



Archaeological Field Unit

**A Late Roman Cemetery beside the A1 near *Durobrivae* (Water
Newton): Archaeological Recording**

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1999

Cambridgeshire County Council

Report No. 165

Commissioned by The Highways Agency

**A Late Roman Cemetery Beside the A1 near Durobrivae (Water Newton):
Archaeological Recording**

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November 1999

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SUMMARY

In June 1998, during maintenance works along the A1 trunk road near Water Newton, Cambridgeshire, human bones and two stone coffins were exposed in the sides of a road-side drainage ditch opposite the site of the Roman town of Durobrivae (known as "The Castles"). Between 4th and 20th June 1998, staff of the Archaeological Field Unit of Cambridgeshire County Council undertook archaeological recording work on a stretch of the drainage ditch, which lay in Chesterton Parish, Cambridgeshire, at TL 1221 9655, some 1500m to the south-south-east of the modern village of Water Newton. The burials appeared to represent a small portion of a late Romano-British cemetery which has long been known to exist outside the south-west gate of Durobrivae.

The disturbed deposits consisted of inhumations of at least 57 individuals of both sexes and all ages down to infancy. The bodies lay on a variety of alignments. Some had been placed in wooden containers (as suggested by the recovery of iron nails) and stone coffins, with possible instances of stone-packing. At least two cases of decapitation were recorded. Coins and fragments of animal bone were also found which may have represented items of furnishing and food offering respectively.

The burials were mostly unfurnished, with the exception of one which was accompanied by copper-alloy and ivory armlets and amber and glass beads from a necklace. A black glass bead in this assemblage, with a white zigzag trail on its surface, was of Frankish origin and probably did not arrive in Britain until the early years of the 5th century. A conservative date range of c AD 390-420 may therefore be offered for this inhumation.

Besides the burials, evidence also emerged for earlier Roman agricultural activity in the form of parallel ditches.

Finally, the presence of headlands (associated with original ridge and furrow) in the field to the west of the ditch suggests that the site reverted to agricultural use sometime in the course of the Medieval/Post-Medieval periods.

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**A LATE ROMAN CEMETERY BESIDE THE A1 NEAR *DUROBRIVAE*
(WATER NEWTON): ARCHAEOLOGICAL RECORDING
(TL 1221 9655)**

1. INTRODUCTION

In June 1998 a series of burials were uncovered in the course of maintenance work in the drainage ditch which runs along the western edge of the northbound carriageway of the A1, north-west of a lay-by directly opposite "The Castles" near Water Newton, Cambridgeshire.

During the replacement of a retaining wall at the north-west end of the ditch, a stone coffin came to light. A visit to the site by Dr Tim Reynolds on behalf of the Cambridgeshire County Archaeology Office Development Control resulted in a design brief being drawn up for archaeological recording of this coffin and other inhumations which were then apparent in the sides of the ditch. Subsequent recording work was carried out in accordance with this design brief.

