

## A MIDDLE SAXON CEMETERY AT COOK STREET, SOUTHAMPTON (SOU 823)

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with contributions by D H BROWN, S HAMILTON-DYER, J I MCKINLEY, and A D RUSSEL

### ABSTRACT

*A Middle Saxon cemetery in the south-west part of Hamwic was investigated further by excavation and watching brief. A north-south ditch marked the western limit of Middle Saxon activity and contained a burial. Five graves, a penannular ditch, and occupation evidence were also revealed. Medieval and post-medieval plough soil and occupation evidence were present in most areas.*

### INTRODUCTION

#### *Project background*

The Archaeology Unit of Southampton City Council recorded archaeological evidence in advance of a housing development by Bellway Homes Limited. The site is centred on NGR SU 425116 in the St Mary's area of Southampton. It lies partly within the former area of the Middle Saxon settlement of Hamwic (Morton 1992), and about 300 m to the E. of the NE. corner of the medieval walled town. It is just to the W. of the supposed junction of two Saxon streets that survive as St Mary Street and Chapel Road. They are the most western and southern respectively of Hamwic's known streets (Morton 1992, 32–40). There may have been a Middle Saxon predecessor to St Mary's Church (Morton 1992, 50–1), perhaps the principal church of Hamwic with its churchyard the main burial ground. Several investigations have been carried out in the area and the major sites are shown in Fig. 1. Most of these projects have produced evidence of Middle Saxon, and some medieval, occupation.

Parts of the Cook Street area have been investigated since 1986 by projects coded SOU 254 and

SOU 567 (Garner 1994; Garner *et al.* 1997). This work revealed a previously unknown Middle Saxon cemetery with a boundary ditch to the W.. A variety of burial rites were encountered which included penannular ditches and burials in the boundary ditch. Only one other penannular ditch is known from Hamwic, at SOU 32 (Morton 1992, 171–81). The cemetery was probably in use in the first half of the eighth century at which time the ditch was also open. Although a few pits were dug close to the ditch and immediately to the E. of the cemetery at some point after the middle of that century, the cemetery was virtually undisturbed by Middle Saxon features. To the E. there was an area of pits, with structural features close to St Mary Street, though the supposed Middle Saxon precursor to the street has not yet been identified in this area.

A site (SOU 407/523) to the N. of Cook Street produced evidence of Middle Saxon and medieval occupation in the eastern half (Scott 1989; Shuttleworth and Smith 1993), but no cemetery features were identified. However, at a watching brief in Chapel Road, just outside St Mary's churchyard (SOU 630), two burials of eighth- or ninth-century and tenth-century date were exposed (Smith 1996, 257–8), indicating not only that St Mary's churchyard extended further S. than at present, but also that it can trace its origins back to the Middle Saxon period.

#### *Geology and topography*

The area of Hamwic is located on low-lying land that slopes gently down to the SE.. The River Itchen is about 500 m to the E. of the site. The height of the modern ground surface at the site is about 4.1 m OD in the NW. and 3.5 m OD in the

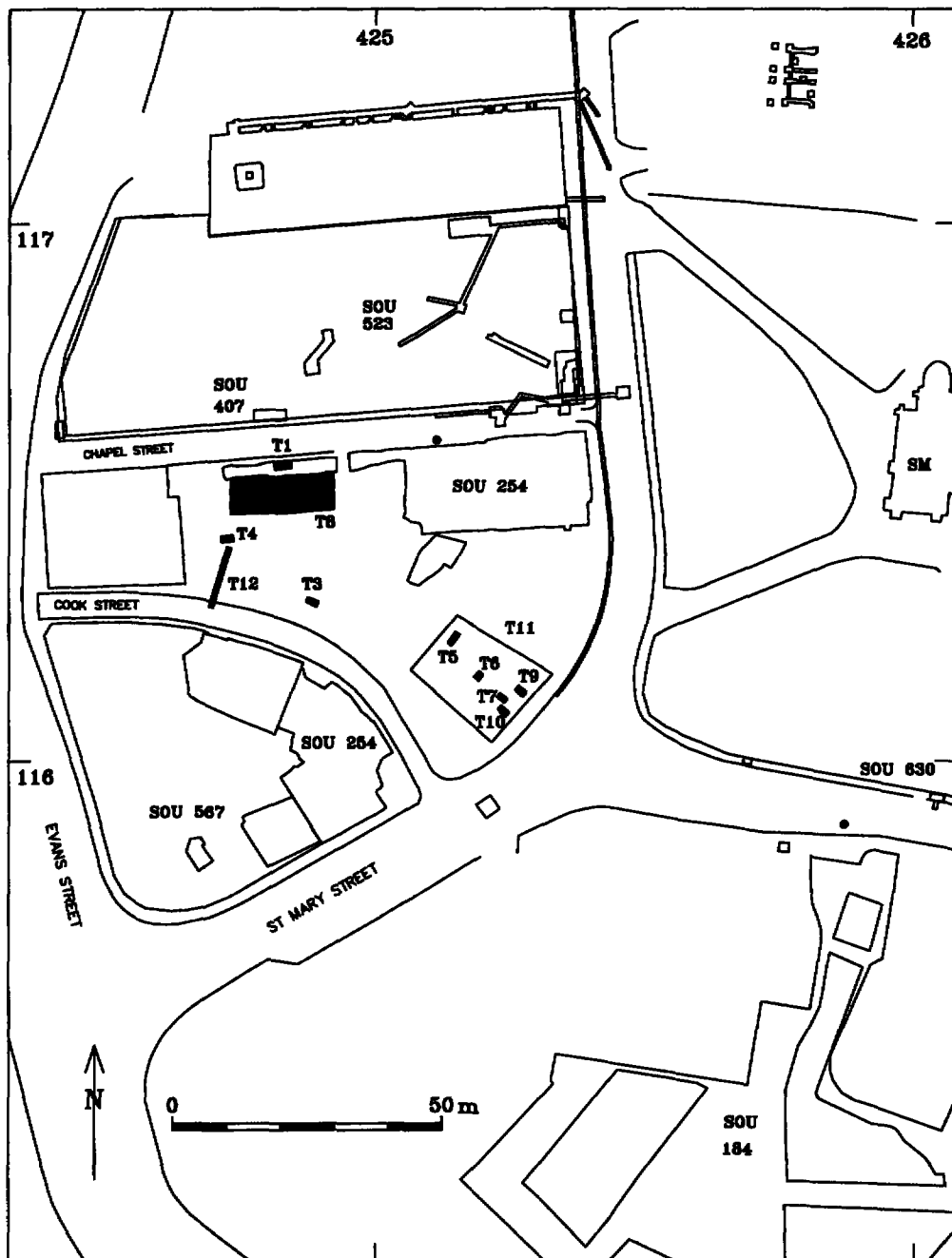


Fig. 1 SOU 823 and other archaeological sites in the area. SOU 823 trenches are solid except Trench 11, which was a watching brief area. The solid circles indicate two graves observed on watching briefs at SOU 184 and SOU 254. SM is St Mary's Church. (Reproduced from the Ordnance Survey map with the sanction of the controller of HMSO Crown Copyright reserved: Licence LA 079340)

SE.. The surface geological deposits in the area are brickearth above gravel (Garner 1994).

### *Methodology*

Seven test holes (SOU 823 Trenches 1 to 7) were excavated in June (Garner 1997) followed by three trenches (Trenches 8 to 10) in October and November 1997 (Fig. 1). A watching brief (Trenches 11 and 12) was conducted during the redevelopment up to June 1998. A continuous series of context numbers was used for the three Cook Street projects.

## RESULTS

### *Natural deposits – Phase 1*

Natural gravel was encountered at 1.85 m OD and was at least 1.2 m thick. The brickearth was between 0.5 m and 0.8 m thick, and its surface was between 2.33 m OD and 2.6 m OD.

### *Pre-Middle-Saxon (before AD 650) – Phase 2*

Layers of dirty brickearth were present in most trenches. They were above *in situ* natural brickearth and were cut by Middle Saxon features. Several of the layers contained burnt flint, worked flint, and Romano-British pottery. In Trench 8 a layer (5602) of dirty brickearth of uncertain date sealed six small features (5796, 5798, 5802, 5806, 5812, and 5814): they were small and contained one fill each. The only cultural materials in the fills were charcoal flecks and a burnt flint. The date and function of the features is uncertain but it is possible that some of them were natural.

