trench was dug along the western edge of St Mary Street, from SU 42501 12106 to SU 42534 11611. This work was observed by D Devereux, P Andrews, and the writer.

Yellowish brown sandy silt (brickearth) was observed at a depth of 0.3m below the present ground surface -- at an approximate height, therefore, of 5.5m OD in the north, 4.7m OD in the centre, and 3.4m OD in the south. The brickearth was at least 0.2m thick.

Apart from a few modern pipe trenches, no features were observed to have been dug into the brickearth. Layers of gravel, at least part of which were makeup layers for the modern street, were spread over the brickearth. It is possible that the lowermost parts were pre-modern gravel spreads; but nothing clearly indicated this fact.

**SOU 98 and 99**

**SOU 98**

See MF1:N3--5.

**SOU 99**

See the main text of this volume. For a supplementary report, see immediately below.

MF2:G3

**SOUs 100--66**

**Not Hamwic sites.**

MF2:H3

**SOUs 171--85**

**SOUs 171--5**

Not Hamwic sites.

**SOU 176**

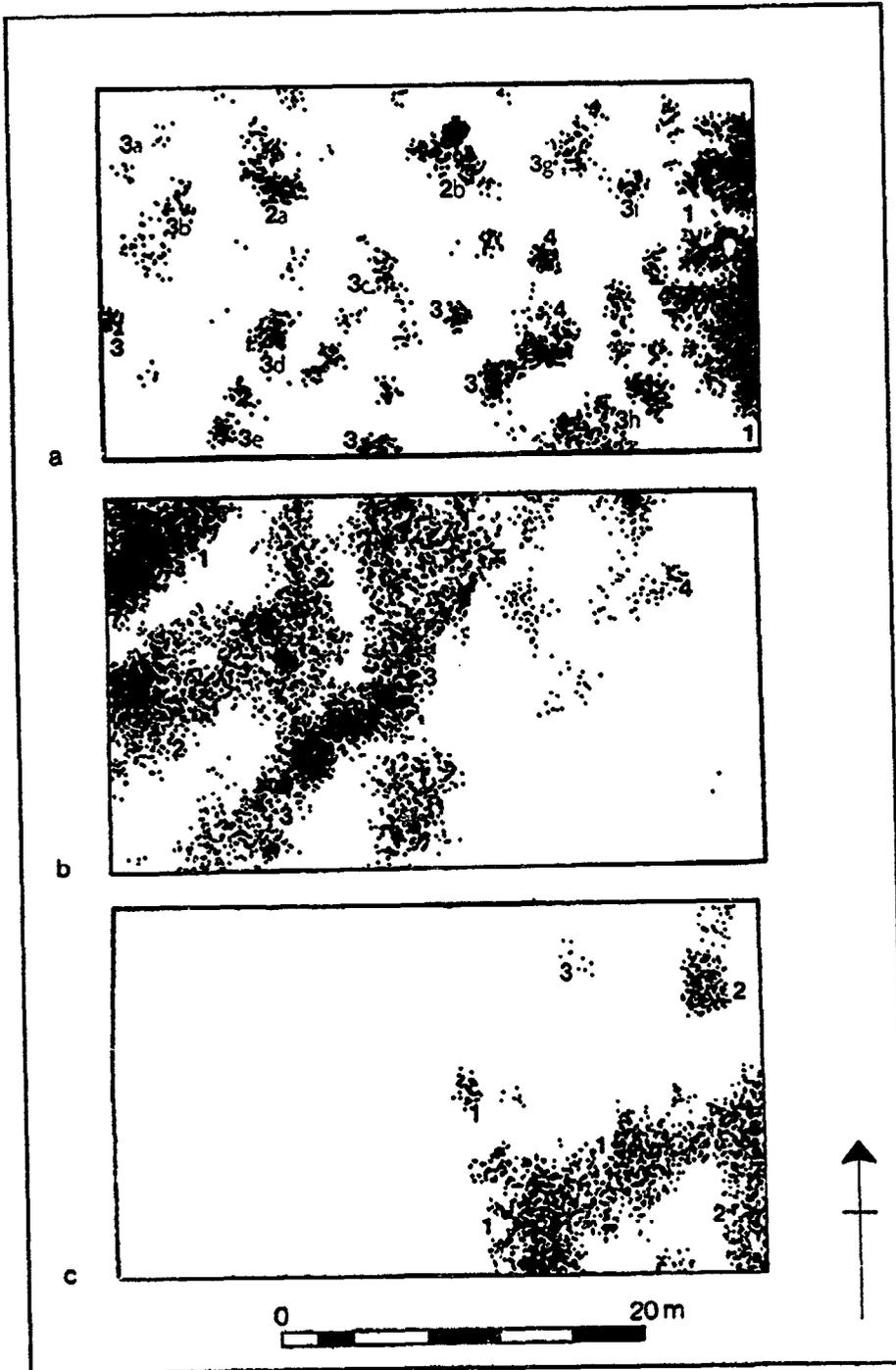
See MF1:N3--5.

**SOU 177**

A site not completed in 1983.

**SOUs 178--85**

Not Hamwic sites, or not Hamwic sites dug in the period  
1946--83.



**Figure 144.** SOU 186, grid G. (a) The magnetometer survey  $>2$  NT; (b) the resistivity survey  $>35$  ohms; and (c) the resistivity survey  $<29$  ohms. Numbers refer to anomalies.

### THE 'ELIZABETHAN' MAP OF SOUTHAMPTON

As was remarked in the main text, the map is difficult to reproduce except as a tracing. The tracing included here as fig 145 is that prepared for publication in The Southampton Atlas (Rodgers 1907, map II). Although that copy is defective or inaccurate in many respects (some of which will be mentioned below), it is generally accurate enough for the present purposes. The modern capital letters, A--H, have been added by the writer.

The original measures 826mm x 559mm and is a coloured painting on sheep parchment. Large areas have been overpainted in oils, apparently in the 18th and 19th centuries, and original details obscured therefore (compare Welch 1964, 1--2). Four points must be made about this later work.

1. The history of the map before its appearance in a 1904 exhibition remains largely unknown. Who did the overpainting, and why, are unanswered questions.
2. But, however crudely the overpainting has been done, there is some evidence that care was taken not to obscure important details. For example, the overpainting of the Common stops just short of the words 'Sent denys Wood' (A).
3. Furthermore, as Welch remarks, the overpainting 'was undoubtedly . . . a crude attempt to remedy [the flaking away of parts of the map]'. It would be interesting to know if the green paint uniquely used to mark the two diagonal routes across the Common (B and C) was a copy of the original. If so, one might suppose that this was a sort of visual pun, for the routes (if they ever existed) would have been green ways.
4. For the purposes of this volume, however, it is enough to note that the river and the pond (D) have been overpainted. Although one can be reasonably sure that the pond was in existence when the map was first made, without scientific analysis there is no way of finding out if the pond had originally been depicted (as here) as an entire unit or (as in later centuries) as divided into halves.

## SHIPS

### INTRODUCTION

The definitions of a ship and a boat have changed in time and are not clearly separated -- see, for instance, the discussion in Fenwick 1978, xvi--xx. In the following pages, no distinction is made on the basis of whether or not a vessel was open, whether or not it was a seagoing craft, or what its size was. In proper nouns, 'Boat' and 'Ship' are used in their most commonly encountered forms without any implied prejudgement that the vessel was therefore a boat or a ship.

In 897, Alfred ordered the building of ships 'shaped neither after the Frisian design nor the Danish' (Batley 1986, 60; ASC, 90). Although Alfred's design is specified in some detail, evidently the chronicler felt no need to explain to his audience what a Frisian or a Danish ship looked like. We may conclude, therefore, that there were at least two designs of ship, easily distinguishable and associated with different parts of Europe; and that this was common-enough knowledge in England at the time. It is not unlikely that there were more than two designs of ship known as Frisian and Danish, whether or not the distinction between types was obvious. Furthermore, it is likely that certain craft incorporated improvements or adaptations not found in others of the same general design. And it is possible that certain of these developments were borrowed from another tradition of shipbuilding. These are matters that must be pursued elsewhere than through one short entry in the Chronicle.

Each species of evidence must be interpreted with extreme caution. As Greenhill (1976, 177) writes of the archaeological evidence, a find

gives information only about itself. . . . The finds are far too scattered both in time and place to enable us at this stage to come to even tentative conclusions about the general evolution of more than one or two particular boatbuilding traditions in Northern Europe.

One important debate concerns the extent to which sail

Kvalsund-2 types would have let 'the North Sea . . . run freely over the gunwale when the ship heeled over only moderately'. The Oseberg Ship also possessed a low freeboard, and the raising of the gunwales is evident only in certain vessels from about 850 onwards, the earliest example being provided by the Gokstad Ship, found in Norway.

No commentator is willing to rule out either obvious explanation of this evidence: that the difference is a chronological one and may have occurred in the first half of the 9th century; or that the different functions of the ships explain their differences in freeboard, the Oseberg Ship having been a coasting pleasure craft and the Gokstad Ship having been intended for more serious business. Expanding on this last point (and underlining the potential errors of any short review of the evidence), one may note the presently held view

that the Vikings produced 'dozens' of different types of vessels 'at a high level of professionalism' rather than just the two standard forms of warship and trader traditionally held (Croome 1987, 349).

Mention of traders is important here, for there is another possible explanation of the differences in freeboard: that vessels with a greater freeboard were of a type not suitable for use in burials or as religious offerings, and in consequence that very little relevant evidence has been found.

Such a ship might have been an early form of a knarr, a type of ship used for carrying cargo. It has been argued that this early form incorporated many of the features of the Gokstad Ship (Marcus 1955, 119--20) or the Oseberg Ship (Greenhill 1976, 211). Combining the archaeological and the documentary evidence, Marcus (1980, 45, 50--1, and 94--5) proposes that the knarr, although similar to most Scandinavian ships, was short; had a higher freeboard and a deeper draught; was broader in the beam; was a better sailer therefore; and was a faster sailer in strong winds. Having 'probably evolved some time before the close of the eighth century', it was the vessel used in Scandinavian voyages to the Faroes and further west. In making the argument about an early date for the knarr, Marcus only slightly extends the point made by Greenhill (in a passage already quoted, where the Nydam Boat and Sutton Hoo Ship are contrasted) that

At least two types of boat may have developed, a long narrow vessel of war, or royalty, and a slower, wider, more stable type which would be better able to carry many passengers and goods.

A dark brown clay, apparently a natural soil, overlay the brickearth in most areas. In one place a post-medieval cobbled track was found. The only find, doubtless a chance loss, was a gold solidus [see fig 129] (SRC AR 1972, 5).

The overlying 'clay' was not noted at the other two sites, but they were observations and it is possible that such a detail was missed. The dating of the cobbled track was insecurely derived in part from the fact that it was overlain by 18th- and 19th-century soils, and partly because such a route is shown on the so-called Elizabethan map of Southampton (MF Hughes, pers comm: see also fig 147).

The coin, which is an imitative gold solidus of Louis the Pious (814--40), may have been struck as early as the 820s or 830s (Pagan 1988b, passim). It was perhaps a chance loss. The line of South Front was a post-medieval route, leading to the spring at Houndwell, 240m to the west of where the coin was found. One may guess that the route had its origins in the days when Hamwic existed, and that the coin was lost by someone using that route.

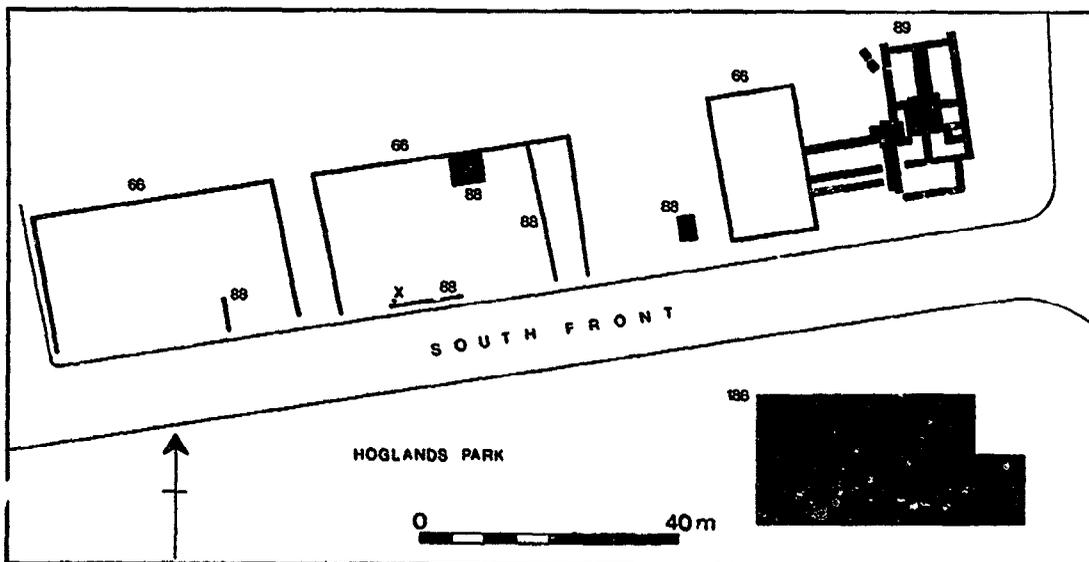


Figure 129. SOU 66 etc: a sites-location map. 'SOU' prefixes to the site numbers are omitted. The find spot of a coin is marked x.