2. SITE BACKGROUND

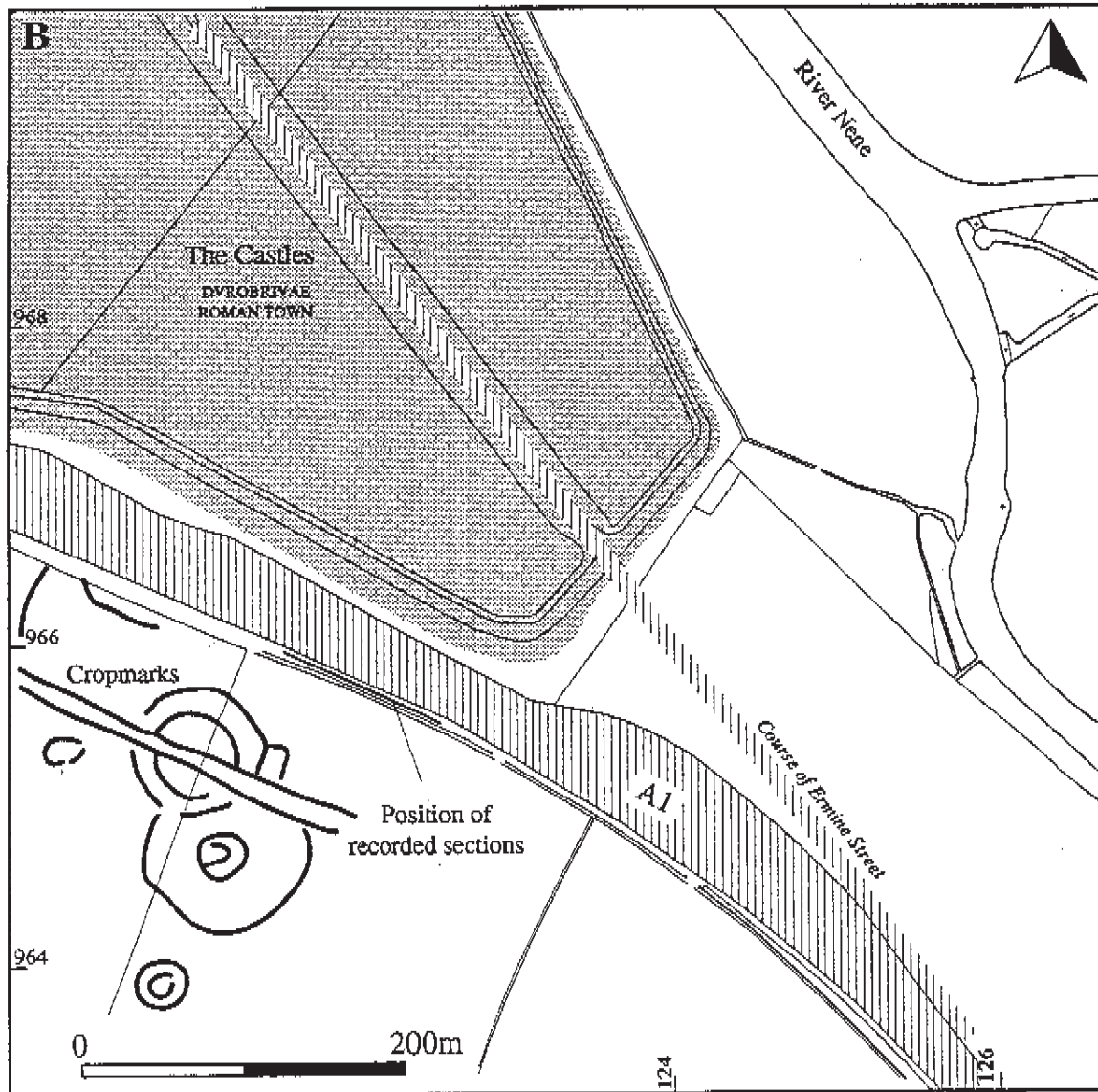
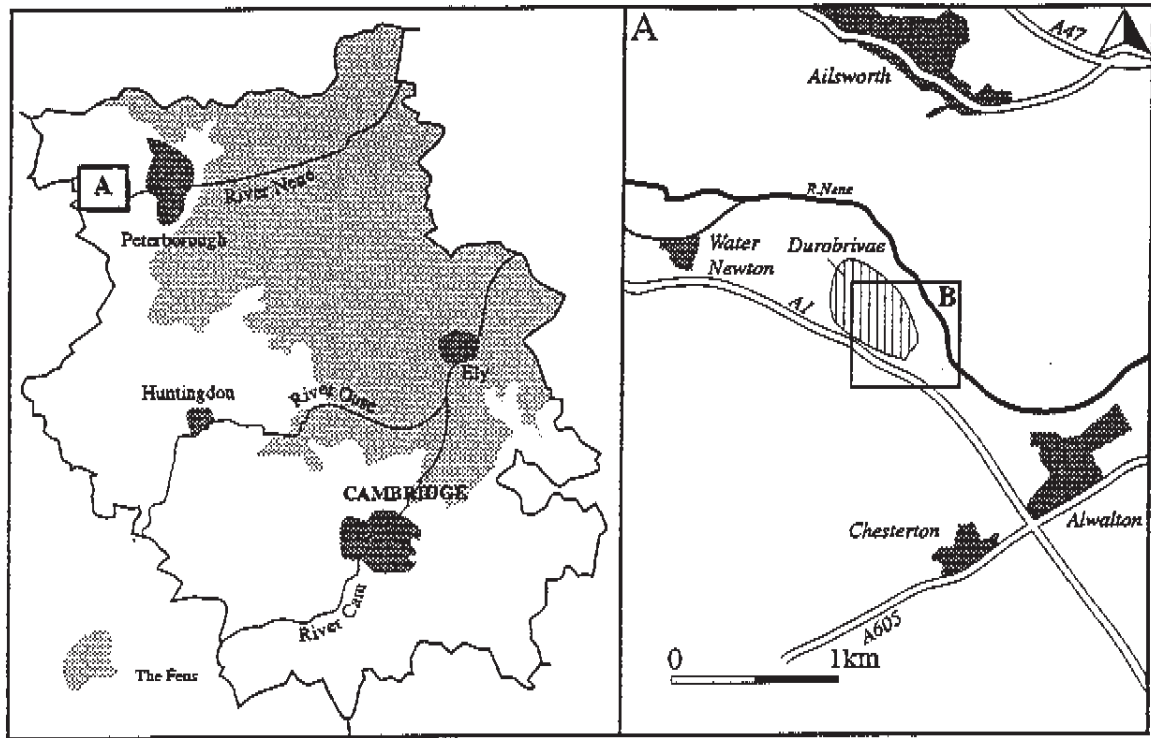
2.1 Site Location