Layer 5602 contained a Roman seal-box lid (item 25), Romano-British and intrusive medieval pottery, and worked flint. The seal-box lid (D Hinton *pers. comm.*) had a maximum length of 25 mm and width of 15 mm and its upper surface has been incised with a reverse leaf motif that was then filled with blue enamel (Fig. 4, item 25). Leaf-shaped seal-boxes (Crummy Type 4) were used to protect the impressed seal attached to a Roman package or tablet. Both the leaf-shaped

and enamelled types are thought to be confined to the 2nd or 3rd century (Crummy 1983, 103–4).

Residual finds from various parts of the site included 65 pieces of worked flint, a sherd of prehistoric pottery, and a few sherds of Romano-British pottery. Most of the worked flint consisted of waste flakes but a barbed-and-tanged arrowhead, a scraper, several cores, and a few blades were also present. It was a mixed group and probably ranged in date from Mesolithic to Iron Age. Most of the Romano-British pottery was small, abraded, and grog-tempered. Burnt flint may have been residual prehistoric material.

### *Middle Saxon (AD 650 to 850) – Phase 3*

#### *The boundary ditch (5620) in Trench 8*

Ditch 5620 cut dirty brickearth, had six fills, and was cut by Middle Saxon pit 5623 (Fig. 2). The ditch ran approximately N.–S., had a V-shaped section, and was 1.5 m wide and 0.8 m deep. It was part of the boundary ditch previously excavated at SOUs 254 and 567 (Fig. 5). The finds included articulated cattle bones, burnt flint, oyster shells, and a near-complete human skeleton (context 5663) in primary fill 5662. There was no evidence of an associated bank – it would have been removed by later activity.

The function of the ditch has been discussed previously (Garner 1994; Garner *et al.* 1997) and it is considered to be marking a boundary because no definite Middle Saxon features have been found to the W.. It may have served as a boundary to the cemetery (see below), or to the actual settlement of Hamwic. The combined length of the ditch across the three sites (SOUs 254, 567, and 823) is about 70 m.

#### *The cemetery by M F Garner and J I McKinley*

Five graves and a burial in ditch 5620 were identified in Trench 8 (Figs 2 and 3). All graves were oriented approximately E.–W., but the skeletons varied in orientation and position.

#### *Burial 1 (skeleton 5663; ditch 5620)*

The skeleton was within the lowest fill of ditch 5620 and had the same orientation as the ditch, with the head to the S.. The right leg and both arms were flexed, but the left foot had been re-

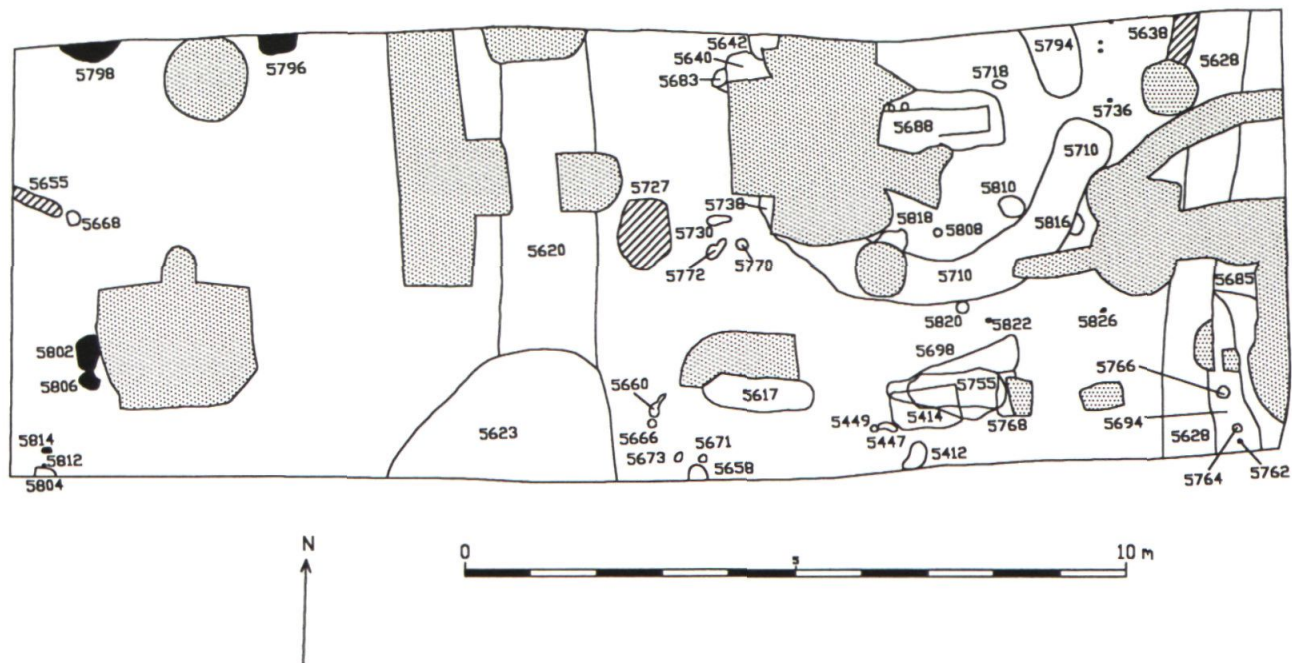


Fig. 2 Plan of Trench 8 showing features of all periods. Black is Pre-Middle-Saxon, white is Middle Saxon, hatched is medieval, and stippled is modern