## SOU 70

## INTRODUCTION

Further additions to Southampton Technical College necessitated the digging of 41 mass-concrete sub-base pits in September 1977. This work was observed by J Walker. Part of SOU 70 coincided with a corner of SCU 38, trench A; and another part with the eastern half of SOU 40 (fig 133). This coincidence leads to some difficulties, because none of the pits observed by Walker seems exactly to correspond to those found at the earlier sites -- although it is possible that pit 47 on SOU 38A appeared as F3 on SOU 70. The writer therefore investigated the possibility that he had mislocated SOUs 38A and 40. Their positions seem virtually correct, however. Small hiatuses in the records of the 1950s and 1960s allow a possible displacement of the earlier sites of up to 1.5m to north or south and up to 1.0m to east and west; but no amount of movement, however great, allows any consistent matching of SOU 70's pits with those of SOU 38A or SOU 40.

In one way, this lack of agreement is not surprising. The pits excavated on SOUs 38A and 40 would have been backfilled eventually with a mixture of soils that was almost certain to contain modern material. Both in fact and in appearance, they would have become modern pits. Walker did not mark modern disturbance on his plan of the site, except where it had cut away part of an earlier pit. It is therefore likely that the Anglo-Saxon pits found at the two earlier sites would not have been marked on Walker's plan.

How, however, does one explain the presence of pits on SOU 70 which do not appear on the plans of SOUs 38A and 40? Again, no amount of movement within the areas available at the time allows any consistent matching of the earlier sites and the pits of SOU 70.

Although no details are shown on any surviving plan, it appears that much of SOU 38A had been trenched by brickearth diggers, and a 'long line of disturbance' ran across the southern end of SOU 40. It is possible, therefore, that some of the pits noted by Walker were dug in the 19th century. Although this remains a possibility -- Walker often notes the difficulties of identifying pits cut

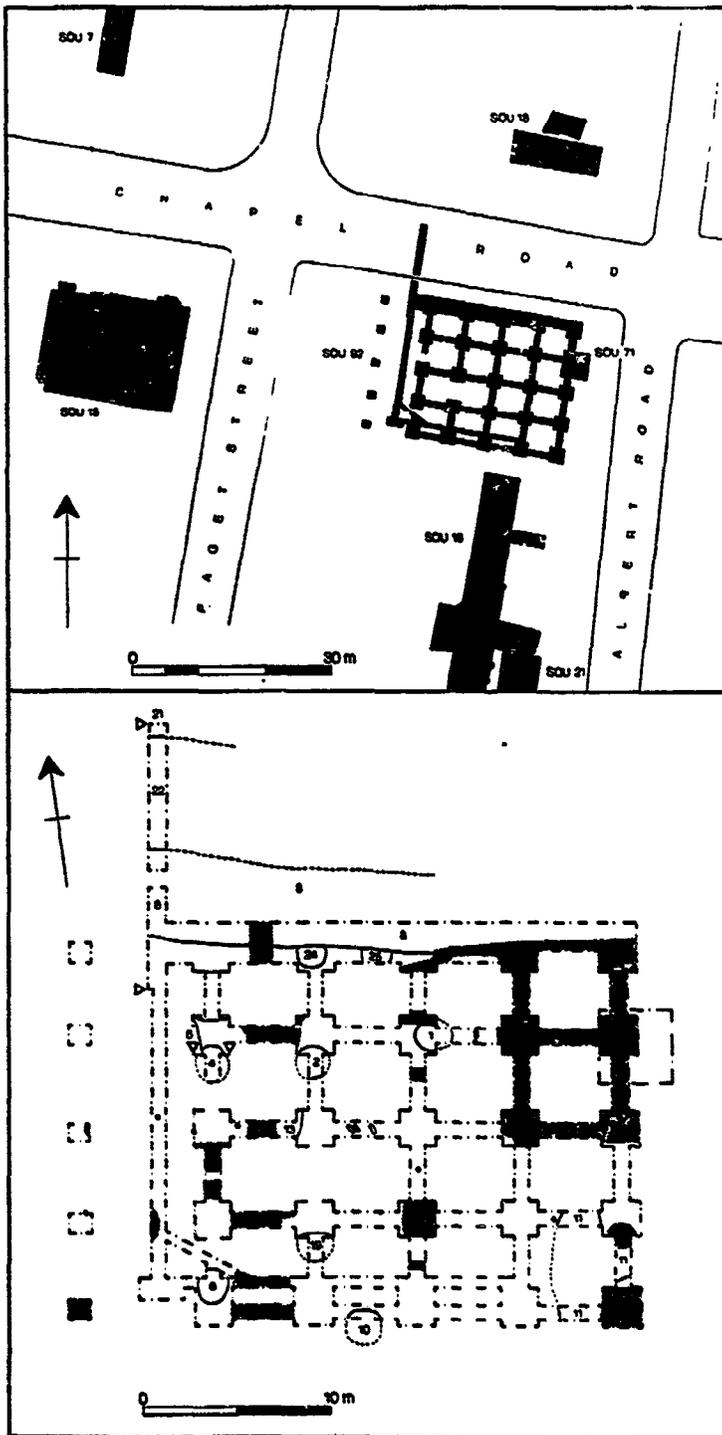


Figure 135. SOUs 71 and 92: a sites-location map and plan. Modern disturbance is shown by hatching. Post- and stake-holes are shown schematically as circles of the same dimension.

## SOU 72

The site number refers to two separate excavations of the same area. In 1971, under the direction of G Dowdell, a search was made for evidence of a lagoon south of Chapel Road. This took the form of the opening of two trenches just to the east of Western Terrace, a street that now exists only as an entrance way to the playing fields of the Deanery School. The trenches were approximately 3m and 5m square. In 1975, under the direction of E Klingelhofer, and for reasons totally hidden from this writer, the trenches were reopened and small western extensions excavated for the first time.

There are no surviving records of the 1971 work. One of the people working there recalled in 1978 that 'nothing but brickearth' was found (P Lomas, pers comm). The records of the 1975 dig tend to support that memory. Yellowish brown soil, described in 1975 as brickearth, lay about 0.75m below the ground surface. Some 0.4m thick, it overlay gravel. The only features observed to have been cut through it were post-medieval or modern. The small extension to the northern trench exposed more 'brickearth'. Cut into this, and aligned north--south, were five linear features at most 50mm wide and 30mm deep. These were filled with 'black loam', a soil that also overlay them to a thickness of at most 0.1m. They were interpreted, plausibly enough, as ploughmarks. No dating evidence was recovered from them or from the layer of 'black loam'.

**SOU 87--90**

**SOU 87**

Test holes in Melbourne Street. Mentioned in the main text of this volume.

**SOU 88 and 89**

See MF2:A3--7.

**SOU 90**

Repeat numbering of SOU 37. See MF1:J2--5

## SOU 99: BRICKEARTH PARTICLE-SIZE ANALYSIS

### THE SAMPLES

A bulk sample of 'brickearth' was taken from context 681 (sample 1), and a similar sample from the 'brickearth' immediately below the iron pan at the base of context 681 (sample 2). These samples were taken from the top of the 'brickearth', at about 0.85m--0.90m OD.

The samples were dried, and split using a rifle box to produce a sub-sample of each that weighed about 30g--40g. The sub-samples were to be used for particle-size analysis. The sample size was determined by the size of the largest sieve mesh to be used ( $-0.5\phi$ ; 1.4mm). The maximum load recommended for this mesh size is 48g, since a greater weight could distort the mesh and thus produce inaccuracies.

Before analysis the samples were prepared by being passed through a 4mm ( $-2\phi$ ) sieve in order to remove any 'lumps' of iron pan.

### METHODS OF ANALYSIS

The methods employed to determine the particle-size distribution of the sediments are similar to those used by Shackley (1980, 3--7), namely the dry-sieving of the sand and gravel fractions; and the sedimentation, by the pipette method, of the silt and clay fractions.

#### Dry Sieving

Dry-sieving was chosen in preference to wet-sieving. Analysis by wet-sieving methods can be inaccurate because the surface tension of the water can cause particles to 'cling' to the sieves (Head 1980).

Prior to sieving, the samples were disaggregated using a rubber pestle and mortar, as recommended by Shackley (1975). The samples were then oven-dried and weighed.

The samples were sieved through a set of standard Endicott 8" sieves arranged at  $0.5\phi$  intervals, in decreasing mesh size from  $-0.5\phi$  (1.4mm) to  $+4.0\phi$  (0.063mm). The sieves

## SOU 167

In 1983, this writer observed the digging of part of a service trench along the eastern edge of St Mary's Road, just to the north of Clovelly Road. At least 0.2m of yellowish brown sandy silt (brickearth) were exposed, lying 0.3m below the modern ground surface, at a height of about 11m OD. This appeared to be a natural deposit.

Above it was a layer of gravel in a matrix of dark greyish brown soil. The gravel comprised about 60% of the layer. Some 0.05m thick, it was at least 1.5m wide and seems to have been aligned north-north-west--south-south-east. This is roughly the alignment of the modern St Mary's Road.

The gravel layer had been cut in two places by pipe trenches associated with the buildings erected in the area at the very end of the 19th century. It was sealed by modern deposits. No closer dating evidence was recovered.

## SOU 186

## INTRODUCTION

The site known as Hoglands Park in Southampton is a mainly grass-covered public park, covering an area of almost 60,000m<sup>2</sup>. Apart from public conveniences and a pavilion in the centre of the park, there seem to have been no buildings on the site. Conduits for water and electricity supplies run beneath tarmac footpaths.

Excavations to the east of the park have revealed dense Middle Saxon occupation, principally comprising refuse pits. Beyond South Front to the north of the park, at SOU 89, what has been interpreted as a boundary ditch, aligned north--south and approximately 1m deep, has been noted (MF2:A3--7). It was hoped that a geophysical survey of the eastern section of Hoglands Park would help to identify the western boundary of Hamwic, based on the presence and absence of pits; with pits east of the boundary and Anglo-Saxon or medieval field ditches to the west.

Many pits of the Middle-Saxon period are about 2m in diameter, and about 2m deep, and contain layers of dark greyish brown loamy soils and redeposited brickearth; some with an accumulation of domestic refuse, including burnt clay. The pits are dug into the natural brickearth, which is estimated to be 0.1m--0.2m beneath the turf level in Hoglands Park. It was felt that the presence of domestic debris in the pits would enhance the magnetic susceptibility of the pit fill; that the cutting such large pits into the brickearth would have enhanced the electrical conducting properties of the soil; and that the measurement of both effects over a large area would provide a contrast between the pits and the surrounding natural brickearth.

## THE SURVEY

The geophysical survey was carried out in December 1982 by the authors, with the assistance of P Andrews and members of the excavation team. Three transects were decided upon, running in an east--west direction, traversing the estimated line of the boundary ditch (fig 141).

The nebulous shape and high values of anomaly 1 suggest that the measurements in that region are affected by proximity to the eastern perimeter fence of the park.

Group 4 anomalies are characteristic of metal fragments

Anomalies 2 and 3 are of interest, each group being of similar dimensions, differentiated only in the magnitude of the magnetic gradient. The anomalies appear to be present across the entire grid.

#### THE RESISTIVITY SURVEY

Within the two grids surveyed, D and G, the 'background' soil resistance appeared to be between 30 and 35 ohms. Anomalies have been located by examining values above and below the background.

##### Grid D: High Resistance (fig 143b)

1. A high resistance region of 70--100 ohms in the north--east corner of the grid.
2. An area of 37--40 ohms in the eastern section of the grid. Encouragingly, the high resistance anomaly coincides exactly with magnetic anomaly 1 of grid D (fig 143a), strengthening the likelihood that it was the location of a concrete base. The general spread of relatively high values, feature 2, is probably associated with feature 1.

##### Grid D: Low Resistance (fig 143c)

1. A linear feature of 26--28 ohms, about 6m x 1m, running north--south.
- 2, 3, and 4. Smaller, nebulous regions of 25--29 ohms.

The western section of the grid has an average resistance less than that of the eastern section (29 ohms in D3, 41 ohms in D1). Feature 1 coincides with the magnetic anomalies 3a and 4a of fig 144a. The distinction between the remaining features is based on comparison with the magnetic anomalies: feature 2 covers the area coinciding with group 4 moderately magnetic anomalies (fig 143a) and features 3 and 5 are in the region of very slight magnetic activity.

##### Grid G: High Resistance (fig 144b)

1. A high-resistance feature, >50 ohms, situated in



replaced oars as the principal means of propulsion, and the timing of that change. Fortunately, much of the argument is irrelevant here. There is no need to discuss, for instance, whether the Frisians forgot how to sail (and, if so, when they remembered) for there is sufficient evidence that the use of sail was widely known in Europe by the 8th century -- which is not necessarily to argue that sailing was everywhere practised. Besides the archaeological evidence, some of which is reviewed later, one may cite documents like Willibald's Life of Boniface and point to such representations as the carvings on the Gotland Stones, southern Sweden. The Life describes the saint crossing to Europe from London in 718, his ship equipped with a 'huge sail . . . full of wind' (Pertz 1829, 340; Talbot 1954, 38), and the carvings, which are usually dated to the 8th century at the latest, depict single-masted square-rigged sailing ships.