The site is located in Chesterton Parish, Cambridgeshire, at TL 1221 9655, some 1.5km to the south-south-east of the modern village of Water Newton, and 1.2km to the north-west of Chesterton. Peterborough is the closest town, at a distance of c 7km (fig. 1).

2.2 Topography and Geology

At the time of the rescue intervention, maintenance work had commenced on the pre-existing drain along the A1 route with the removal of the accumulated silt from the base and sides of the ditch with a mechanical excavator. Burials were observed in both sides of the drain which was 2m wide and 1.5m deep. Most of the burials had already been damaged during construction and maintenance of the A1 trunk road (formerly known as the Great North Road). The land to the west and east of the drainage ditch does not appear to have been dramatically affected, having been under cultivation since the Medieval/Post-Medieval periods. Cropmarks visible in aerial photographs (Upex 1995) attest to the good degree of preservation of the area as a whole. This land is presently scheduled (below).

The site lies on the first terrace gravels overlying the Grantham Formation of the Inferior Oolite Group.



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Figure 1 Site Location Plan showing location of recorded sections.

2.3 Archaeological and Historical Background

The area of "The Castles" on the eastern side of the A1 is a Scheduled Ancient Monument (SAM 130). There is a further Scheduled Area on the western side of the trunk road, north-west of the Billing Brook. This begins about 500m north-west of the present site. However, the portion of the roadside where the ditch lies is not scheduled.

The area between Water Newton and Chesterton has long been known to be of archaeological significance (Artis 1828). Excavations conducted by the Ancient Monuments Inspectorate under the supervision of E Greenfield in 1956-58 in advance of the widening of the A1 trunk road revealed a portion of the town defences by the south-west gate (Site 1), evidence for suburban occupation to the west of the Billing Brook (Site 2), suburban occupation to the south of the Roman town (Sites 3-4) and a cemetery next to site 4 (Greenfield, unpublished; *Anon.* 1958; *Anon.* 1959) (fig. 2). In 1957 plans to divert the A1 to by-pass Water Newton culminated in further excavations carried out in 1958 by the Water Newton Excavation Committee (later to become Nene Valley Research Committee) under the direction of J P Gillam, G Webster and B R Hartley (Areas 1-2-3), with contributions from F Dakin and the Peterborough Museum Archaeological Field Section (Areas 4-5) (fig. 2). In particular, areas 1-5 to the east of Greenfield's Site 2 revealed the presence of a series of pottery kilns in use from the middle of the 1st century to the first half of the 4th century [Perrin (ed.) 1999, *passim*].