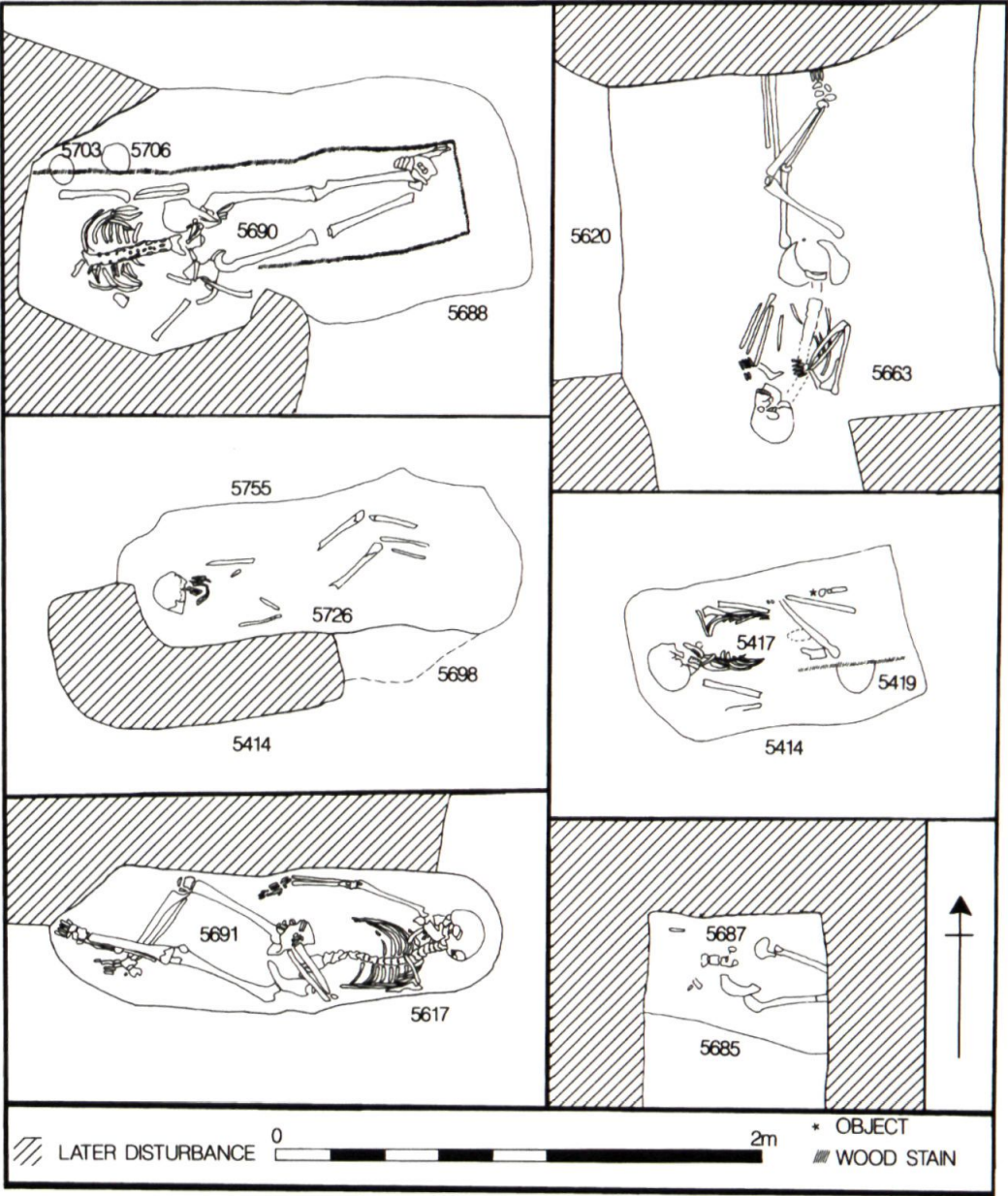


Fig. 3 Graves and burial in the boundary ditch

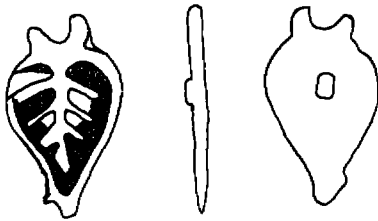
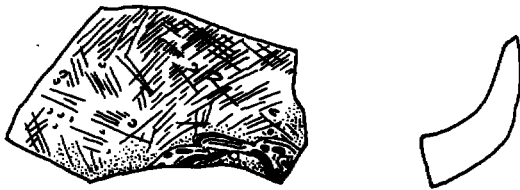
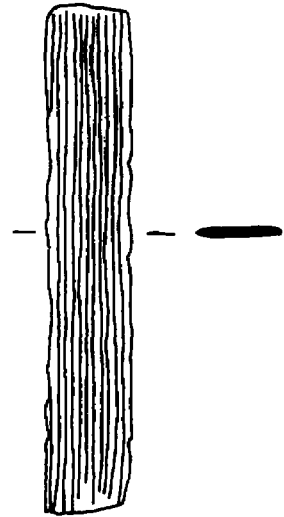
**Item 25****Item 1****Item 29**

Fig. 4 Copper alloy objects (items 1 and 25) and glass linen-smoother (item 29), all at 1:1

moved by a modern feature which had also removed the upper part of skeleton 201 in the same ditch fill in the adjacent trench of SOU 254 (Garner 1994, 88). No finds were associated with the burial; the surrounding fill contained animal bones and burnt flint.

The burial belonged to a female older mature adult. There was about 80% skeletal recovery and the following pathology was noted (summary):

caries; abscess; hypoplasia; fracture – right rib; *coxa vara*; morphological variation – mandibular M3 5-cusp, maxillary right M2 accessory root, M3s accessory cusps.

A radiocarbon determination on a sample from the skeleton gave a radiocarbon age of  $980 \pm 55$  BP calibrated to AD 1001–1156 and AD 978–1206 at one and two sigma levels of confidence respectively (AA-35544). This date is about 300

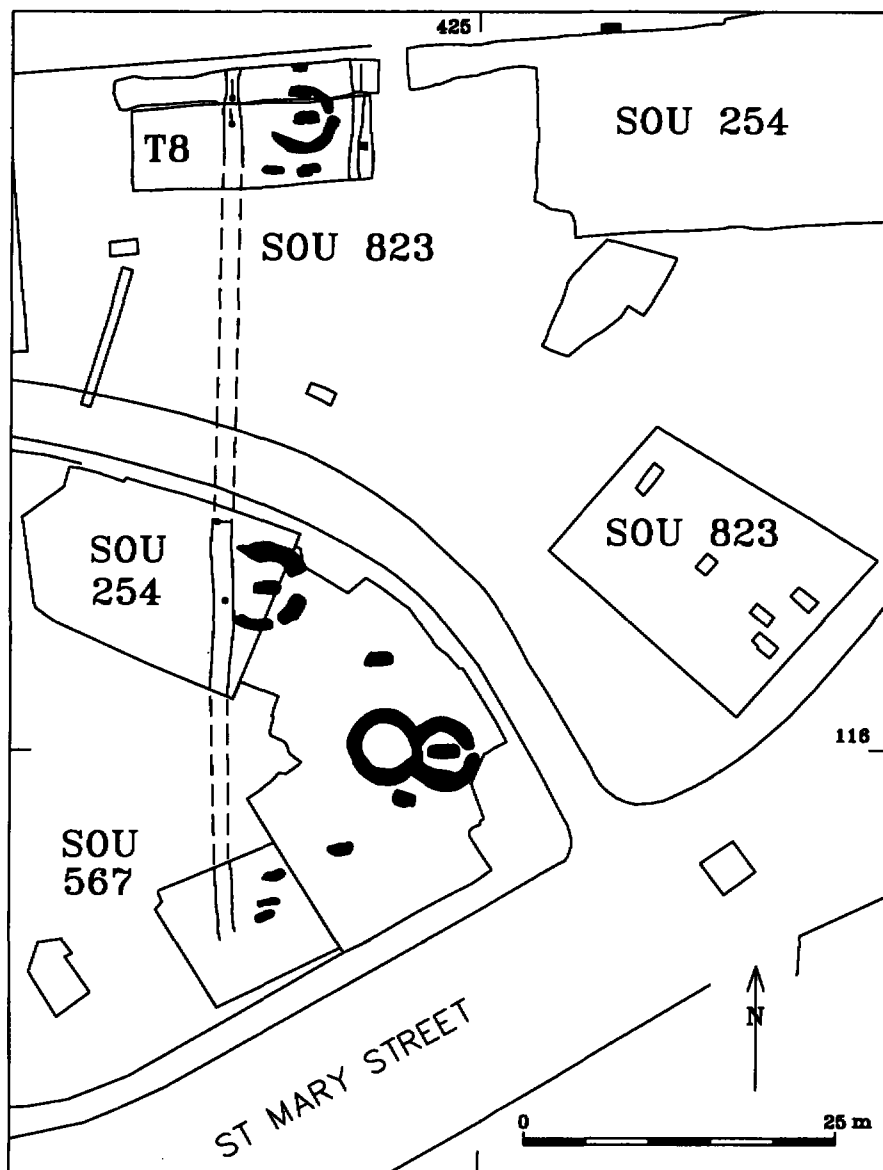


Fig. 5 Saxon cemetery, boundary ditch, and linear feature revealed by SOUs 254, 567, and 823. Graves and penannular ditches are black, skeletons and a skull in the ditch are indicated, and the projected line of the boundary ditch is shown. (Reproduced from the Ordnance Survey map with the sanction of the controller of HMSO Crown Copyright reserved: Licence LA 079340)

years later than expected for the ditch fills but the burial was not intrusive. It was possible that the ditch was open in the eighth century and was not filled until the 11th century but this is unlikely. A sample from the contemporary skeleton 201 (Garner 1994, 88) was dated for comparison. It gave a radiocarbon age of  $1250 \pm 35$  BP calibrated to AD 691–800 and AD 675–886 at one and two sigma levels of confidence respectively (AA-40364). Because this second date agrees with the other dating evidence from the site the first radiocarbon date is thus considered to be inaccurate (see below).

*Burial 2 (skeleton 5690; grave 5688)*

Grave 5688 was at the centre of an area enclosed by a penannular ditch (5710/5794). The ditch was probably a continuation of feature 316 in SOU 254. It cut features 5816 and 5818. The ditch and grave were cut by modern features, resulting in the right arm being disturbed and the loss of the skull. The ditch had a causeway on the E. side, as did at least two of the three penannular ditches to the S. (SOU 254). It was about 1.0 m wide and 0.4 m deep, and features 5640 and 5738 were probably part of it. The enclosed area would have had a diameter of about 4 m.

The grave was the largest in Trench 8 being 0.9 m wide, 0.25 m deep, and at least 1.9 m long. Wood stains indicated a coffin or plank-lined chamber, while stake-holes 5703 and 5706 may have held stakes that secured a plank. Grave 2962 (SOU 254) had two rows of three stake-holes and was also within a penannular ditch (Garner 1994, 85).

Animal bones, burnt flint, a flint flake, a sherd of Romano-British pottery, and two pieces of coal were recovered from the grave. The finds were probably residual, except the coal which was, presumably, intrusive. Finds from the penannular ditch included burnt flint, worked flint, animal bone, pottery, oyster shell, daub, and a broken pin or needle of animal bone. Fill 5793 contained fragments of a glass linen-smoother (Fig. 4, item 29) and a copper-alloy pin. The upper fill (5711) in one part of the ditch contained post-Saxon finds including fragments of roof tile, floor tile, slate, and medieval pottery, as well as probable Saxon finds such as a bone pin beater and fragments of daub.

The burial belonged to an older mature adult of

male sex and there was about 40% skeletal recovery.

A radiocarbon determination on a sample from the skeleton gave a radiocarbon age of  $1330 \pm 45$  BP calibrated to AD 658–762 and AD 642–777 at one and two sigma levels of confidence respectively (AA-35543).