It is sometimes argued that the Frisians were using sails long before the Scandinavians; and it has been suggested that the Gotland carvings depict Frisian types of ship (Crumlin-Pedersen 1965, 121--9). The Old Norse word for sail, sigla, is supposed to have been a borrowing from the Frisians, who may also have introduced the technique of sailing into Scandinavia (Jellema 1955, 27; McGrail 1981, 40). If cogs originated with the Frisians, as is regularly argued, the extent to which the Frisians had penetrated the Baltic might be indicated by the fact that a part of Birka's harbour was known as Rugghamn, translatable as 'cog-harbour' (Crumlin-Pedersen 1965, 119--20; 1972, 188). The truth of such claims has been firmly disputed (see, for instance, Christensen 1966, 38). Nevertheless, it seems necessary to consider first the ships built 'in the Frisian manner'.

### 'COGS'

'Cog' is used here as a convenient shorthand for the type of ship described below. Because it is not generally accepted that this Dark Age ship was a cog, or a proto-cog, the word is placed in inverted commas.

Any attempt to detail the form of the 'cog' is bedevilled by a lack of clearly relevant finds. Most cogs that have been found are datable to the 13th and 14th centuries, a period when the ship was highly developed and most closely approached a dominance of European freight-carrying. Crumlin-Pedersen (1965, passim) interprets this and other flawed evidence to suggest that early ships of this sort were flat-bottomed and keel-less, sometimes with keel planks; that there was a sharp transition between keel and stem; and that they had steep,

One can usefully mention the experiences of some of those who have sailed replicas of Scandinavian vessels, which tend to bear out Marcus's points about the sailing abilities of the knarr. Replicas of trading ships are able to beat far more closely into the wind than replicas of other types of vessel, and are at least as fast (Vadstrup 1986, passim; Vinner 1986, 224). Other details seem to be borne out by the admittedly slight archaeological evidence: it is time to mention the Skuldelev-1 Ship, a knarr built around 1000 and found in Denmark.

Clinker-built, stout, and with a high freeboard, fully laden the ship might have drawn 1.5m of water. About 16.5m long, it had a wide beam of about 4.6m. It was decked fore and aft and equipped with a central hold and central mast. Its full, round stem and stern are apparently other basic features of such ships: in an Icelandic saga, two women are described as 'knarr-breasted' (Crumlin-Pedersen 1972, 185). Described as a 'masterpiece' (Thorseth 1986, 81), the Skuldelev-1 Ship 'was the ship of the future' according to Hodges (1982, 00). Such views are permissible, perhaps, only for as long as a single knarr is known, and one built at a relatively late date. However superbly developed, this vessel might also be called the ship of the past: such is clearly the view of Marcus, who adds that 'The Skuldelev evidence for the most part only confirms what was already known from literary sources' (Marcus 1980, 188, n49).

Ships built in the Scandinavian tradition were known to Gildas as caulae (Mommsen 1898, 38; Winterbottom 1978, 26), and seem eventually to have been known in England as keels. That keels carried merchandise is indicated by the fact that a keel and a hulk are together mentioned in a sentence in a list of tolls due in London, written about 1000 (Robertson 1925, 71). It is probable, therefore, that the knarr was known also as a keel: possible, too, that any ship 'built after the Danish design' was potentially a keel. McCusker (1966, 288--9) takes these and other evidences to suggest that English ships built in the Scandinavian tradition were also known as keels. It is not clear, however, whether the Graveney Boat (considered immediately below) had ever been known as a keel.

#### THE GRAVENEY BOAT

The Graveney Boat was found in Kent. It had been built in the second quarter of the 10th century, perhaps 50--75 years before the Skuldelev-1 Ship had been built. Although similar in proportions to the Skuldelev-1 Ship and only slightly smaller (about 14m long by 3.9m in the beam), the Graveney Boat is considerably different. There is no

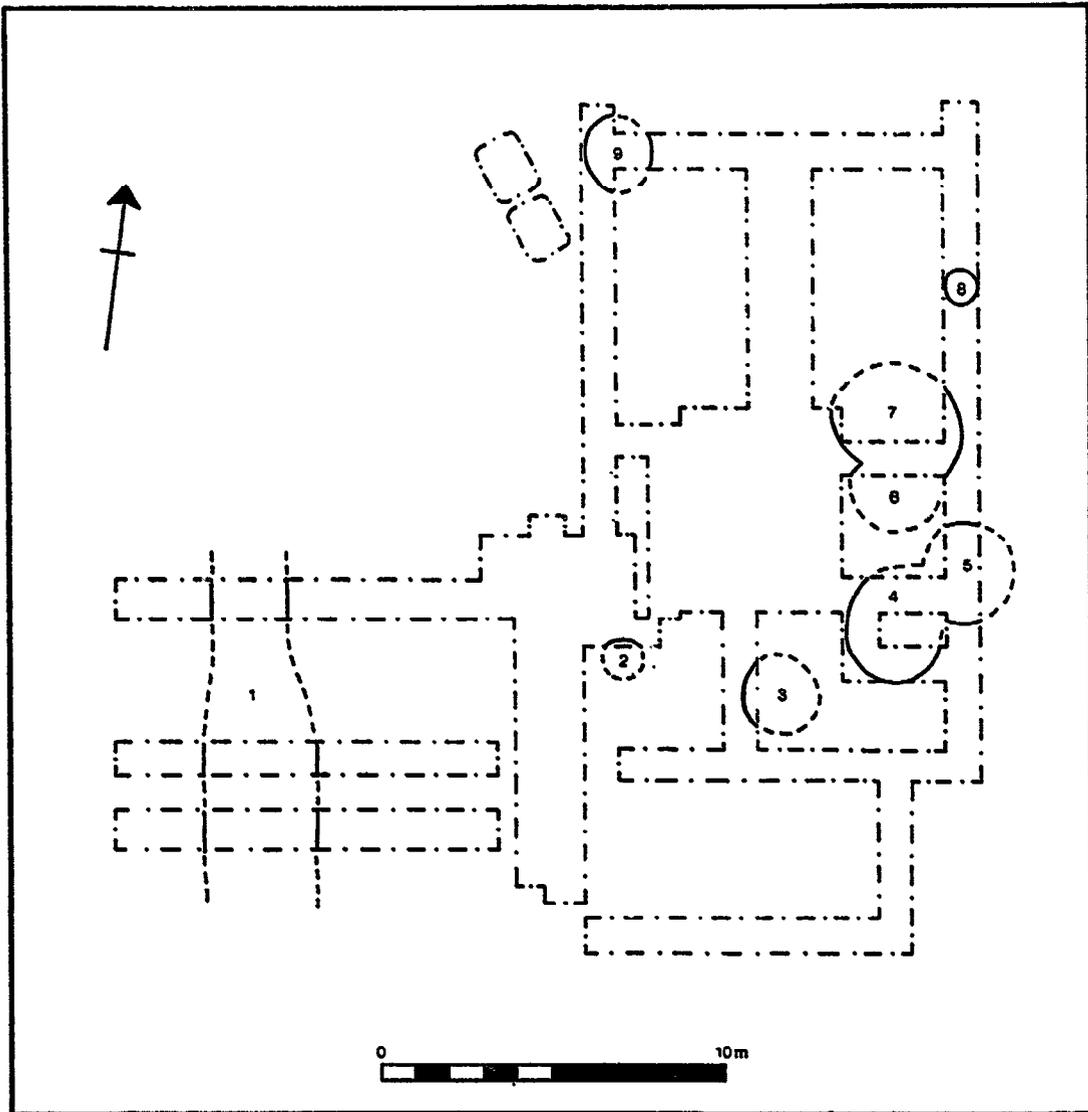


Figure 130. SOU 89: a site plan.

### SOU 89

In March 1982, P Andrews observed trenches dug as part of the redevelopment of the northern corner of South Front and Kingsway. The natural deposits consisted of yellowish brown fine sandy silt (brickearth) over valley gravel. The brickearth, which lay about 0.6m below the modern ground

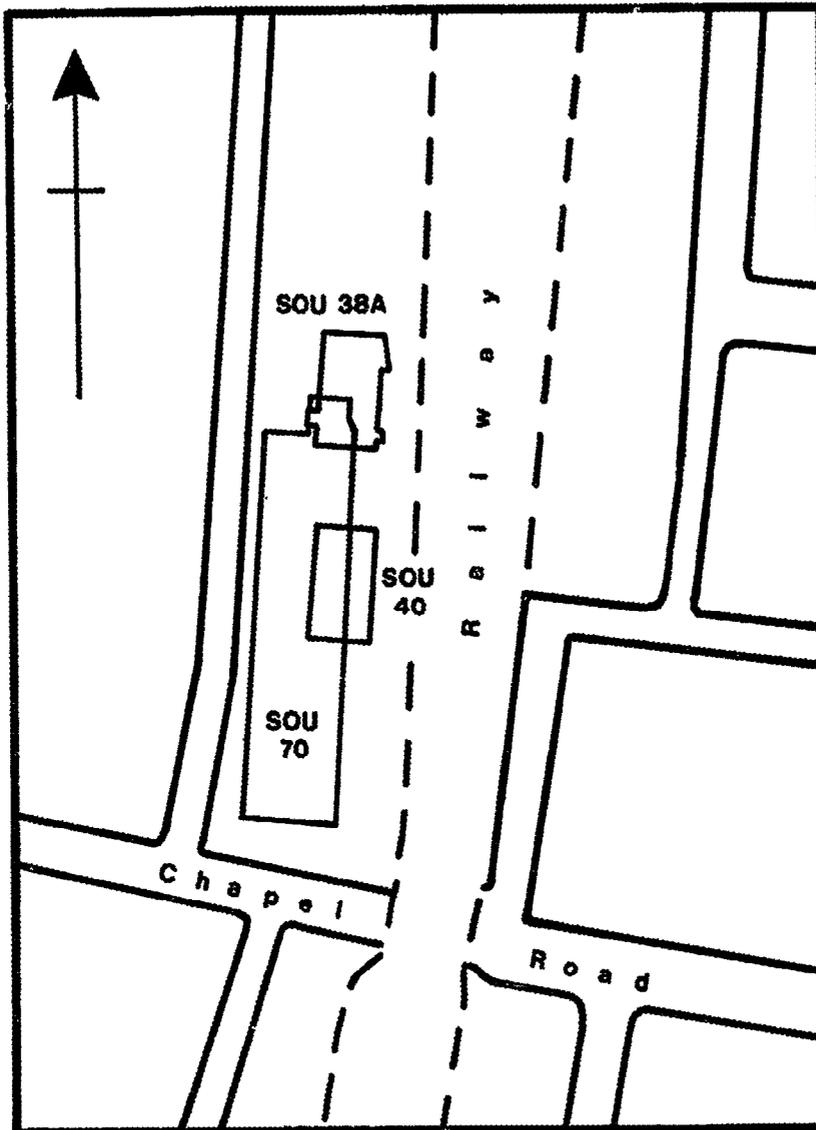


Figure 133. SOUs 38A, 40, and 70: a sites-location map.

through by a mechanical digger -- the pits of SOU 70 do not appear to have been brickearth-digging trenches or Victorian rubbish pits. Another possibility, therefore, is that the pits correctly identified as Anglo-Saxon by Walker were mistaken by the earlier excavators. It seems that the fills of modern pits were not removed at SOU 40: if one of these pits had in fact been an Anglo-Saxon feature, it would have remained intact for Walker to recognise it. A similar error

layer of 60% small and medium gravel in a matrix of the same dark soil. This was perhaps the remains of an above-ground layer. No datable finds were recovered from the pit, which seems to have been cut through the supposed ploughsoil. There was no identifiable horizon between the upper pit fill and the modern overburden. One suspects that it may have been a medieval or later pit.

Pit 2 was circular in plan and bowl-shaped in section. It survived to a depth of 0.5m. Three layers were noted. These were cess; overlain by redeposited brickearth; overlain by a very dark greyish brown soil. This latter deposit, which was at most 0.3m deep, contained much bone, some oyster shell, and some flecks of charcoal. Recovered from this layer were also one sherd of a Middle Saxon pot and a lump of smithing slag. A Middle Saxon date for this feature is indicated also by the fact that the top fill underlay the supposed ploughsoil.

Pit 4 (fig 136) was conical in section and at least 1.6m deep. Cut at least 1.3m into the valley gravel, the feature may have been a well. However, there was no sign of a shaft. The two lowermost layers were cess, sealed by redeposited brickearth. The three or four layers above this were very dark greyish brown soils containing much shell and charcoal and some burnt clay. At the top was part of a gravel spread, context 5, described below. Found in the cess layer were two sherds of Middle Saxon imported pottery.

Pit 6 was rounded in plan and at least 1.2m deep. It was filled mainly with very dark greyish brown soil which contained much charcoal, some lumps of 'greyish green' clay, and three sherds of Middle Saxon pottery.