Many finds of Roman date are known from the area near the 1998 site. At least two Roman stone coffins are noted on the Cambridgeshire County Council Sites and Monuments Record. One (SMR 01607) was found "in a field to the West of the main Huntingdon to Stamford Road in 1920". The OS grid reference given for this is TL 122 965 and it may be the same find as the stone coffin found here in 1920 noted on the OS 6" map. A further Roman stone coffin was found in a field to the West of the A1 in 1983 and was excavated by members of the Nene Valley Research Committee. Records in Peterborough City Museum indicate that further stone coffins were found in 1958, during ditch digging operations associated with the widening of the A1. In an unpublished manuscript, Greenfield records a visit he made to a site at TL 121 966, where six stone coffins and several inhumation burials had been uncovered. Although there is some confusion over the exact identity and location of this site, Greenfield's location map shows a cemetery and a findspot for "coffins" in an area apparently very close to the present site (fig. 2). Greenfield records that several coffins had been discovered previously in this field, and that it was known locally as "the coffin field" (Greenfield unpublished).

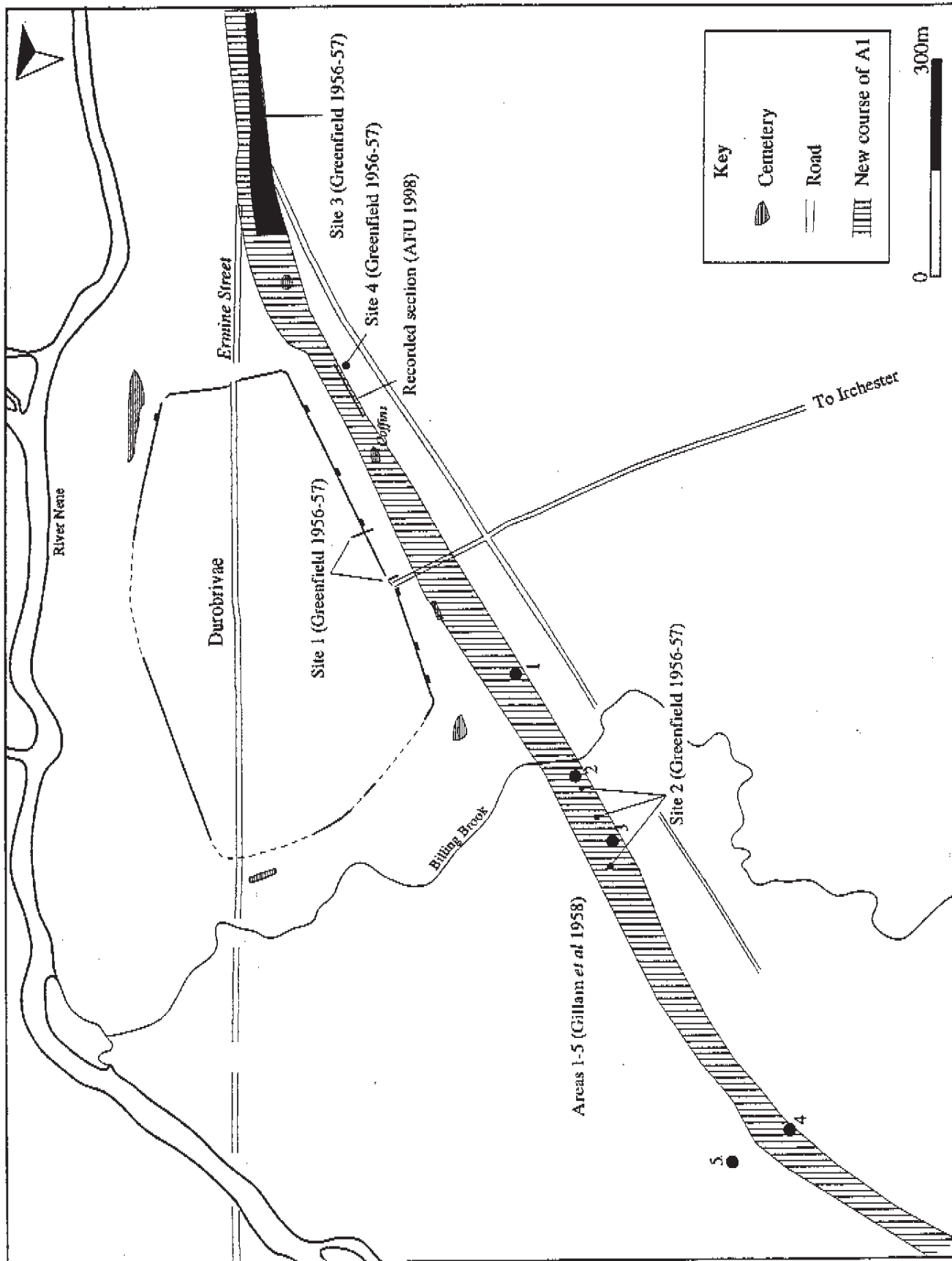


Figure 2 Roman Durobrivae - location of excavations.

3. METHODS AND AIMS

The initial concern of the design brief was for the recording and immediate reburial of the stone coffin uncovered during work on the retaining wall. This was rapidly accomplished and the location of the new retaining wall was moved several metres south-east beyond the site of the coffin, so that the ditch here could be backfilled and the coffin preserved *in situ*. Following this, archaeological work consisted of cleaning and recording the exposed sides of the ditch for a distance of approximately 140m south-east of the new retaining wall. Sections of the sides were drawn at 1:20 scale (figs. 3 and 4). A photographic record was also compiled which