*Burial 3 (skeleton 5726; grave 5755)*

Grave 5755 cut feature 5768 and was cut by grave 5414. The skeleton was within the lower of two fills and was slightly flexed with the head to the W.. The low level of survival of the skeleton was probably due to poor preservation rather than disturbance. The grave was about 1.5 m long, 0.6 m wide, and 0.32 m deep. The fills contained burnt flint, animal bone, a flint flake, iron slag, and two sherds of Middle Saxon and one sherd of prehistoric pottery.

The burial belonged to an older juvenile/young subadult of indeterminable sex. There was about 25% skeletal recovery.

*Burial 4 (skeleton 5417; grave 5414)*

Grave 5414 cut grave 5755 and had an uncertain relationship with feature 5698. Skeleton 5417 was above the lowest of three fills. The skeleton was flexed with the head to the W.. The grave was 1.0 m long, 0.6 m wide, and 0.23 m deep. A dark E.–W. line to the S. of the pelvis probably belonged to a wood stain, while a feature (5419) adjacent to the stain may have been a stake-hole. Except for the right arm, the skeleton appeared tightly constrained. The left leg was bent at the knee with the long bones nearly vertical. Close by was a copper-alloy strip (Fig. 4, item 1) of uncertain function – it was possibly a fitting from a coffin or a re-used container. The only other finds from the grave were burnt flint, animal bones, and a sherd of Middle Saxon pottery.

The burial was of a probable female determined to be an older subadult. There was about 45% skeletal recovery. The following pathology was noted (summary): caries; abscess; morphological variation – metopic suture.

*Burial 5 (skeleton 5687; grave 5685)*

Grave 5685 was cut by linear feature 5628 and modern features, which resulted in only the cen-



tral part of the grave surviving intact. This part was 0.75 m long, 0.51 m wide, and 0.14 m deep. The surviving bone indicated a supine burial position. The only find was a sherd of Middle Saxon pottery.

The burial belonged to an adult of unknown sex; about 1% skeletal recovery.

#### *Burial 6 (skeleton 5691; grave 5617)*

Grave 5617 was cut by a modern feature. The grave was about 1.7 m long, 0.5 m wide, and 0.25 m deep. The burial position was supine with a casual posture, and the head was to the E.. This is the only example from Hamwic of an E.-W. burial in a grave. The left humerus was dislodged during machining so is not shown in Fig. 3. Four pottery sherds (two Middle Saxon and two medieval), five flint flakes, burnt flint, and daub were recovered from the fill.

The burial belonged to an older mature/older adult of male sex. There was about 55% skeletal recovery. The following pathology was noted (summary): caries; abscesses; *ante mortem* tooth loss; morphological variation – impaction anterior mandibular teeth.

#### *Human remains by Jacqueline I McKinley*

Methodology. Because of the weak and fragmentary state of the bone, much of it had not been washed, and a covering of tenacious soil existed in places, particularly over joint surfaces. No joint surface could conclusively be excluded from having pathological lesions so counts for the calculation of disease prevalence were not made. Similarly, no bone measurements were made, since any such measurement would have been affected by the deposits of soil. All mandibles and maxillae were cleaned enabling the dentitions to be fully recorded and calculations of the prevalence of dental disease to be made. Age was assessed from the stage of tooth development (Van Beek 1983) and ossification/epiphyseal bone fusion (McMinn and Hutchings 1985; Webb and Suchey 1985), assessment of tooth wear patterns (Brothwell 1972) and the general degree of other, visible, age-related changes to the bone (eg Bass 1987). Sex was ascertained from the sexually dimorphic traits of the skeleton (Bass 1987).

Disturbance and condition. Like previously excavated graves in the Cook Street cemetery (SOU 254 and 567), there had been some level of disturbance or truncation to most of the burials. Most of the skulls were badly fragmented and at least one was warped.

The condition of the bone was very variable, indicating differences in the microenvironment between individual burials. Some bones had to be lifted in soil blocks due to their extreme fragility, which hindered examination of joint surfaces. Skeleton 5687 had been substantially truncated and almost all of the remaining bone had disintegrated. In three burials, the trabecular bone, particularly of the axial skeleton but also, to some extent, the articular surfaces, was in very poor condition or disintegrated whilst the rest of the skeleton had survived well. That the condition of the bone may reflect the mode of burial is indicated by the relatively good preservation of skeletons 5663 and 5690, the former from a ditch fill and the latter from a penannular-ditch grave. Almost all the bones were observed to have a patchy, dark brown stain/accretion over much of the surfaces. This suggests some form of organic material, such as wood or textile, was present within the graves, both over and around the bodies.

Demography. Six individuals were identified, comprising two immature individuals and four adults, with a minimum of two females and two males. This brings the minimum number of individuals recovered from the cemetery to date to 22 (Garner 1994; McKinley 1994). As the group probably represents only part of the whole cemetery, detailed demographic comment would be inappropriate. However, there are two general points of note. No infant remains have yet been recovered in any of the investigations; this may simply be due to poor bone survival, but no appropriately sized graves have been found either (unless several small features were infants' graves) and there may be some cultural significance to their absence. The remains that have been recovered were from graves in different parts of the cemetery, both sexes being found in all the areas of investigation, together with individuals of different ages

(with the exception of infants mentioned above). The implication is that the cemetery was not zoned by age and sex.

**Pathology.** The limits placed on the observation of pathological lesions were outlined above. A total of 120 erupted permanent teeth were recovered and 120 erupted permanent tooth positions were counted. *Ante mortem* tooth loss was seen in one dentition (0.8%), an older adult male (5691). Dental calculus (calcified plaque) was noted in only one dentition (skeleton 5691) where there was a heavy concentration around the mandibular right I2-C. Carious lesions were noted in three dentitions, with an overall rate of 6%; females 10% and males 4%. Various studies have shown caries to affect females to a greater degree than males (Hillson 1990, 287), so the higher prevalence amongst the females is not unexpected. All the lesions were in the molar teeth, where they are generally most common (Hillson 1990, 294). Where it was possible to detect the origin of the lesions most were occlusal (43%), with 14% cervical; in the remaining 43% destruction of the tooth was too severe to be able to judge where the lesion had originated. The relatively high percentage of occlusal caries originating in the fissures, as opposed to formation in association with excess wear in the enamel, is not a pattern commonly seen in archaeological material, being more familiar in modern dentitions (Miles 1969; Hillson 1990, 290). In four instances within the female dentitions, infection from a carious lesion had tracked down into the tooth socket resulting in the development of a dental abscess (3% overall, 7% female). The mandibular and maxillary teeth were similarly affected.

The main factor affecting dental disease is diet and 'the interaction with the micro-organisms that live in the mouth' (Hillson 1990, 283). Dental hygiene may also be of consequence, since plaque deposits perform a major role in this interaction. The level of dental attrition observed in this assemblage was relatively low; which suggests the diet was not particularly coarse. The rate of *ante mortem* tooth loss is low in comparison with other contemporaneous cemeteries (Marlow 1992, 117), with caries and abscess rates being within the upper range of those noted elsewhere. In general, the

condition of the teeth suggests a relatively nutritious diet, with a good standard of dental hygiene.

Slight dental hypoplasia was noted in one dentition, the condition is indicative of periods of illness or nutritional stress in childhood. A well-healed fracture was observed on one right rib; this constitutes the most frequently recorded fracture type in archaeological assemblages, and is most commonly caused by a fall against a hard object (Adams 1987). *Coxa vara*, a condition in which the angle of the femoral head is considerably reduced, may have a number of possible causes (Adams 1986, 373). It leads to shortening of the limbs and may possibly have affected the gait of the individual.

#### *Other possible cemetery features*

Several small features between ditch 5620 and linear feature 5628 in Trench 8 (Fig. 2) may have been associated with the cemetery. They cut dirty brickearth and were below medieval layers. Each had one fill and their date and function are uncertain. It is possible that some of them were infants' graves despite an absence of human bone. Some of the adult skeletons in the cemetery were poorly preserved and infants' bones may not have survived at all. Many of the features may have been stake-holes or post-holes but it is not certain that all were cultural. Several of the features were close to the penannular ditch: stakes and posts could have been used to set out its position or to support an earthwork.

#### *Cemetery discussion*

This excavation has added six more burials to the total from this cemetery, and they include the only example so far known from Hamwic of an E.-W. burial in a grave. Wood stains in two graves were probably the remains of wooden containers - coffins or plank-lined chambers. No definite grave goods were found in the graves but some residual finds were recovered, though the copper-alloy strip in grave 5414 is of uncertain function.