Pit 10 was at least 0.2m deep. Three layers were noted in plan: dark greyish brown soils (one containing about 5% oyster shell) separated by a 0.1m-thick band of gravel. The dark soils were 'smeared' outwards from the confines of the pit and intermingled with the supposed ploughsoil. It is probable, therefore, that the pit was an early feature, but no dating evidence was recovered.

Pit 19 was at least 0.1m deep. Dark and very dark greyish brown soils comprised its observed fill. There were no datable finds.

Pit 24 had been cut by the ditch, context 8, described below. At least 0.3m deep, it directly underlay modern deposits. (There was no sign here of a 'ploughsoil'.) The observed fill was very dark greyish brown soil containing smithing slag, bone, some burnt clay, and two sherds of Middle Saxon pottery.

Pit 25 was also cut by the ditch and overlain by modern deposits. At least 0.3m deep, its observed fill was dark greyish brown soil containing oyster shell, charcoal, burnt clay, and bones.

MF2:D5

SOU 73--6

SOU 73--5  
See MF1:M5--7.

SOU 76  
Not a Hamwic site.



## SOU 91 (AH 25)

In 1969, a trial trench measuring 5m east--west by a little over 3m north--south was opened just to what was then the east of Granville Street. (The street has since been shifted to the east and now encompasses the site of SOU 91.) The east-facing section was drawn (fig 138) and the drawing annotated. This provides the main guide to what was uncovered since only a few comments were written in the site notebook.

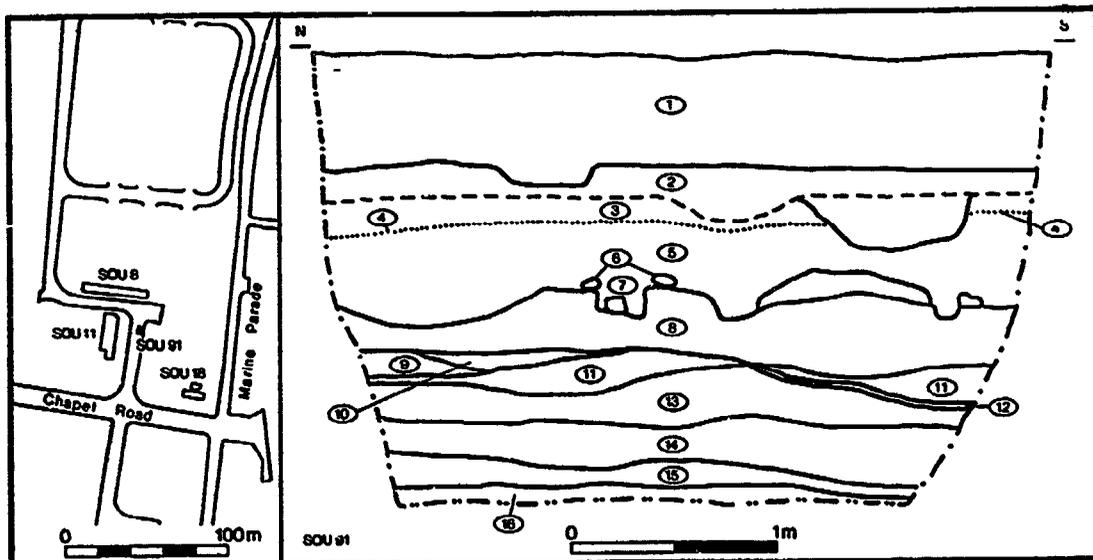


Figure 138. SOU 91: a location plan and section drawing.

Layers 1 and 2 were, respectively, 'Victorian building rubble' and a 'make-up layer' sealing a pipe trench. Cut by the pipe trench was layer 3, a 'grey' layer thought to have been a 'possible medieval occupation layer'. It overlay layer 4, a thin spread of 'dark ferric brown hard pan',

were agitated for 20 minutes using a mechanical sieve shaker.

The sediment retained on each sieve was then weighed and recorded. In order to ensure accuracy each sample was sieved three times and the mean result was taken.

### Sedimentation

Between 5g and 10g of the sediment  $< +3.5\phi$  was taken for sedimentation. The sediment was dispersed in 1000ml of distilled water which contained 20ml of 10% sodium hexametaphosphate ('Calgon'). 'Calgon' was used to ensure that the sediment was totally deflocculated.

Sedimentation was carried out using an Andreasen's pipette, samples being taken at time intervals corresponding to the setting time of particles at  $0.5\phi$  intervals. The results were then calculated as weight per phi class of the total weight of sediment used for particle-size analysis.

The results from both methods expressed as weight per phi class were then combined to produce a complete particle-size distribution.

### Further Observations

During sieving small pieces of shell and burnt flint were noted. These were probably derived from the overlying deposits.

Both samples were tested for the presence of carbonates with 10% hydrochloric acid. Effervescence occurred in both cases indicating the presence of carbonates.

## RESULTS

The results of the analysis are given in weights per phi class in tables 9 and 10. The percentage weight of the sediment in each of four descriptive classes (gravel, sand, silt, and clay) is given in table 11. The results are depicted graphically as both percentage-frequency curves (fig 139a) and cumulative-percentage-frequency curves (fig 139b). The latter is plotted on log-normal graph paper, and comparison may be made with Shackley 1980, 5, fig 2.2.

The cumulative-percentage-frequency curves were used to extract percentiles from which phi-size parameters were calculated (table 12). The calculation of size parameters is a statistical method of describing the major features of a distribution.

## SOU 168

In September 1982, P Andrews observed the cutting of a pipe trench immediately to the west of SOU 99 and to the east of Kingsway.

At 0.6m below the modern ground surface (a height of approximately 3.7m OD), a natural deposit of yellowish brown brickearth was exposed. This was at least 1.2m thick. Cut into the brickearth were three modern features and six pits, all of which contained animal bone and oyster shell in their fills. (The latter features were numbered contexts 1--6.) Overlying the brickearth were nine, apparently pre-modern layers. These were numbered contexts 7--15.

Pit 1 was 1.2m deep. Rounded in section, it was filled with a dark greyish brown soil. It was cut by a modern feature and underlay gravel hoggin.

Pit 2 was rounded in section. About 0.9m deep, it contained two layers. The main one was dark greyish brown soil. Over this was a thinner layer of 'pinkish orange ash', which might have been associated with the 'ash' layers noted further to the south. The pit and its fills underlay gravel hoggin.

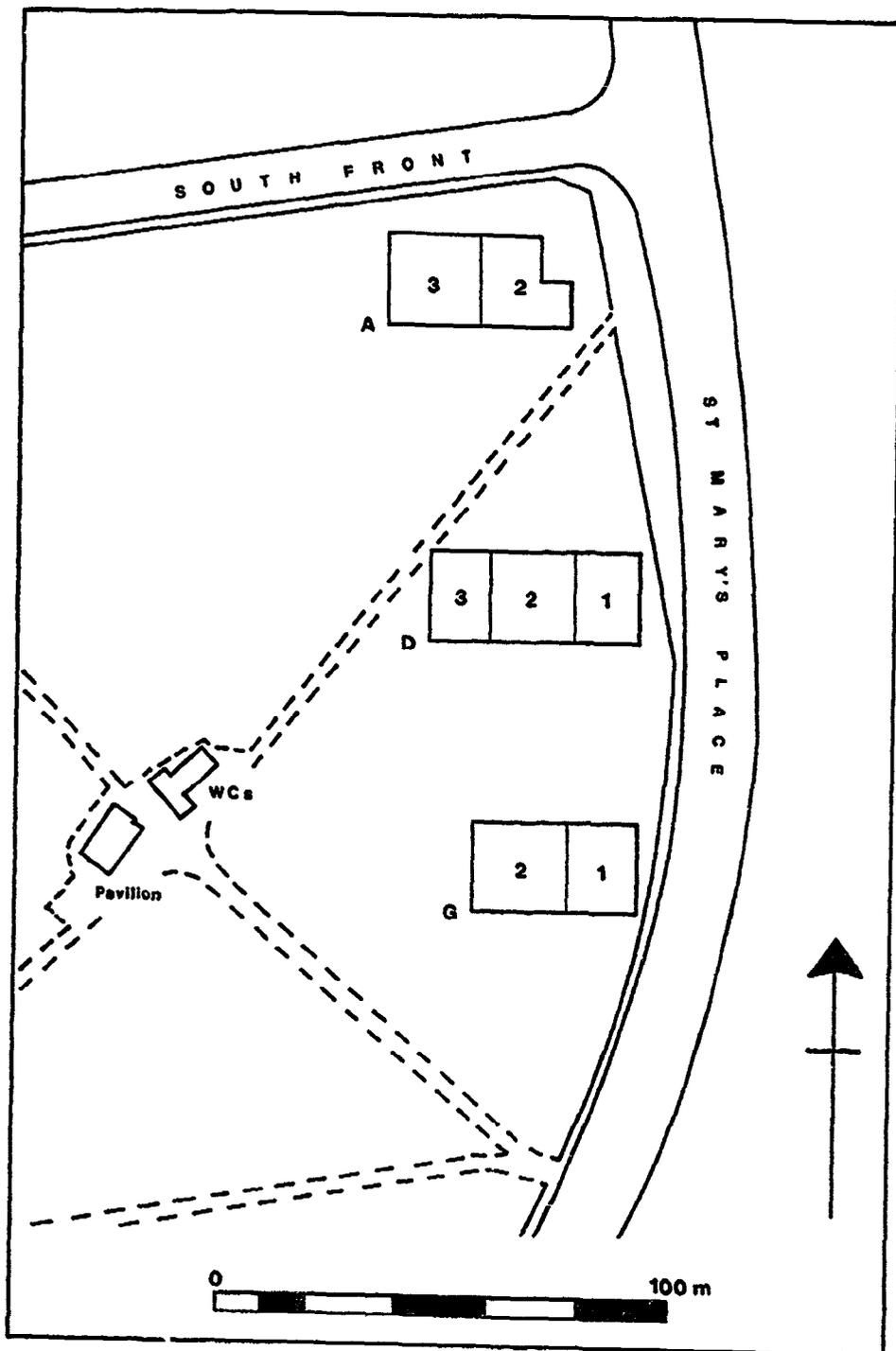
Pit 3 did not appear in the east-facing section, and is not illustrated here. Shaped like pit 4, it was at least 1m deep and seems to have been cut through layer 15. It was filled with a layer of dark greyish brown soil containing some charcoal, and underlay modern deposits.

Pit 4 was at least 1.3m deep. It had been cut through layers 11 and 12, and perhaps through layer 13. However, layer 13 seemed to merge with the pit fill, which was dark greyish brown soil subdivided by lenses of redeposited brickearth. The pit was sealed by modern deposits.

Pit 5 was 1.2m deep and filled with dark greyish brown soil. It had been cut through layer 9 and was sealed by modern deposits.

Pit 6 was 1.35m deep. Its fill and stratigraphical relationships were the same as those of pit 5.

Layer 7 was a 0.13m-thick spread of gravel over the natural brickearth. Heavily cut by a modern feature, its surviving width was only some 1.2m. This is insufficient to allow any reasonable guess about its function. It may have underlain layer 8. and certainly underlay layer 9, from



**Figure 141.** SOU 186: modern features in Hoglands Park and the survey areas.

- the north--west corner of the grid.
2. A distinct high resistance feature, c 50 ohms, parallel to and south of 1, turning to run north--south.
  3. A high-resistance feature, 40--50 ohms, parallel to both 1 and 2; turning north--south, as 2.
  4. A group of isolated anomalies, 36--41 ohms.

The high-resistance features display a distinct south-west--north-east trend, which is reflected in the magnetic anomaly map of fig 144a. At first it was thought that feature 1 was the result of the north-west corner of the grid extending onto the wicket of a cricket pitch, the ground beneath which presumably has been rolled and levelled; but this is improbable since features 1--3 are parallel.

Feature 2 coincides with magnetic anomalies 3b and 2a. Feature 3 is aligned with anomalies 3c--e, and feature 4 with anomaly 3f.

#### Grid G: Low Resistance (fig 144c)

1. A region of 24--28 ohms running south-west to north-east.
2. An area of 24--28 ohms at the extreme east of the grid.
3. An isolated feature of 29 ohms, just below the 'background'.

The same south-west--north-east trend evident in the high-resistance anomalies is apparent in the 'below-background' values. Feature 1 coincides with group 3 and group 4 anomalies (fig 144a), notably magnetic anomaly 3h: while feature 3 coincides with magnetic anomaly 3g. Feature 2 is in the region of high-magnetic readings assumed to be the effect of the perimeter fence.

Unlike grid D, the resistance tends to decrease towards the east, from an average of 37 ohms in G2, to 31 ohms in G1.

#### DISCUSSION

What is immediately apparent is the extent of modern construction in the park, exemplified by the large concrete structures of grids A and D.

Neither of the surveys detected a single linear feature crossing each grid, so it has not been possible to pinpoint a boundary ditch to the Anglo-Saxon town. Therefore one

The map has been variously dated on internal grounds to 'about the middle of the 16th Century' (Rogers 1907, nII) and to the period 1611--20 (Welch 1964, 2). The use of the town name 'Hampton' in the phrase 'Wynchester Waye from Hampton' (E) does not resolve the problem, since it was current up to at least the early years of the 17th century. The handwriting, which is in no manner accurately reproduced in the copy used here, equally cannot refine the date further.