consisted of colour and monochrome prints and colour slides. Only those remains (in particular, human skulls) or artefacts that were already loose or would be disturbed during the normal operation of drain-clearance were removed. A scan with a metal-detector was undertaken along the ditch both before and after cleaning.

During archaeological cleaning, the corner of what was presumed to be a second stone coffin was observed in the eastern side of the ditch about 110m south-east of the first coffin. This was not uncovered, but was recorded, along with features showing to either side of it. Two new retaining walls about 5m apart were then constructed across the ditch to the north-west and south-east of the coffin. The ditch between these walls was piped and backfilled, preserving the coffin *in situ*.

4. RESULTS

A total of 160 features was recorded in the sides of the drainage-ditch. At least 57 human inhumations, two of which had been placed in stone coffins, were identified, together with disturbed grave-pits and earlier field-ditches. The field-ditches run perpendicular to the drain on a north-east to south-west alignment. The upper portion of some of their fills had been cut by later graves, suggesting that the ditches had already started to silt-up by the time burial activity took place. Sherds of 3rd-4th century pottery and fragments of animal bone were found scattered throughout the rescue site. It was not possible to establish whether they may have represented items of grave-furnishing or were residual finds associated with the phase of earlier agricultural activity.

Cuts on opposite sides of the ditch may have belonged to the same features, appearing in both the eastern and western slopes (figs. 3 and 4). In only one case, however, could a grave be traced with certainty from one side to the other. Most graves appeared to have been cut at approximately right-angles by the drainage ditch which ran north-west to south-east, suggesting that the majority of burials were aligned approximately north-east to south-west.