The following elements of the cemetery have been excavated: four penannular ditches with central graves (except one), 13 graves without penannular ditches, and three skeletons and two skulls found in the boundary ditch (Tab 1), while

Table 1 Summary of burials in the Cook Street cemetery

| context no. | feature type | feature no. | same as | head at | age category                  | sex | % present | SOU code | trench no. | context date | notes          |
|-------------|--------------|-------------|---------|---------|-------------------------------|-----|-----------|----------|------------|--------------|----------------|
| 201         | ditch        | 885         |         | S       | older mature/older adult      | ?M  | 30        | 254      | 1          | M Saxon      |                |
| 247         | grave        | 107         |         | W       | young/younger mature adult    | F   | 50        | 254      | 1          | M Saxon      |                |
| 247         | grave        | 107         | ?304    | ?       | immature                      | ?   | 1         | 254      | 1          | M Saxon      | disarticulated |
| 304         | ditch        | 885         | ?247    | ?       | immature                      | ?   | 5         | 254      | 1          | M Saxon      | skull only     |
| 308         | grave        | 309         | ?109    | W       | adult                         | ?   | 12        | 254      | 1          | M Saxon      | disarticulated |
| 442         | grave        | 440         |         | W       | adult                         | ??F | 10        | 254      | 1          | M Saxon      |                |
| many        | pit          | 109         | ?308    | N/A     | adult                         | ?M  | 3         | 254      | 1          | modern       | disarticulated |
| 906         | ditch        | 1355        | ?2436   | ?S      | older adult                   | ?M  | 20        | 254      | 3          | M Saxon      | skull only     |
| 1396        | ditch        | 1355        | ?1604   | W       | juvenile                      | ?   | 10        | 254      | 3          | M Saxon      |                |
| 1604        | ditch        | 1525        | ?1396   | N/A     | juvenile                      | ?   | 1         | 254      | 3          | L Saxon      | disarticulated |
| 2436        | grave        | 2423        | ?906    | W       | older mature adult            | M   | 70        | 254      | 3          | M Saxon      | penannular     |
| 2664        | grave        | 2655        |         | ?       | older subadult/adult          | ?   | 1         | 254      | 4          | M Saxon      |                |
| 2713        | grave        | 2597        |         | W       | young/younger mature adult    | ?   | 1         | 254      | 4          | M Saxon      |                |
| 2960        | grave        | 2959        |         | ?       | older subadult/adult          | ?   | 1         | 254      | 4          | M Saxon      |                |
| 2966        | grave        | 2962        |         | W       | older mature adult            | ?   | 20        | 254      | 4          | M Saxon      | penannular     |
| N/A         | p ditch      | 1898        | N/A     | N/A     | N/A                           | N/A | 0         | 254      | 4          | M Saxon      | no grave       |
| 2616        | linear       | 2104        |         | N/A     | mature/older adult            | F   | 1         | 254      | 4          | medieval     | disarticulated |
| 4671        | grave        | 4610        |         | W       | subadult/adult                | ?   | 1         | 254      | 5          | M Saxon      |                |
| 5094        | grave        | 5077        |         | W       | young/younger mature adult    | ??F | 10        | 567      | 6          | M Saxon      |                |
| 5103        | grave        | 5096        |         | W       | mature adult                  | ?F  | 15        | 567      | 6          | M Saxon      |                |
| 5130        | grave        | 5128        |         | W       | mature adult                  | M   | 15        | 567      | 6          | M Saxon      |                |
| 5417        | grave        | 5414        |         | W       | older subadult                | F?  | 45        | 823      | 8          | M Saxon      |                |
| 5663        | ditch        | 5620        |         | S       | older mature adult            | F   | 80        | 823      | 8          | M Saxon      |                |
| 5687        | grave        | 5685        |         | W       | adult                         | ?   | 1         | 823      | 8          | M Saxon      |                |
| 5690        | grave        | 5688        |         | W       | older mature adult            | M   | 40        | 823      | 8          | M Saxon      | penannular     |
| 5691        | grave        | 5617        |         | E       | older mature/older adult      | M   | 55        | 823      | 8          | M Saxon      |                |
| 5726        | grave        | 5755        |         | W       | older juvenile/young subadult | ?   | 25        | 823      | 8          | M Saxon      |                |

fragments of disarticulated human bone have been recovered from other features. If the radiocarbon dates for skeletons 201, 5663, and 5690 are correct they indicate that the cemetery was in use for several centuries, or that there were at least two phases of burial. It is suggested that the radiocarbon date for skeleton 5663 is inaccurate and that the cemetery was in use during the first half of the eighth century AD.

The three graves within penannular ditches exhibit a common burial rite. The bodies were supine, in wooden containers and in large grave pits. It seems that they were dealt with in a special way that required care and much effort. All three were older mature adults and two of the three were male; the sex of the third skeleton (2966) could not be determined. Penannular ditches were sometimes on the edges of Saxon cemeteries (see for example Hogarth 1973, 118) and may have acted as boundary markers. At Cook Street, the ditches do not appear to have been on the periphery (Fig. 5). No earthworks such as banks or central mounds were found but if they had existed medieval ploughing would have removed them. Overall, penannular ditches are rare cemetery features and outside Hamwic only one other is known from Hampshire at Portway West, Andover (Stoodley, *forthcoming*); thus the relatively high number of them at this site is notable.

The full extent of the burial ground is unknown, but it is probable that all the burials at SOUs 254, 567, and 823 were part of the same cemetery. The most likely exception is grave 4610 near Chapel Street. This grave was about 20 m to the E. of the nearest known grave. Assuming that the full extent of the cemetery, including the ditch, has been found and it did not include grave 4610, the cemetery would have covered about 1200 m<sup>2</sup>, of which c. 500 m<sup>2</sup> has been excavated. Some burials were probably removed by later disturbance (perhaps 20%), and the remains of infants may have completely disintegrated; in reality there were probably many more burials in this area. The remains of 22 to 26 individuals have been recovered, and based on a similar density, about 32 individuals would have been expected to have occupied the remaining unexcavated area, thus

giving a surviving total for the cemetery of 55 individuals. Including the burials that were lost to later disturbance, the cemetery may have contained about 70 individuals, or more if infant burials were present.

#### *Other Middle Saxon features*

The only features of possible Middle Saxon date to the W. of ditch 5620 were features 5668 and 5804. They cut dirty brickearth, were below medieval layers, and contained no datable finds. Both were small and of uncertain date and function.

Two linear features (5628 and 5694) at the E. end of Trench 8 were probably Middle Saxon. Feature 5628 cut feature 5694 and grave 5685. Few finds were recovered but included four Middle Saxon pottery sherds from feature 5628. Three features in the base of feature 5694 were stake- or post-holes (Fig. 2) but contained no finds.

Pit 5623 cut the fills of ditch 5620 and was below medieval layers. It may, however, have been dug to extract brickearth and gravel. The pit was used for rubbish disposal but did not produce the quantities usually found in most rubbish pits in Hamwic, though the range and quantity of finds was similar to that found in ditch 5620. In addition, five small features (5658, 5660, 5666, 5671, and 5673) may have been the remains of a structure associated with the pit.

In all likelihood, the pit and linear features in Trench 8 were later than the cemetery and represent encroachment on it by other processes, such as rubbish disposal. It is possible that feature 5628 may mark the boundary between a property and the cemetery.

Some of the features in other trenches may also have been Middle Saxon: they cut brickearth, were below medieval layers, but contained no datable finds. They comprised: two stake-holes, two post-holes, and a small pit in Trench 5; four stake-holes and a post-hole in Trench 7; a pit, a post-hole, and three (probably structural) linear features in Trench 9; and a post-hole in Trench 10. The features in the trenches close to St Mary Street indicate that structures and associated pits were present in this area, though it is not possible to determine whether they were contemporary with the cemetery.