It is not clear why the map was produced. Its survival may have owed something to its utility as a public document, although there is only one reference to its use as such: the map is endorsed with a note that it was produced in a lawsuit in 1656 arising from a dispute over the glebe and tithes of St Mary's Church and South Stoneham (*ibid*, 91). The extreme distortions of the map would probably have reduced its usefulness as evidence in the case of a dispute, but this point cannot be pursued too far: much more distorted maps could be admitted as evidence or used to illustrate a verdict. (For an example from 1570, see Tyacke and Huddy 1980, 17--18.) In this respect, it may be relevant that the map shows few details outside the town's liberties; all the boundary markers are shown; and most of the fields shown were those in which the town held or claimed common rights.

'The roads have been edged with modern paint' (Welch 1964, 2), but otherwise seem to be original features. The argument runs along the following lines.

1. Certain parts of the roads lie beneath written legends.
2. Their handwriting is consistent with a late-16th-century or early-17th-century date.
3. The spellings and name forms point to this same fact. Most clearly, the phrase 'Winchester Way from Hampton' (E) contains two Tudor name forms. 'Hampton', it has been stated, seems to have disappeared as the town's name by some point in the 17th century. 'Winchester Way' is a name found in the 16th century at least: in 1549, 1570, and 1587 (Merson 1952--65, II, 20 and 114; Hearnshaw and Hearnshaw 1905--8, II, 251).
4. Unless a careful and elaborate forgery was made, utilising unpublished manuscripts, these legends must be original.
5. If they are original, so too are the roads beneath them.
6. These overwritten parts do not differ noticeably from the other sections of road.

There are circumstantial reasons for supposing that the boundaries are original. These boundaries are shown on the copy used as fig 145 as single or double broken lines. Presumably, broken lines were used so as to distinguish the red-painted, unbroken boundaries on a monochrome tracing.

clinker-built sides and a single, square-rigged mast.

Evidence of such vessels is to be found in documents and depictions, and naturally their interpretation is disputed. Greenhill (1976, 200) effects a compromise between more extreme interpretations and cautiously indicates his belief that flat-bottomed ships, related in some degree to the cog, are shown on certain Gotland stones of the 8th century. Lebecq (1983, I, 182) identifies square-stemmed ships depicted on coins from Birka, and dated to about 825, as cogs. The interpretation of such coins is disputed, however. Crumlin-Pedersen (1965, 122--4) suggests that the coins depict round-stemmed Scandinavian ships fitted with angular projections known as barder. And Hodges states that the ships are shown 'with distinctive keel lines' (Hodges 1982, 97; and see his references). Presumably open boats at first, by the 9th century some were built perhaps as decked ships. McGrail (1981, 36) argues as much from a reference in the Vita Anskarii to a Frisian ship with two cabins; but Lebecq (ibid, 174) relates this same reference to hulks, a type of ship considered below.

Flat-bottomed boats of varying designs and differing periods have been found in many areas noted for their shallow or tidal waters, and Crumlin-Pedersen (1974, 187) suggests that cogs originated along Frisia's Wadden Zee coast. Nobody has seriously questioned this view. The first references to cogs, which date from the end of the 9th century, apply to Frisian craft (Jellema 1955, 32), and one might suppose that the far-sailing 'cogs' were the Frisian ships mentioned by Alfred's chronicler. However, Lebecq (ibid, 183) argues that the Frisians used 'cogs' in their eastern voyages, and 'hulks' in their western voyages.

#### 'HULKS'

Again, the term is used as a shorthand reference to the type of ship described below; and is placed in inverted commas because there is considerable disagreement about whether or not it was a hulk, or proto-hulk.

Although the earliest known reference to a hulk -- in a law of Ethelred (Robertson 1925, 71) -- dates to about 1000, it has been argued that the ship was in existence by about 800 at the latest. The first definite depiction of a hulk, however, is on a late 13th seal of Hulkesmouth (New Shoreham, Sussex). This shows a vessel with a keel-less, clinker-built, and banana-shaped hull, and with a single mast, placed amidships. Apparently similar craft had been depicted a century earlier on fonts at Winchester and Zedelgen, Bruges, and -- most importantly -- in the early 9th century on coins struck at Quentovic and Dorestad

evidence of decking, the freeboard was much less, and the laden draught probably was about 0.65m. Clinker-built around a keel plank, the ship had a pronouncedly heeled stern (the bows had not survived). Nevertheless, it was very stoutly built and would have been a hefty freighter.

In a comprehensive analysis of the ship and its features, Fenwick (1978, especially 193--264) thinks it likely that the ship was built in southern or eastern England as a coaster capable of crossing the Channel. She argues that the ship was a sailing vessel constructed in many respects in the Scandinavian tradition, perhaps incorporating some influences from Frisian ships, and possibly influenced in part by a residual, Celtic tradition.

Certain of these points are disputed. Hodges (1982, 57 and 98) thinks that the ship was French, and states that a ship with a keel plank could have carried only a small sail. Since he supports his first argument only through reference to half a Rouen-type cooking pot found with the vessel, and since (as is already clear) conclusions about the limited sailing ability of keel-planked ships are themselves disputed, there seems no good reason to accept either of his views. Fenwick thinks that the heavy framing of the ship was a legacy of the Celtic tradition, but Greenhill (1976, 223) allows only that this framing was functional, related to the ship's role as a carrier of bulky goods.

Because the Graveney Boat is an isolated find, and one that may have incorporated features from many shipbuilding traditions, one cannot tell if it is typical of English cargo vessels of the period. Even so, Fenwick (1978, 254--5) establishes a strong case for supposing that

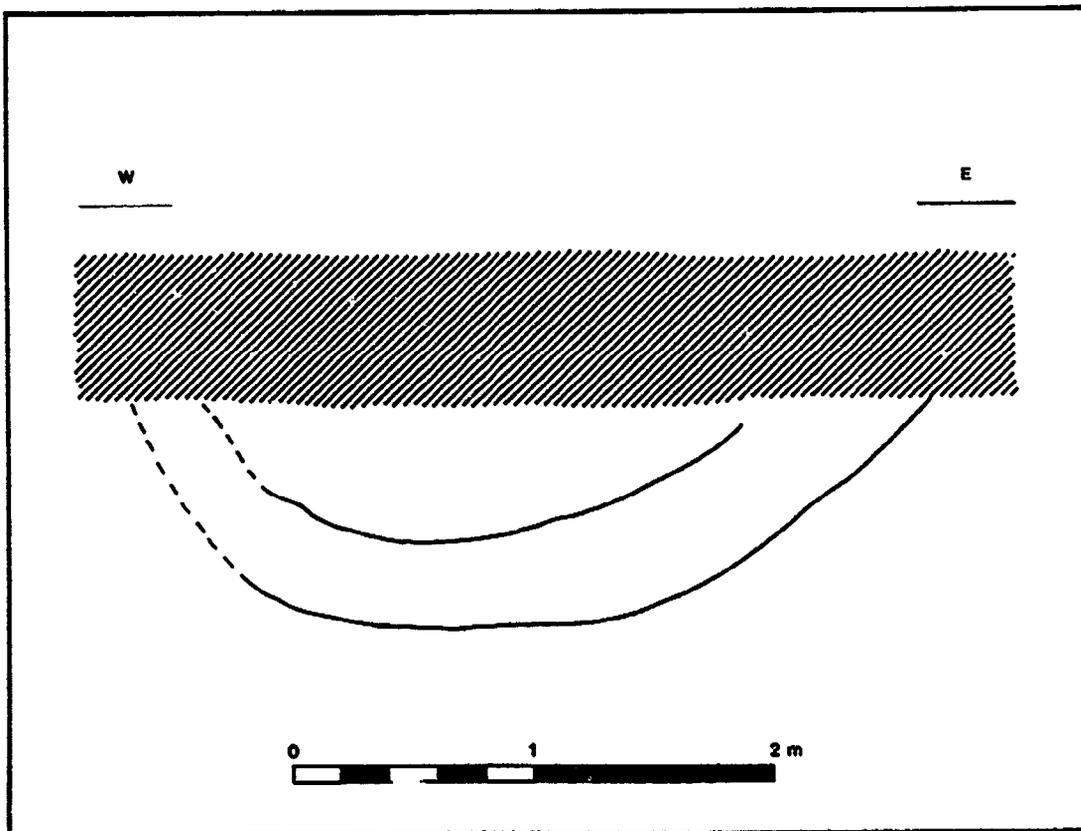
Medieval trade depended on . . . work-a-day coasters.  
 . . . In large numbers they plied from port to port and could put in at places where there were no harbour installations.

In this respect, and for the present purposes, one might think the Graveney Boat more typical of Dark Age trading ships than most of the ships found so far.

surface, at about 4m OD, was some 1.2m thick. Nine pre-modern features were observed. These were numbered contexts 1--9. Layers filling these features were numbered contexts 10--20.

Context 1 (fig 131) was a linear feature aligned north--south. Its width varied between 3.35m and 2.4m. Its depth where it was 3.35m wide was 0.95m. Its full depth where it was 2.4m wide was not exposed in the trench, but was at least 0.6m.

Underlying modern soils, it contained three layers, contexts 10--12. Context 10 was a thin spread of dark brown soil. Under it, context 11 was a slightly gravelly, greyish brown silty clay. This may have been a weathered, redeposited brickearth. The bottom layer (context 12) was a very dark greyish brown, gravelly silty clay.



**Figure 131.** SOU 89: context 1, section. Modern layers are shown by hatching.

may have occurred at SOU 38A, but the surviving records are insufficient to allow any certainty on this point. In short, despite some grounds for uncertainty, Walker's record can probably be taken at its face value.

Most of the trenches exposed a stratigraphic sequence of modern soils (0.7m--0.9m thick); over 'darkish brown' or 'greyish brown brickearth' (0.3m--0.4m thick); over gravel (at least 0.3m thick). The relative thinness of the brickearth may be an indication that its upper parts had been removed by brickearth diggers.

If there had been such disturbance, the chances are that all structural features had disappeared, and perhaps also a number of shallow pits. At least nineteen of the 22 pits or possible pits observed had been cut through the brickearth and deeply into the gravel. This is an unusually high number, which might be explained if we suppose that a great many more pits, dug only into the brickearth, had been destroyed by brickearth digging.

#### PRE-MODERN FEATURES

Two of the pits were numbered 1 and 2 by the observer. The rest have been numbered 3--22 by this writer.

Pits 1 and 2 may have been a single feature, although the observer thought that pit 1 had been cut through pit 2. About 1m of the pits was exposed. These had been cut through at least 0.4m of gravel.

Eight layers were noted, largely dark soils probably derived from domestic rubbish. One layer of gravel, up to 0.25m thick, perhaps was the remains of a slumped above-ground surface. One well stratified sherd of a Middle Saxon imported vessel was removed.

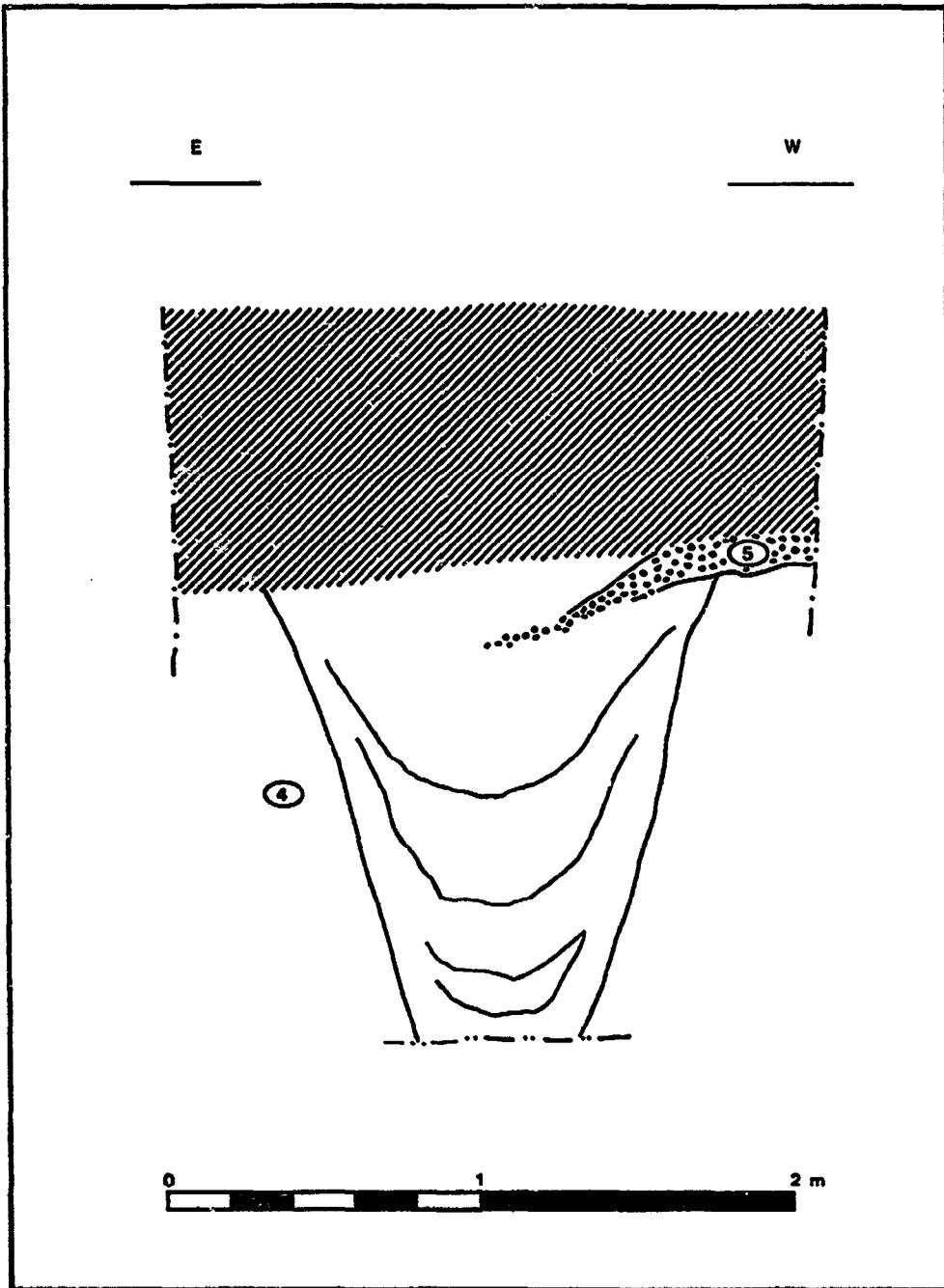
Pit 3 was 1m deep, rounded in section, cut perhaps 0.5m into gravel, and filled with two layers, both of 'lightish brown clay [brickearth?]''. The upper layer contained gravel, and the lower one flecks of charcoal.