ESE

WNW



Figure 3 North-east facing section of drainage ditch

All the features had been cut through natural sand and gravel deposits (1002) and were sealed by a discontinuous and undulating layer of subsoil (1003), 0.60m to 1m thick, visible in the north-east facing section (fig. 3), i.e. along the edge of the field to the west of the drain ditch. The deposit was interpreted as representing the remains of two possible headlands (2.8m and 2m wide respectively) which run perpendicular to the present A1 route. The headlands were generically assigned to the medieval/post-medieval periods. At the top of the sequence was a layer of topsoil (1000) some 0.50 to 1.10m thick.

During final removal of the skull of inhumation 114, a group of copper-alloy and ivory armlets, together with amber and decorated black glass beads was uncovered and lifted (figs. 5, 6 and 7). The bracelets were clearly not in place as worn on the arm, but were stacked together, with the beads placed inside the group of bracelets. This suggests they may have been buried inside a box or bag, since decayed. Inhumation 114 parallels a similar burial in a stone-lined cist at Wittering, Cambridgeshire, excavated in 1993. At Wittering, a single decapitated female inhumation was discovered in a field some 500m west of the A1. The burial was accompanied by a group of three bone and five copper-alloy bracelets, beads and other items, the bracelets showing a marked similarity with those from inhumation 114. The Wittering burial was dated on the basis of the artefacts to the 3rd or 4th centuries AD (Meadows unpublished).

No other grave goods were found, apart from six unstratified coins located by the metal detector. These were clustered mainly at the north-western end of the ditch, and several were in very good condition, suggesting they may have come directly from burials rather than from the ploughsoil. The metal detector also revealed the presence of numerous iron coffin nails, most of which were left *in situ*.