*Table 2* Quantities of pottery of each period in Phase 3 (Middle Saxon) and 4 (medieval) contexts

| <i>Pottery Type</i> | <i>Phase 3</i>    |              | <i>Phase 4</i>    |              | <i>Totals</i>     |              |
|---------------------|-------------------|--------------|-------------------|--------------|-------------------|--------------|
|                     | <i>Weight (g)</i> | <i>Count</i> | <i>Weight (g)</i> | <i>Count</i> | <i>Weight (g)</i> | <i>Count</i> |
| Prehistoric         | 5                 | 1            |                   |              | 5                 | 1            |
| Romano-British      | 70                | 8            |                   |              | 70                | 8            |
| Middle Saxon        | 216               | 35           | 63                | 4            | 279               | 39           |
| Late Saxon          |                   |              | 5                 | 2            | 5                 | 2            |
| Anglo-Norman        | 2                 | 1            | 36                | 3            | 38                | 4            |
| High Medieval       | 7                 | 2            | 2025              | 155          | 2032              | 157          |
| Late Medieval       | 10                | 1            | 264               | 17           | 274               | 18           |
| Misc Medieval       | 6                 | 2            |                   |              | 6                 | 2            |
| TOTALS              | 316               | 50           | 2393              | 181          | 2709              | 231          |

*Finds**Pottery by Duncan H Brown (Tab 2)*

A total of 231 sherds of pottery, weighing 27.09 kg, was recovered from 56 contexts (medieval and earlier). Pottery from a further 21 contexts (post-medieval and later) was scanned and the various types present noted. The Middle Saxon pottery type names used are those of Timby (1988), while the post-Saxon pottery types named, such as Southampton coarseware, are represented in the Southampton Pottery Type Series (Brown forthcoming).

A limited range of Middle Saxon wares is present in Phase 3. Local chalk-tempered, mixed-grit-tempered and sandy types are all represented together with a single small sherd of North French white ware and one piece of imported grey ware. Organic-tempered wares, which Timby considers to be early in Hamwic, are absent from the whole assemblage and so too are flint-tempered types, which are shown to be late. The pottery from Phase 3 therefore appears to fall into the middle period of occupation at Hamwic, when the settlement was at its peak – ‘dated from the mid eighth to the mid ninth century’ (Andrews 1997, 14).

Late medieval layer 5573 produced the largest sherd of Middle Saxon imported pottery from the site, a rilled shoulder fragment from a North French black ware jar. Context 6004, the fill of late medieval feature 6007, contained a Middle Saxon sandy ware sherd decorated with ring stamps.

This assemblage compares well with material previously recovered from Cook Street. The Middle Saxon material is badly fragmented and does not indicate primary deposition, which accords with the cemetery context in which it mainly occurs.

*Animal bones by S Hamilton-Dyer*

Introduction. Bone from three features (boundary ditch 5620, pit 5623, and two portions of penannular ditch 5710) in Trench 8 was examined and recorded. Archive material includes details of the recording system and analysis, and metrical and other data not presented in this report. The methodology used in the analysis of the bone is compatible with, although not identical to, that of earlier work on material from Cook Street (Bourdillon 1994) and direct comparison with that larger body of data is possible for most aspects.

**Condition.** A total of 1,292 individual bones was recorded, 206 from sieved samples taken from the penannular ditch. Preservation of the material varied both between and within the three features. Most bones showed some surface degradation, some were very eroded and fragile. Bone from the pit was in better condition than that from the two ditches. Excluding the material from the sieving of penannular ditch contexts, 88% of the ditch and penannular ditch bone is eroded to some degree while for the pit this figure is lower at 58%. This is also borne out by the fragment sizes; 44% of the pit bones were less than 50 mm in greatest dimension whereas for the boundary ditch this figure is 62%, in spite of the presence of large and sometimes articulated and unbutchered bones. The material from the penannular ditch is even more comminuted with 84% of fragments less than 50 mm. An examination of the WBE (whole bone equivalent) also reveals that there is less fragmentation in the pit and the greatest level is in the penannular ditch. Charred fragments were also more evident in the penannular ditch, particularly in the sieved material. Just one fragment from the ditch was burnt and none were recovered from the pit.

**Species distribution and identifiability.** Just over 390 bones (31.4%) could be identified to taxon with a further 378 (29.3%) classified as cattle-sized and 99 (7.7%) as sheep- or pig-sized. There were also 410 mammal bone fragments (31.7%) which could not be identified to any group; although most of these were tiny scraps of bone recovered from the sieved samples from the penannular ditch. Overall the majority of the identified fragments are of cattle (241). Many of the large ungulate class (cattle-sized) are probably also cattle as horse bones are so few (seven). Ovicaprid remains (sheep and goat) are frequent (79), pig is in third place (52). Other taxa are rare, just a few bones each of dog, cat, goose, small passerine, and fish. Amongst the ovicaprid remains, ten bones could be identified as sheep and three as goat. A summary of the taxonomic distribution for each feature is given (Tab 3).

As expected the few fishbones were found only in the sieved material, and therefore from the penannular ditch. Flatfish and a salmonid, per-

haps a salmon par or smolt, were identified. Apart from the fish, the bone of a blackbird-sized passerine is the only wild species represented, the single goose bone is likely to have been from a domestic, or at least tamed, bird. Dog bones number just four, all from the pit, but several bones throughout the assemblage show signs of canid gnawing.

The ratio of the main domestic ungulates (cattle, sheep/goat, and pig) is quite different in the three features. The distribution can be affected by taphonomic factors as well as resulting from differing disposal practices. It is often the case that relatively more bones of the large animals are found in ditches, partly through deliberate dumping but also because material from ditches tends to be less well preserved than that from pits. The higher proportion of sheep and pig in the pit is, therefore, expected. It is most surprising, however, that sheep is at an even higher level from the penannular ditch, at the expense of cattle. In comparison with the material from the previous excavation (SOU 254) the pit closely resembles pit 370 from the early phase and the penannular ditch is not dissimilar to pit 272 of the main phase. Ditch section 885 is the closest match for the current part of the boundary ditch, though with less cattle than from that section.

**Anatomical distribution.** For the major taxa, the majority of body areas are represented with an expected taphonomic bias against small and fragile elements. The three goat remains were all large horncores, probably from male animals. In common with other goat horncores from Saxon Southampton these are of the sabre type in shape. The sheep material also included horncores, unlike the previous collection. One of these was probably from a ram and another had the pathological 'thumb marks' usually attributed to castrates (Hatting 1975). For cattle (and cattle-sized fragments) there is a sufficiently large sample to examine in more detail. A large proportion of the remains are pieces of rib, vertebrae and also fragments of other bones which are too big for sheep and pig and have been assumed to be from cattle bones. Skull fragments are also relatively common but do not represent many individual animals. Differences between the three

Table 3 Animal bone species distribution summary

|                      |        | <i>HOR</i> | <i>COW</i> | <i>SHE</i> | <i>GOA</i> | <i>S/G</i> | <i>PIG</i> | <i>LAR</i> | <i>SAR</i> | <i>MAM</i> | <i>DOG</i> | <i>CAT</i> | <i>GOO</i> | <i>BIR</i> | <i>FIS</i> | <i>ALL</i> |
|----------------------|--------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| DITCH                | 5620   | 3          | 111        | 4          | 1          | 15         | 16         | 192        | 40         | 134        | 0          | 2          | 0          | 1          | 0          | 519        |
|                      | %      | 0.6        | 21.4       | 0.8        | 0.2        | 2.9        | 3.1        | 37         | 7.7        | 25.8       | 0          | 0.4        | 0          | 0.2        | 0          |            |
| % cattle, sheep, pig |        | 75.5       | 2.7        | 0.7        | 10.2       | 10.9       |            |            |            |            |            |            |            |            | 147        |            |
| PIT                  | 5623   | 4          | 94         | 5          | 2          | 24         | 27         | 139        | 26         | 22         | 4          | 4          | 0          | 0          | 0          | 351        |
|                      | %      | 1.1        | 26.8       | 1.4        | 0.6        | 6.8        | 7.7        | 39.6       | 7.4        | 6.3        | 1.1        | 1.1        | 0          | 0          | 0          |            |
| % cattle, sheep, pig |        | 61.8       | 3.3        | 1.3        | 15.8       | 17.8       |            |            |            |            |            |            |            |            | 152        |            |
| PEN DITCH            | 5710   | 0          | 36         | 1          | 0          | 25         | 8          | 44         | 31         | 70         | 0          | 0          | 1          | 0          | 0          | 216        |
|                      | %      | 0          | 16.7       | 0.5        | 0          | 11.6       | 3.7        | 20.4       | 14.4       | 32.4       | 0          | 0          | 0.5        | 0          | 0          |            |
| % cattle, sheep, pig |        | 51.4       | 1.4        | 0          | 35.7       | 11.4       |            |            |            |            |            |            |            |            | 70         |            |
| ALL                  |        | 7          | 241        | 10         | 3          | 64         | 51         | 375        | 97         | 226        | 4          | 6          | 1          | 1          | 0          | 1086       |
|                      | %      | 0.6        | 22.2       | 0.9        | 0.3        | 5.9        | 4.7        | 34.5       | 8.9        | 20.8       | 0.4        | 0.6        | 0.1        | 0.1        | 0          |            |
| % cattle, sheep, pig |        | 65.3       | 2.7        | 0.8        | 17.3       | 13.8       |            |            |            |            |            |            |            |            | 369        |            |
| PEN DITCH            | sieved | 0          | 0          | 0          | 0          | 2          | 1          | 3          | 2          | 184        | 0          | 0          | 0          | 1          | 13         | 206        |
| OVERALL              |        | 7          | 241        | 10         | 3          | 66         | 52         | 378        | 99         | 410        | 4          | 6          | 1          | 2          | 13         | 1292       |
|                      | %      | 0.5        | 18.7       | 0.8        | 0.2        | 5.1        | 4          | 29.3       | 7.7        | 31.7       | 0.3        | 0.5        | 0.1        | 0.2        | 1          |            |