Pit 4 was the same as pit 3, except that it was 0.85m deep and its lower layer contained 'much fragmented bone'.

Pit 5 was observed only in plan, at the bottom of a 1.3m-deep trench. It had been cut at least 0.2m into gravel. Dark soils containing 'much oyster and mussel shell fragments, charcoal, and bone' were observed.

Pit 6 was at least 0.7m deep and cut at least 0.2m into gravel. It was filled with three layers containing various amounts of animal bone ('decayed' or in 'fragments'), oyster shell, and charcoal.

Pit 7 was at least 0.95m deep and cut at least 0.35m into the gravel. Two layers were observed. Both comprised dark soils with charcoal and animal bone.



**Figure 136.** SOU 92: contexts 4 and 5. Modern contexts are shown by hatching.

SOU 77

According to a contemporary newspaper report (SDE 1954), 'human bones' were discovered at a garage site in Britannia Road, during the excavation of a hole for petrol tanks. Finds included 'fragments of skull and other bones'.

These bones seem to have been disarticulated and were found at about 2m below the ground surface; at a height, therefore, of about 0.8m OD.

No other information is available.

interpreted as perhaps a 'former ground surface'.

Layers 5--8 seem all to have been, or to have been derived from, natural brickearth. Layer 5 was 'grey silt, becoming lighter at its lower levels' (a phenomenon noted in ploughsoil, as was explained in the main text). Layer 6 was patches of 'orange silt/clay'. Properly speaking, layer 7 was a number given to an 'alien sandstone' that seems to have been burnt; but the number is used in this report to identify the fill of four depressions in layer 8. This fill was indistinguishable from the bottom of layer 5. Layer 8, which was encountered at about 1.4m OD, was 'grey silt with medium gravel'.

Layers 9--16, the top of which group was encountered at about 1.1m OD, were strata of gravel. It is unnecessary to distinguish them here.

Given what is now known about the history of the SOU 91 area, there is no difficulty involved in assuming that layers 8--16 at least were natural deposits in existence before Middle Saxon occupation of the area.

The depression in which the piece of sandstone was found was referred to in the site notebook as a 'possible post-hole'. Almost certainly, it and the two depressions to the south of it were post-holes fortuitously exposed in the side of the trench. The wider depression to the north also seems to have been a feature cut into the brickearth, but one with an inexplicable function. It is noteworthy that layer 6 was interrupted by the three supposed post-holes, as if it had been cut through by those features or had accumulated around upstanding posts.

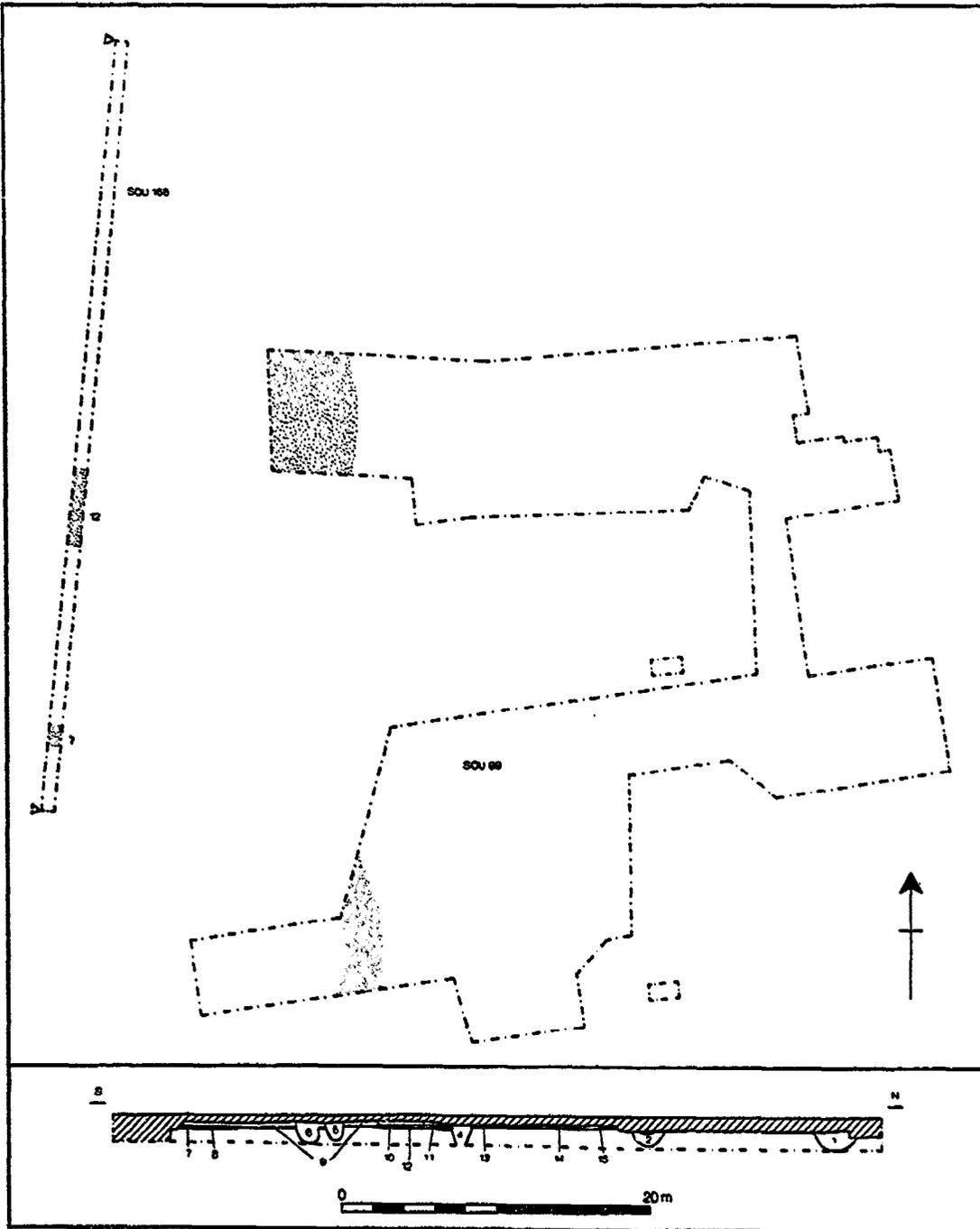
In the site notebook it is remarked that the 'possible post-hole' was 'sealed by possible medieval ground surface layers'. On the section drawing it is noted that layer 3 was a 'possible medieval occupation layer'. It is unclear how these dates were determined. There is no mention of the recovery of medieval dating evidence. Instead, the excavators might have argued among the following lines. It was believed that a lagoon existed north of Chapel Road; therefore 'lagoon cutting II' (SOU 91) was opened to test this possibility. 'Fine apparently waterlaid silts' were discovered; therefore the trench had been dug into the silted-up remains of the lagoon. This lagoon had coexisted with Hamwic; therefore any later layers would have been medieval at the earliest.

If such a course of reasoning had been followed, it is now reasonable to suppose instead that the four features dug into the brickearth were all potentially Middle Saxon in date; and that the layers above them cannot be closely dated.

$\phi$ size	weight (g)	cumulative %	Wentworth descriptive grade
-0.5	0.6	1.61	
0.0	0.3	2.41	Coarse Sand
0.5	0.3	3.21	
1.0	0.3	4.01	
1.5	0.7	5.89	Medium Sand
2.0	2.4	12.33	
2.5	3.3	21.19	
3.0	3.2	29.78	Fine Sand
3.5	3.453	39.05	
4.0	2.889	46.80	
4.5	2.306	52.99	
5.0	2.25	59.03	Coarse Silt
5.5	2.083	64.62	
6.0	2.139	70.36	
6.5	2.417	76.85	Medium Silt
7.0	2.111	82.52	
7.5	1.944	87.74	
8.0	1.861	92.73	Fine Silt
8.5	1.416	96.53	
9.5	1.278	99.96	Clay
<b>Total weight 37.247g</b>			

$\phi$ size	weight (g)	cumulative %	Wentworth descriptive grade
-0.5	0.1	0.31	
0.0	0.1	0.62	Coarse Sand
0.5	0.5	2.18	
1.0	0.1	2.49	
1.5	0.5	4.05	Medium Sand
2.0	2.1	10.76	
2.5	3.0	20.15	
3.0	2.8	28.91	Fine Sand
3.5	2.901	37.98	
4.0	3.393	48.60	
4.5	2.858	57.54	
5.0	2.643	65.81	Coarse Silt
5.5	2.229	72.78	
6.0	2.049	79.19	
6.5	1.492	83.86	Medium Silt
7.0	1.186	87.57	
7.5	1.186	91.28	
8.0	1.096	94.71	Fine Silt
8.5	0.971	97.75	
9.5	0.755	100.00	Clay
<b>Total weight 31.959g</b>			

**Tables 9 and 10.** Results of the particle-size analysis of samples 1 (top) and 2 (bottom).



**Figure 140.** SOUs 99 and 168: a location map (major gravel surfaces are stippled). SOU 168: the east-facing section (modern layers are hatched).

Two survey instruments were used: a Bradphys Mk IV resistivity meter, using the 'two probe' configuration of electrodes; and a Philpott fluxgate gradiometer, with a fluxgate separation of 500mm, the lower fluxgate element held about 50mm above the ground surface.

All three grids (a total of some 2360m<sup>2</sup>) were surveyed using the fluxgate magnetometer, with the magnetic gradient recorded at 1m intervals. Two of the transects, grids D and G, an area of 1640m<sup>2</sup>, were also surveyed with the resistance device, again with measurements recorded at 1m intervals. The transects were sited away from any of the perimeter trees, did not cross any of the footpaths, and covered quite level ground.

The magnetometer survey was carried out in a north--south direction, with the device pointing north. It became evident that the direction travelled in each run was influencing the readings; the values from a northward run were consistently 4--6 NT higher than those for a southward run, creating an apparent 'zebra' effect. To correct for this, the mean value for each magnetometer run was computed (excluding exceptionally large values such as those recorded in grid D, fig 143a), and then subtracted from each measurement of that run, effectively normalising each grid. Further, a fixed station was established as a zero point for the magnetometer (this station being a location assumed to be unaffected by any anomalies, against which all other locations are compared), to which regular reference was made throughout the survey. The readings were observed to drift from zero, which was recorded and corrected for in the final results.

## THE RESULTS

The data were submitted to the central computer of Bradford University, a Cyber 170-702, from where data were made available to a Research Machines 380Z microcomputer and a Hewlett Packard 1000 series-M minicomputer. Contour plots from the Cyber, were used along with a line-graph quick-look facility on the 380Z to assist the interpretation. The apparent anomalies were then produced in contrast-density form by the Hewlett Packard (figs 142--144c). Each grid has been separately displayed, and the anomalies recorded described below, followed by an interpretation and discussion of the results.

must try to locate the boundary based on the presence or absence of pits.

An excavation to the north-east of Hoglands Park (SOU 169: Six Dials) in progress at the time of the survey has exposed a number of Middle Saxon pits about 2m in diameter. These can be roughly categorised into two groups: pits close to the estimated boundary, containing natural silting levels and redeposited brickearth; and pits within the confines of the town, containing layers of domestic refuse including fragments of burnt daub. At the University of Bradford, the magnetic properties of soil samples from the pits and natural brickearth have been measured (table 13). It can be seen that the difference in the magnetic susceptibility between the 'domestic' and naturally silted pits is not large, although the results suggest that it may be possible to distinguish between the two pit types from the survey of Hoglands Park. (Unfortunately, the Middle Saxon layers of SOU 169 were beneath some 3m of post-Anglo-Saxon stratigraphy, including a large quantity of Victorian rubble and associated iron material, making it very difficult to carry out direct measurements of the pits with the Philpott magnetometer.)