Key: HORse; SHEep; GOAt; Sheep/Goat; LARge ungulate; Small ARTiodactyl; MAMmal; GOOse; other BIRd; FISh.

features appear to be mainly preservational; loose teeth are much more frequent from the penannular ditch, already noted as offering less well preserved material. Unidentified shaft fragments are also common in both of the ditch assemblages but are less frequent in the pit. Some dumping of groups of bone appears to have taken place including the remains of a near-complete cattle hind leg and the substantial part of an articulated thorax (vertebrae and ribs) in the boundary ditch. Similar associations of articulated bone were recorded from sections of the boundary ditch encountered in the previous excavation. In that case there was a cattle thorax and the partial remains of an old and diseased horse.

**Butchery.** With imperfect preservation, butchery marks were not common but were observed on some bones. Both knife and chop marks were present. A heavy bladed instrument had been used to chop across vertebrae, split cattle marrow bones and to remove horns from skulls. A chopped cattle astragalus indicates that removal of the waste foot bones could also be done with this implement. Knife marks were found mainly on sheep and pig bones and included marks associated with joint disarticulation as well as with filleting and meat removal. The butchery style is that observed before at Hamwic and seems to indicate the general slaughter and butchering of animals right across the settlement with little or no specialised areas.

**Metrical analysis.** As might be expected the few available measurements compare closely with those from excavations in the centre of Southampton and with SOU 254 (Bourdillon 1980, 1994). Withers heights of the domestic ungulates are based on factors recommended by von den Driesch and Boessneck (1974). Three of the cattle bones were sufficiently complete to estimate withers heights. These were a femur from the boundary ditch giving an height of 1.041 m, a tibia from the same feature giving 1.035 m, and a metatarsus from the pit (5623) giving a slightly larger value of 1.199 m. These were small animals by recent standards but well within the expected range for Saxon Southampton.

There were also two complete sheep limb

bones, a metatarsus and a tibia from the boundary ditch, giving estimated heights of 0.59 m and 0.635 m respectively. These fall just either side of the Hamwic mean and, again, are closely similar to those already calculated for Cook Street.

A horse left radius in the boundary ditch gives an estimated withers height of just 1.293 m. Data on horse from Saxon Southampton is limited as bones have been rare, but in any case this is a small animal. It is interesting to note that the adjacent section of the ditch also contained bones of a small horse, including a left foot but no radius. It is tempting to speculate that this is from the same individual but this is unlikely as the other bones showed considerable pathological changes and were found 30 m to the S..

**Pathology.** This is a small sample and, for sheep, there was none of the oral pathology frequently reported from Southampton. A few sheep bones were abnormal; in addition to the 'thumbed' sheep horn cores already mentioned there was also a complete metatarsus with an enlarged area on the front of the shaft. This may have been associated with a minor injury. The cattle pathologies appeared to be those associated with age. A pelvis from the ditch showed eburnation of the acetabulum indicating probable arthritis. Some thoracic vertebrae from the ditch were locked together, though not yet completely fused with extra bone growth. Cattle bones from the pit included a bucranium perforated caudally, examples of this are well illustrated and described for Lincoln (Dobney *et al.* 1996). There is also a femur with exostosis and vesicles under the caput. Like the pelvis this bone is small and was probably from an old cow.

**Discussion.** As indicated above the material from the penannular ditch is not as well preserved as from the pit and boundary ditch. This is likely to affect not only the anatomical distribution, but also the species distribution as bones of smaller species are less likely to survive. With this in mind it can be said that, in broad terms, the assemblages from the three features are similar. All three are dominated by the bones of cattle with sheep and pig subordinate and other taxa rare. In addition to flatfish already identified at Cook



Street, this assemblage contributes a salmonid although this species is not new to Saxon Southampton as a whole. The four bones of dog match the number in the previous collection, where it was felt that dog was under represented. The presence of dog is also seen indirectly in the form of a comparatively high level of gnawed bones. The occurrence of goat only as horncores, probably brought in for working, is similar to most other sites in Middle Saxon Southampton. This was, however, not the case at the previous Cook Street excavations (Bourdillon 1994, 116–17) where goat was mainly represented by postcranial bones. Lack of other taxa is partly a consequence of the small sample, as the minor elements of an assemblage may not occur by statistical chance. Saxon material from Southampton is, however, usually dominated by the main domestic ungulates with few other taxa and little in the way of wild species.

There are several clear differences between the three features. Sheep/goat bones are notably more frequent from the penannular ditch, despite taphonomic factors that might be expected to favour larger bones. The boundary ditch contained the highest frequency of cattle bones. This section of the boundary ditch contained at least two partial carcasses of cattle, paralleling those of cattle and horse found previously (Bourdillon 1994, 116–18). None of these was complete (even allowing for problems of excavation) and they appear to have been dumped in this state rather than as entire fresh bodies. The pit had the largest number of pig bones, along with all four dog bones and four of the six cat bones.

The sample is not large but it appears that the remains result from individual episodes of disposal activity. They do not represent purely slaughter waste of heads and feet, nor just remains of meat butchery and plate waste, but probably a mixture which, for the boundary ditch, seems to include complete or partial carcasses; these may have been diseased or aged beasts that died or were culled and little utilised, perhaps only for the hide and horns. Casual disposal of cats and dogs is also implied. There is no indication of the substantial bone and antler working industry found at Melbourne Street and Six Dials (Bourdillon and Coy 1980; Riddler 1997) and little was encoun-

tered for the previous assemblage. The frequency of pig is relatively high in comparison with the rest of Hamwic but not as high as at the previous excavation (Bourdillon 1994, 120). Unfortunately there was very little ageing information available from the current sample to confirm or counter previous conclusions recorded from Cook Street which suggested a slightly more rural exploitation than the main phase at Hamwic.

**Conclusion.** The assemblage from SOU 254 seemed to show that there was the usual solid, rather basic, provisioning found in the rest of Hamwic but that this area, next to the cemetery and at the edge of the settlement, did have subtle differences from the rest. Pig was more frequent, postcranial goat and young cattle and horse were present, and a possible temporal decline was implied by the later material. The present collection is comparatively small, a fifth of the size, and caution must, therefore be applied to the interpretation. There are some distinct similarities: pig, though not so frequent, is still comparatively high and may indicate the peripheral nature of the site; the ditch had again been used as a convenient dumping ground, presumably not in the immediate vicinity of habitation, but large bones had also been deposited in the other features and wild resources continue to be notable by their rarity.

Most of the differences in the assemblages relate to minor occurrences, the current assemblage had no evidence of lambs or foals, deer remains, nor some of the other minor taxa. It is likely that this largely results from the smaller size of the sample. On the other hand, dog remains were more evident and sheep remains included those of horned animals. The current collection thus helps to balance the bias found in the minor species and anatomical elements caused by small samples. It also supplements the few withers height estimates and other measurements from the previous Cook Street sites.

The differences from the main Hamwic settlement, though relatively small, indicate that excavations on the periphery, even small ones, will contribute to the body of data that is accumulating and aid interpretation of the animal economy and settlement usage overall.

*Other finds by A D Russel*

Worked bone. Needle (context 5788, item 28). A broken tip, 35 mm in length, from what was probably a needle, but could have been a pin, of animal bone. It is 4 mm wide at its widest part, and has a flattened oval cross section. Such needles have been found on many post-Roman sites. Their use has been assigned to dress fastenings, coarse textile production and net making (Keene 1990, 232–3; Riddler 1993, 114; Rogers 1993, 1368–9), however, there is too little of this example to assist in the debate.

Pin beater (context 5711, item 2). A double-ended pin beater, with one end lost on excavation, the other in antiquity. Made from a cattle metapodial (S Hamilton Dyer, *pers. comm.*), it bears many scratches along its length, and exhibits a high polish over most of the surface. The extant portion is 106 mm long, and it has a maximum width of 10 mm. It is generally circular in cross section, although the mid-shaft is slightly flattened and it bears a natural groove along the flattened portion. Knife facets are visible towards one end. Pin beaters were used when weaving on a vertical loom, and are common on Anglo-Saxon sites. The size of this example, although broken, places it in the larger of the two sizes of pin beater (> than 100 mm.) (Riddler 1993, 117–19).

Copper alloy. Strip (context 5445, item 1). A rectangular strip of copper alloy (item 1, Fig. 4) some 66 mm long by 11 mm wide by 0.75 mm thick. One side is smooth and undecorated, the other bears 11 parallel grooves along its length. The grooves vary in depth and width as if cut by dragging, or pushing, a tool by stages from one end to the other. Slight deviations in the lines show that each was cut individually. The strip may have been longer in antiquity, one end is square cut and patinated, but the other is thin, rounded and corroded. No parallels are known for this object from Middle Saxon sites (D Hinton *pers. comm.*).

Glass. Linen-smoother (context 5793, item 29). Two joining fragments of a bun-shaped, hollow-blown linen-smoother in light blue glass,

weighing 7g (Fig. 4, item 29). The outer surface is dull and worn with many fine scratches, and one flat facet at the edge of the break, probably indicating that this was the main rubbing surface. The inner surface is unworn and shiny. Such items are known from seventh-century contexts and remained in use until recent times. The bun shape occurs in late seventh-century examples, either as a solid lump of glass or a hollow flattened bubble as here (Macquet 1990). Both types are known from Birka (Arwidson 1984) and Dorestad (Isings 1980). Hollow examples from Middle Saxon sites in England include Brandon in Suffolk, Covent Garden in London, Barking Abbey in Essex (founded AD 675), and Bedfordbury (Evison 1991). The recent examination of over 1700 fragments of Middle Saxon glass from Hamwic (Hunter and Heyworth 1998) did not reveal any fragments of linen-smoother, so it is possible that this fragment is of a later period. However the good quality and colour of the glass body, being unweathered and light blue points to a Saxon date, as medieval 'forest glass' when found in Southampton is always dark green and heavily weathered.

Vessel fragment (context 6013, item 33). A small chip from a vessel, weighing less than 1g. Although small this appears to be a fragment of a trail of light blue bubbly glass that was badly marvered onto a vessel and has become detached. Light blue is the most commonly occurring colour of glass in Hamwic, mostly used for the common palm cup/funnel beaker series, and self-coloured trails are the most common decorative feature (Hunter and Heyworth 1998, 20).

*Medieval (1066 to 1550) – Phase 4*

A few medieval features were present across Trench 8. Most were small and of uncertain function. Feature 5638 was linear, while feature 5727 was a probable tree-root hole. Trenches 9 and 10 revealed two and three features, respectively. They were exposed only partly by the trenches and were damaged by later features, but are probably to be interpreted as pits and structural features. A post-hole was observed in Trench 11. Layers of dark soil were present in all trenches.

Finds recovered from medieval contexts included animal bones, mollusc shells, pottery, daub, roof slate and tile, floor tile, and dressed stone.

Following the Middle Saxon period the area shows signs of change of use with tree-root holes and the development of a soil horizon. The presence of medieval ditches and dark humic soil suggests that the area was turned over to agriculture, though between 1250 and 1350 the area ceased to be fields, and the presence of the pottery and building material point to a fairly substantial building, perhaps on the street frontage.

#### *Medieval pottery by Duncan H Brown*

Nearly all the features and layers in this phase contained high medieval pottery, while layers 5573 and 6005 and linear features 5655 and 6007 contained late medieval pottery.

Among the high medieval wares present, the most common is Southampton coarseware (Southampton fabric 1123), which takes the form mainly of jars or cooking pots with a distinctive folded rim. A wide range of glazed sandy wares includes Southampton sandy ware (fabric 1150), South Hampshire redware (fabric 1248), and local pink sandy ware (fabric 1087). Imported Continental wares are also present, in the form of one sherd each of Saintonge green-glazed white ware and a North French white ware. Most spectacular is the top half of a decorated South Hampshire redware jug with applied strip decoration.

From layers 5573 and 6005 and linear feature 6007 there are almost equal amounts, by weight and sherd count, of high and late medieval types. The late medieval types can be dated to the last half of the fifteenth century or the first quarter of the sixteenth. They include the usual range of local red sandy wares together with types of more distant origin such as Tudor Green ware, Low Countries redware, Raeren stoneware, and Seville coarseware. None of these are unusual finds in Southampton. Unstratified finds included sherds of a fine fifteenth-century Beauvais sgraffito dish.

This assemblage compares well with high and late medieval pottery that has been recovered from previous phases of excavation at this site. The group demonstrates the use of the St Mary's area from about 1250 onwards, but also perhaps

demonstrates a lack of occupation for the previous 400 years.

## DISCUSSION

The latest investigations at Cook Street have provided more important information about the use of the area. Evidence of prehistoric and Roman activity was present in the form of early features and layers, some with associated finds, and residual finds, which indicates low intensity use such as agriculture. No Early Saxon material was recovered.

In the Middle Saxon period the Cook Street area had three main (roughly N.-S.) zones. The western zone (including Trench 4 and the W. end of Trench 8) had no definite Middle Saxon features and was presumably outside the main settlement and cemetery. The central zone (including Trench 3 and most of Trench 8) was a cemetery bounded on the W. by a ditch. The eastern zone (including Trenches 5, 6, 7, 9, 10, and 11) comprised structures with yards and pits, possibly bounded on the E. by a street. This zone was the most damaged by later disturbance and little Middle Saxon evidence was identified in the SOU 823 trenches. The boundary between the central and eastern zones was not clear. After the main use of the cemetery, pits were dug on its periphery.

The absence of any definite Middle Saxon features to the W. of the ditch suggest that it was a boundary and an early feature in the area. Most of the evidence indicates that the cemetery and ditch date to the first half of the eighth century. Possibly the boundary ditch was the earliest Middle Saxon feature on the site, closely followed by the establishment of the cemetery. The burials in the ditch may have been roughly contemporary with those in the rest of the cemetery. It appears that the line of the ditch still formed an acknowledged boundary after its filling. It is still not known if the ditch was a boundary to the cemetery or to the settlement of Hamwic. The nearest candidates for parts of a Hamwic boundary ditch were at SOU 89 to the N. and SOU 184 to the SE.

The full extent of the cemetery is not certain.

Probably it was one of several small, early cemeteries which have been found across Hamwic. The Cook Street cemetery might have been one of the largest in area, but the burials were not densely arranged. Excluding Cook Street, about 150 burials have been excavated in Hamwic up to 1998; all were W.-E., supine, extended inhumations in graves, apart from two infant inhumations in rubbish pits. Only one of these graves was within a penannular ditch. The burials at Cook Street show several differences to the overall pattern, which could be chronological or social. It could not be determined whether the penannular ditches were quarries for earthworks such as banks or central mounds. There is also evidence indicative of grave markers such as in grave 2597 (Garner 1994, 86-7).

The density of occupation features at Cook Street is low compared with other sites such as those at Six Dials and nearer ones, such as Stoner Motors (SOU 99), 100 m to the N.. There were several features in Trench 8 that were not obviously related to the cemetery, but most were small and of uncertain function. The low density of occupation features at Cook Street may have been due to the site's location in the extreme SW. corner of Hamwic. The effect of the close proximity of the assumed Middle Saxon predecessor of St Mary's Church on the use of this part of Hamwic is not known, but it is clear that the Cook Street cemetery did not extend to the churchyard. Other early cemeteries in Hamwic were encroached upon by later Middle Saxon features (Morton 1992), but this occurred to a much lesser degree at Cook Street and this may have been due to long-term visibility of the funerary monuments.

Very little evidence of Late Saxon or Anglo-Norman activity has been found at Cook Street. From all of the trenches at SOU 823 only two Late Saxon and four Anglo-Norman pottery sherds were recovered. Despite the continued importance of St Mary's Church, the main area of Late Saxon occupation shifted some 1 km and was re-established alongside the River Test and extended from the Lower High Street area in the S. to Portland Terrace in the N.

By the high medieval period there was renewed occupation in the area. The finds include domestic waste and building material, while pits and structural features were close to St Mary Street and ditches were present in the W.. A thick soil layer above Middle Saxon deposits contained few finds, none definitely later than medieval, which was probably formed by ploughing in the medieval period, and possibly post-medieval period. More high medieval pottery has been recovered than late medieval; so perhaps the Black Death had an effect on the settlement. Finally, there were some post-medieval buildings and the area has been continuously occupied since at least the eighteenth century.

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