SAMPLE	WEIGHT (g)	SUSCEPTIBILITY	Q	VISCOSITY
Brickearth	45.6	13.6	0.75	5.60
Natural silting	45.8	27.29	1.63	5.97
Domestic	35.75	29.37	1.62	5.51

Where Q= quadrature susceptibility in emu  $\times 10^{-6}$  (for 50gm)  
 magnetic susceptibility is in emu  $\times 10^{-6}$  (for 50gm)  
 and the magnetic viscosity =  $\frac{Q}{\text{susceptibility}} \times 100\%$

Table 13. Magnetic susceptibility and viscosity of samples from SOU 169.

In general, the survey results show a good conformity between features detected by both resistance and magnetometer methods. The distinct south-west--north-east trend apparent in grid G, and to a certain extent in the low-resistance features of grid D (fig 143c) is reflected in

However, no double lines now appear on the original. It seems that the copyist used double lines to mark what she distinguished as thicker lines on the original. The copyist does not show some lines that are today apparent. She may have overlooked them, for all are faint, but they may have become visible only recently, as the surrounding colours have faded. In that case, it is unlikely that these 'new' lines were late additions, which are painted in strident colours. Each detail mentioned above is painted in the same red colour.

The identification of field distinctions is hampered to some extent by the extreme distortions of the map. Even so, most can be identified with those divisions shown on 18th- and 19th-century maps. But some details cannot be reconciled with the later evidence. However, where medieval documentary evidence survives and is unambiguous, it is consistent with the details shown on the map. An example of this can be found in the main text, and concerns the identification of fields shown south of Chapel Road (F).

If the field divisions were added in the 18th or 19th century, these extra lines would have had to be haphazardly added. Since they coincide with the known earlier evidence, this coincidence is more easily explained if one assumes that they are original details.

However, any final decision must await a proper analysis of the paints used.

Finally, some note must be made of the distortions of the map. These clearly mark it as a mental map, produced probably by someone living inside the walled town. Out of the many possible examples of this fact, only three have been chosen for mention here.

1. London Road and St Mary's Road meet at the bottom of the Inner Avenue, and their predecessors are shown on this map. The cartographer has more or less correctly depicted the acute angle between the first two of these routes (G). But he or she has shown London Road running as an almost straight line into the Inner Avenue while the St-Mary's-Road--Inner-Avenue route is shown as a crooked line. The reverse is true, in fact.
2. The Hythe shoreline (H) is shown as an east--west stretch of land, whereas (disregarding the effects of later reclamation) it would have run more nearly in a north--south direction.
3. The pond (D) is shown stretching far out into the River Itchen. The outer bulwark did in fact protrude into the river, but never to the extent shown (see pl 2).

These distorted spatial images embody the lessened awareness of someone familiar with the immediate surroundings of the

(Crumlin-Pedersen 1972, 187). It seems likely also that a ship of the same type is shown on a Merovingian strap-end, probably 7th century in date (Evans and Bruce-Mitford 1975, 423, fig 321c, and 433).

Despite the clear indications of a centrally placed mast in the vessels shown on the coins and on the strap-end, Hodges argues that these were rowed vessels (Hodges 1982, 97; Hodges and Whitehouse 1983, 94--5). Lines are marked on some coins, radiating from the hull; and on other coins a fringe of half-loops appears beneath the hull. The marks can be interpreted as oars, but the interpretation is not inevitable by any means. Unlike the side rudder, or steering oar, which is always immediately recognisable and is always shown crossing the hullside, the supposed rowing oars are undetailed and confined to the area outside the hull. In some examples, these lines appear to have been cut in waves, and may be meant to represent water. Vlek (1987, 87) states unambiguously that 'The water around the vessel [shown on one coin from Quentovic] is represented by two rows of dots'; and that all the vessels depicted on coins from Quentovic and Dorestad are 'sailing ships' (his emphasis).

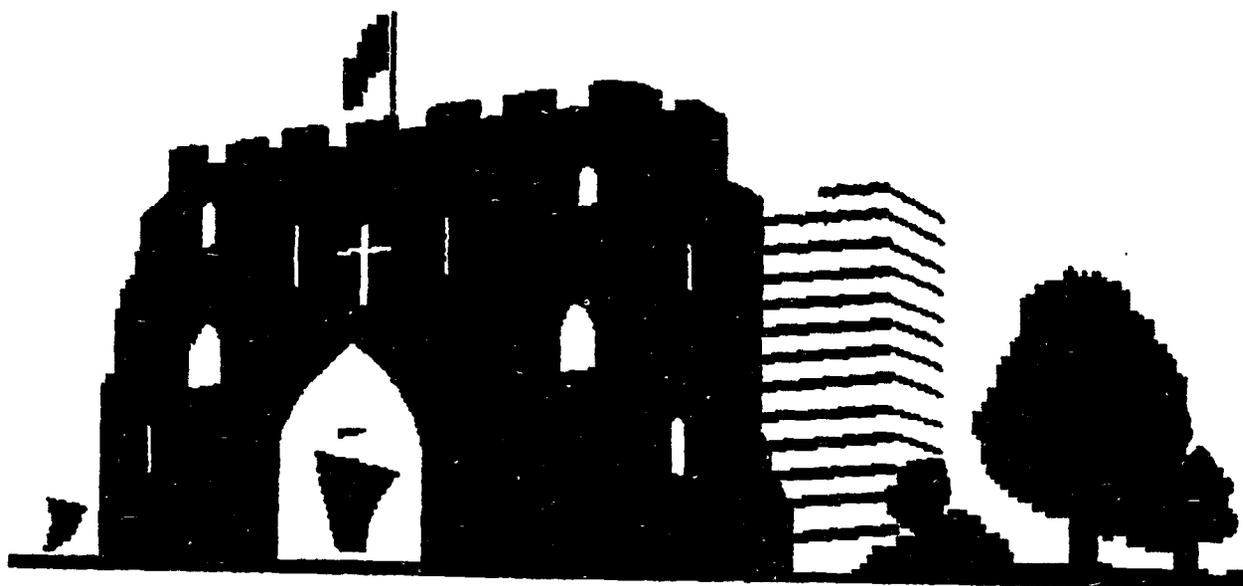
One reason for Hodges's assertion is his belief that the Utrecht Ship (Utrecht-1) was a sea-going hulk of the 8th or 9th century, mainly propelled by oars. The interpretation is a very contentious one, since many other writers more reasonably argue that the vessel was a towed or punted river barge. But the arguments are of no great interest here, for the ship has recently been redated to the 11th century, possibly the early 12th century (ibid, 61--74).

There are no archaeological finds of Dark Age 'hulks', therefore. For as long as the Utrecht-1 Ship was thought to be a Carolingian vessel, it was possible to argue that 'hulks' had been developed as sea-going vessels from barges on the lower Rhine. The only pieces of evidence now available are the coins, the strap-end, and the provenance and relative dating of these finds. All one can safely argue from this evidence is that ships with a banana-shaped hull and a mast amidships 'sailed across the Channel between England and France' in the early 9th century at the latest (ibid, 88).

The evidence is too weak to allow dogmatism. By contrast, boats and ships built in the Scandinavian tradition are relatively common finds.

## SCANDINAVIAN TRADITION

Despite the comparative wealth of the surviving evidence,



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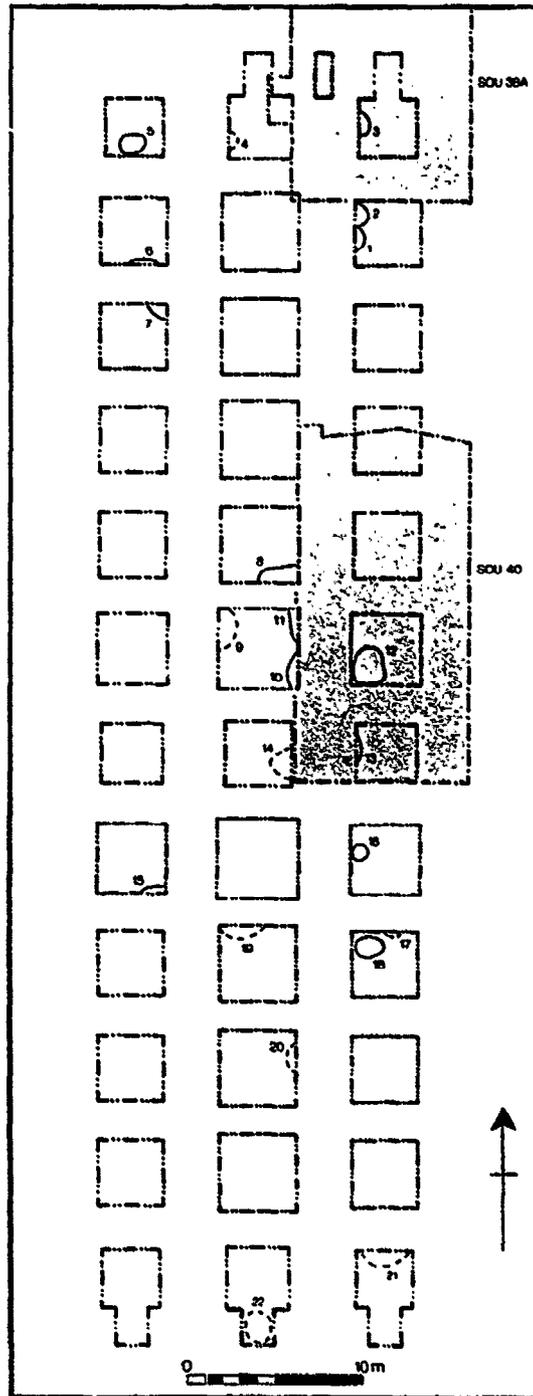
The feature, which appears to have been a ditch, is further discussed below.

Contexts 2--9 were, or appeared to be, rounded rubbish pits. With the exception of context 5, none had been cut so deeply that it intruded into the valley gravel. One could not estimate accurately how far that pit had been cut into the gravel. The basic fill of each pit was a greyish brown or dark greyish brown soil, often observed to contain some animal bone.

No dating evidence was recovered from any of these features, but it is presumed that they were all Middle Saxon in date. Certainly, nothing suggests that they were not dug during that period.

Context 1, supposed to have been a ditch, seems to have marked a division between the area to the east, where pits were dug, and the area to the west, where they were not.

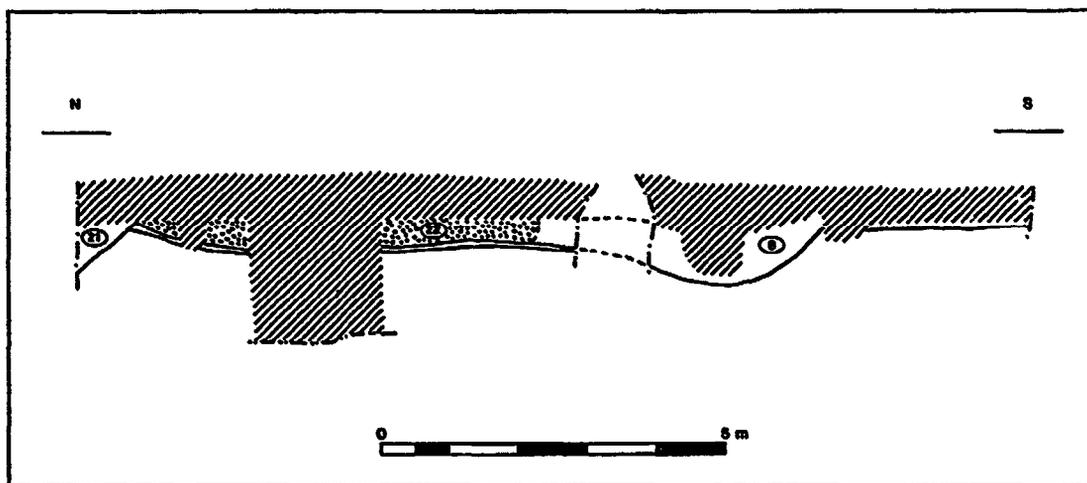
No structural evidence was found at SOU 89. If this is a significant fact, it means only that one cannot expect to find post-holes when observing a building trench.



**Figure 134.** SOU 70: an observation plan of the pre-modern features. Broken lines are taken from the original plan and indicate unclear edges.

## DITCHES

Chapel Road at the end of the 18th century was 'a road not very wide, and bordered on either hand by a deep and muddy ditch' (Englefield 1805, 75). The evidence relating to the 'road' will be detailed later: attention is concentrated here on the ditches.



**Figure 137.** SOU 92: gravel surfaces and ditches. Modern layers are shown by hatching.

The southern ditch, context 8, was aligned east--west and appears to have been cut through the edge of the gravel spreads, context 22. It had also been cut through the pits, 24 and 25. It was some 4.3m wide by about 1.1m deep. Only the lip of the northern ditch, context 21, was uncovered. This feature appears to have been aligned east--west. It was cut through the gravel spreads, context 22.

Both ditches were finally infilled (at the same time, one guesses) in the 19th century. Sewers were laid in the bottom of the ditches, which were then infilled with dark soil. The southern sewer was built of bricks, cylindrical, and with an external diameter of 0.5m. The outflow from the northern sewer seems to have been mistaken by Holdsworth (1976, 29) as a 'small creek . . . recorded . . . in 1845--6'.

When the ditches were dug remains uncertain. A ditch to the north of Chapel Road was in existence before 1576,

SOU 78

Following his excavation at SOU 27, D Devereux observed British Rail's track realignment further to the west. Along a length of some 23m and across an average width of 1.5m, natural brickearth (yellowish brown fine sandy silt) was exposed. Only one feature was discovered: this was a rubbish pit infilled in the 18th or early 19th century.

MF2:E7

**SOU 92--5**

**SOU 92**

See MF2:C3--D3.

**SOU 93**

Not a Hamwic site.

**SOU 94 and 95**

See MF1:N3--5.

Sample	Weight processed	% gravel	% sand	% silt	% clay
1	37.3g	0	46.8	49.73	3.43
2	32.0g	0	48.6	49.05	2.25

Table 11. Percentages of gravel, sand, silt, and clay in the 'brickearth' (Wentworth descriptive grades).

Sample	$\phi$ sorting	$\phi$ skewness	$\phi$ kurtosis	$\phi$ mean	Description
1	2.395	0.17	0.855	4.52	Very poorly sorted; positively skewed; platykurtic
2	2.1	0.199	0.875	4.29	Very poorly sorted; positively skewed; platykurtic

Table 12. Phi-size parameters of the 'brickearth' samples.

## DISCUSSION

The samples are shown as similar, both graphically and statistically from the calculated size parameters, as they show the same degree of sorting, skewness and kurtosis.

It is probable that the majority of particles  $>1.0\phi$ -- $1.5\phi$  were derived from the overlying deposits, which is confirmed by the presence of small particles of shell and flint observed during sieving. The particles at this end of the distribution account for only 5% of the total; and for this reason it is possible to 'smooth out' the curve for sample 2 where a peak occurs at  $0.5\phi$ .

The distributions lack the characteristics of pure loess, which usually contains almost no sand-sized particles ( $>4.0\phi$ ,  $63\mu\text{m}$ ). The clay fraction, being  $<15\%$ , is normal for a loess deposit.

Both distributions have peaks that fall within finesand, of either fluvial or aeolian origin. The absence

which it was divided by a thin scatter of oyster shells.

Layer 8 was a 'light grey ashy' layer, at most 0.13m thick, over the natural brickearth and below layer 9.

Layer 9 was a dark greyish brown soil intermixed with 'ash' and containing charcoal, burnt clay, and shell fragments. It overlay layers 7 and 8, abutted or merged into layers 10 and 12, was cut by pits 5 and 6, and underlay modern deposits.

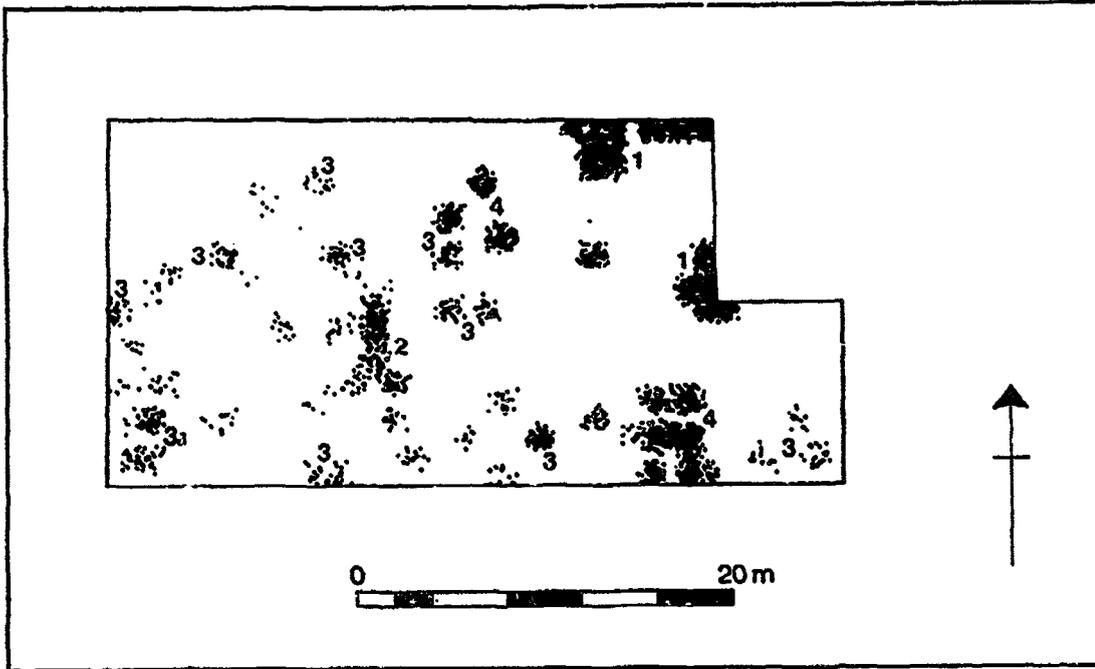
Layer 10 was the uppermost of two gravel layers. Some 0.35m thick and 3.2m wide, it was aligned east--west. In places, a thin layer of dark greyish brown soil separated it from layer 12. It was difficult to ascertain the exact nature of layer 10, which may have been composed of more than one layer of gravel. It was sealed by modern deposits.

Layer 11 overlay layer 12, abutted or merged into layer 10, was cut by pit 4, and was sealed by modern deposits. It may have been the same as layer 9 although it was not exactly constituted like that layer: it comprised a mixture of yellowish brown brickearth, 'pale grey ash', dark greyish brown soil, and some burnt clay.

Layer 12 was the lowermost of two gravel layers. At most 0.12m thick and 4.9m wide, it was aligned east--west. It had been laid on the natural brickearth, underlay layers 10 and 11, and was cut by pit 4.

Layer 13 was a black soil containing much charcoal and many lumps and flecks of burnt clay. It merged into layer 14, a narrow spread of burnt oxidised clay. This, in turn, merged into a layer of 'pale grey/white ash'. It is possible that all three layers, which overlay natural brickearth and were sealed by modern deposits, represent a continuum that extended further to the north as the 'ash' in the top of pit 2.

No dating evidence was recovered from these contexts. It is a reasonable assumption, however, that they were features of Hamwic; more especially since Middle Saxon stratified deposits survived at the nearby SOU 99. In the conditions, the observer could make no detailed investigation of the contexts, and was unable to discover if the pale 'ash' was ash or burnt chalk. The gravel layers, aligned east--west, perhaps were associated with the north--south-aligned gravel surfaces found at SOU 99. (It is unfortunate that the produced line of the SOU 168 gravels passes through only an unexcavated area of SOU 99 and an area disturbed by cellaring.) The observer, who had seen and excavated a number of Hamwic's streets, thought that SOU 168 may have exposed a section of an east--west street running back from St Mary Street. This writer inclines to the same view, but the evidence is too limited to allow certainty.



**Figure 142.** SOU 186, grid A. The magnetometer survey >2 NT. Numbers refer to anomalies.

**Grid A (fig 142)**

1. A very highly magnetic feature, >1000 NT.
2. A smaller, moderately magnetic feature of 7--11 NT, running north--south, about 3m long by 1m wide.
3. Groups of smaller magnetic anomalies, 4--8 NT containing isolated peaks of 11 NT.
4. Highly magnetic material, the southernmost being >40 NT.

The most striking feature of this grid is anomaly 1, both physically and magnetically large (some 14m x 10m, and >1000 NT). The presence of this feature can be seen to affect the magnetic field for a considerable part of the east section of the grid; with the massive values from the north--east corner obviated. This is most likely to be the effect of a modern metal-based feature, for instance reinforced or ferro-concrete; perhaps a gun or searchlight emplacement remaining from World War II. Group 4 anomalies

the magnetometer survey. It is likely that the resistance survey has detected regions of soil disturbance, that is to say pits as well as packed ground and stone scatters (where one would expect a high resistance to be obtained from the latter two). And it is likely that the magnetometer survey has detected the extent to which those areas have affected the earth's magnetic field: in this survey it is assumed that the fill of the pits provides the main magnetic contrast.

Excluding the concrete structures (A and D), the path (D), the interference from the fence at the east end of G, and the various metal fragments that influence the magnetic gradient, it is apparent that there are three groups of magnetic anomaly:

- i) greater than 15 NT
- ii) less than 15 NT, commonly 8--9 NT
- iii) anomalies of 3--4 NT.

(This allows for a 0--3 NT variation in the 'background' soil.) The very low values could be due to small, naturally silted pits, and the moderate-to-high values could represent deposits comprising an increasing quantity of domestic material, with daub and burnt-clay deposits producing relatively high values of about 20 NT.

In grid A, those anomalies noted west of anomaly 2 are 3--4 NT, but those to the east are 7--14 NT; feature 2 itself being 7--11 NT. These are interpreted as pits increasing towards the east section, both in their size and in the quantity of domestic refuse they contain.

A similar pattern is observable in grid D, with anomalies 3, 4 and 5 of fig 143a thought to be pits increasing towards the east.

It is gratifying to see a good conformity between low-resistance values and the magnetic anomalies, a conformity that reinforces the interpretation of a series of cuts having been made into the natural.

Grid G is more difficult to interpret. Using only the pattern produced by the magnetic anomalies (fig 144a), it would seem that, as with grid D, there is a trait of decreasing magnetic gradient towards the west. But, unlike grid D, there is a good conformity between the high-resistance patterns (fig 144b) and the magnetic anomalies. It is felt that this effect could be attributed to two causes, either of which reflects activity relevant to the archaeology of the area. The pattern may represent dumps or laid deposits of domestic material and brickearth rather than pits, or it is a result of the persistent rain prior to and during the survey of grid G. The second interpretation is thought the most likely. The natural brickearth has a clayey texture, and, if the water-retention capacity of this material is greater than that of the pit

walled town, and the misconceptions of a rare visitor to outlying areas. The Inner-Avenue--London-Road route is shown as virtually a straight line, presumably because the cartographer regularly made use of this route out of the walled town. As can still be ascertained, the Hythe shore does appear to an incurious observer from the walled town to run in an east--west direction. Anyone observing the bulwarks from the western shore of the River Itchen, or walking between two stretches of water along the bulwark to the ferry that was located at its eastern extremity, might easily have exaggerated the obtrusion of the pond (or ponds) into the river. We can expect that constant familiarity with this area would have led to the opposite effect, the minimising of the eastwards stretch.

Two further points must be made about the distortions of the map, before this supplementary report can be ended. First, as with mental maps, subsidiary details seem to have been fitted into the areas defined by what have been distinguished by the cartographer as major details. He or she seems to have marked the roads and ways before adding details like field divisions; and as a consequence some of the field divisions have been considerably distorted so as to fit them all into the misshapen areas defined by the thoroughfares. However (and secondly), the cartographer seems to have made some effort to mark changes in direction, although one cannot always descry an effort to depict features in a constant scale. Examples of the inconstant scale are found throughout the map, the most obvious being the compression of the unoccupied northern portion to the benefit of the southern part. (Such distortions will be familiar to anyone who has made use of the map of the London Underground system.)

our understanding of the Scandinavian tradition of shipbuilding is far from complete. Here, one might recall Greenhill's caution against too elaborately interpreting the scattered finds: in the words of Nýlen (1986, 104), it is

wrong to believe that the technique for building and using marine vessels was the same throughout the Scandinavian area.

As a number of finds indicate, this Scandinavian area included England -- not only after Viking kingdoms were established in large portions of the British Isles, but also during the Migration Period, and (indirectly or otherwise) in the intervening centuries.

With regard to the Migration Period, it is pertinent to recall the main arguments about vessels found in the homelands of the Angles: the Nydam Oak Boat, built late in the 4th century and found in southern Jutland; and the Sutton Hoo Ship, built in perhaps the early 7th century and found in East Anglia. Both vessels were long (about 24m and 27m respectively) and may be said to have been built in the same general tradition (defined below), but the Sutton Hoo Ship displays certain improvements that make it the more seaworthy of the two.

The vessels are perhaps not wholly representative of their type. It may be, for instance, that the Nydam Oak Boat was built elsewhere than in southern Jutland, and was a war trophy; and the Sutton Hoo Ship might be thought a specialised, royal ship. Nevertheless, as Greenhill (1976, 186) points out, these craft are evidence of the ability to 'construct very well-built clinker-built open rowing boats which were seaworthy and could be very big.' It is not clear, either, that the vessels are properly representative of their times. If one accepts an absolute chronology, the developments found in the Sutton Hoo Ship have no relevance to a discussion of vessels of the Migration Period, and it will be a reasonable guess that Britain was reached in craft like the Nydam Oak Boat. Such assumptions underlie the argument to that effect made by Christensen (1972, 164). On the other hand, if only a relative chronology is accepted, it must remain wholly uncertain when later developments occurred: uncertain, too, whether those developments rendered earlier forms wholly obsolete. In this case, one might follow Greenhill (*ibid*), who suggests both that

At least two types of boat may have developed, a long narrow vessel of war, or royalty, and a slower, wider, more stable type which would be better able to carry many passengers and goods