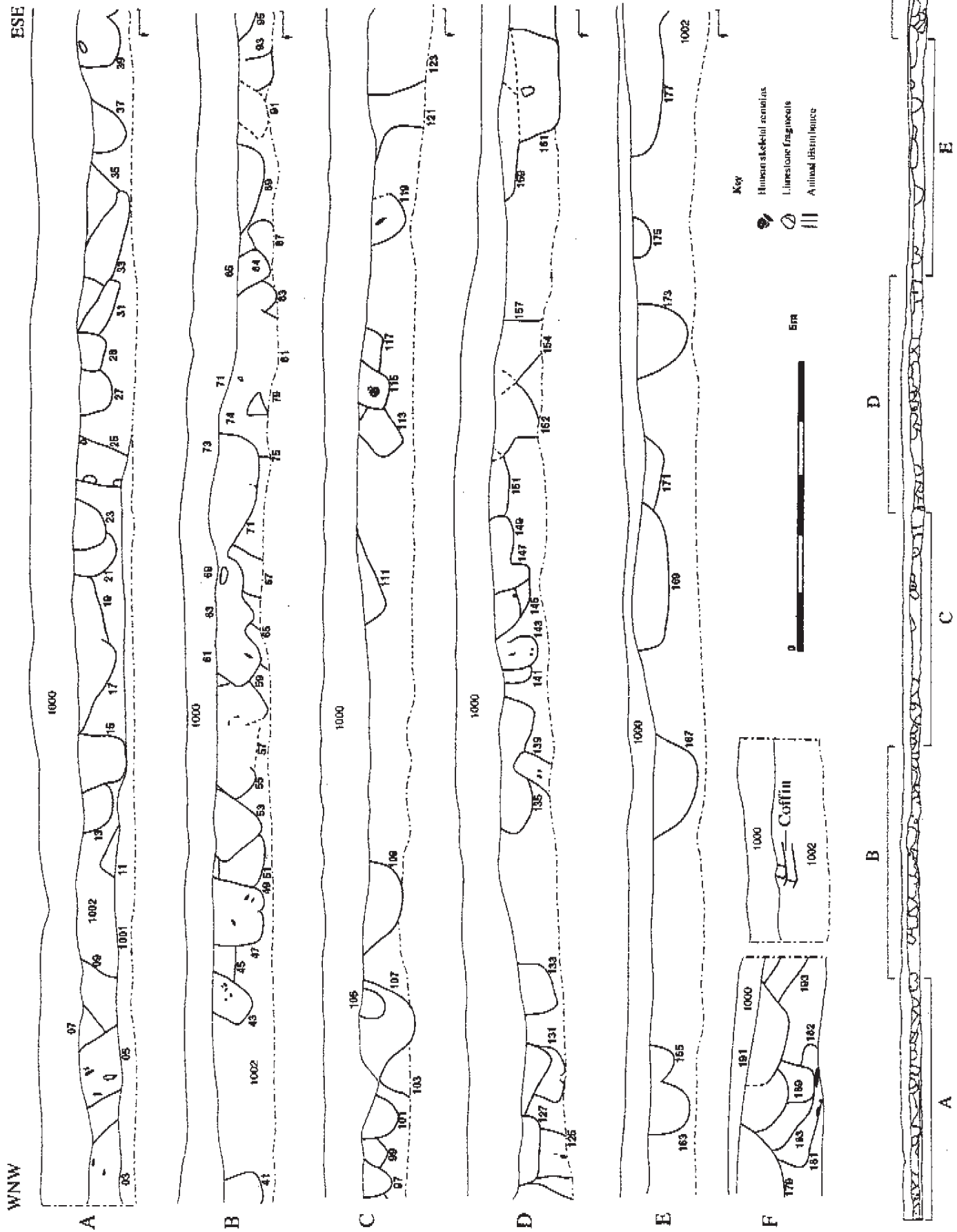
5. DISCUSSION

5.1 The Cemetery Site

Introduction

The analysis of the burial site rescued in 1998 is fraught with difficulty. By the time of the recording, not only had the former road drain-ditch already obliterated many burials; it had also severely disturbed and damaged those still visible in section. Furthermore, given the nature of the archaeological intervention, recording was confined to the drainage ditch itself.

In spite of limitations, interpretations have been attempted here, bearing in mind that the evidence from the rescue intervention may not be representative of the immediately surrounding burial ground, let alone of the whole cemetery area to which the graves in the drainage ditch appear to have belonged (below).



Chronology

Due to the absence of both conclusive stratigraphic evidence and finds in context, it was not possible to establish firm chronological parameters for the burials.

Dating was tentatively achieved by recourse to one possible stratigraphic relation between a former boundary ditch associated with an early field system and a later grave-pit [529] which had been cut through the upper portion of the ditch-fill (530) (fig. 4). The pottery rescued from the base of the ditch did not appear to have been disturbed, representing thus a reliable *terminus post quem* around the late 3rd century for the inhumation.

Other finds from the site which could provide means of dating included unstratified pottery (*Appendix III*) and coins (*Appendix IV*). Given the high degree of disturbance, it was not possible to assign any of these finds to specific burial contexts, nor to establish whether some of them may have been originally deposited in the graves as part of the furnishings, or were residual.

With reference to the pottery, the latter hypothesis seems more probable for several reasons. There was no evidence for complete (or intentionally broken) pots nor for vessels in general which may have been intentionally deposited as items of furnishing. Furthermore, most sherds were abraded, suggesting that they may have been dumped on the site. There was evidence that, prior to the creation of the cemetery, rural activities (surviving in the form of boundary-ditches) had been carried out (above). The dating of most of the pottery is consistent with that for the sherds from the ditch-fill (530), and would point to a date range between the middle and the late 3rd century for the agricultural activities predating the cemetery. There were rare instances of 2nd century pottery.

With regards to the numismatic evidence, with the exception of one Barbarous Radiate (dating to the 270's), most issues belonged to the House of Constantine and rivals (4th century). The latest issue from the site was represented by a coin of the House of Valens (Valens 364-378 AD or Gratian 367-383 AD).

The results from the finds seem to be consistent with what is known of late Romano-British grave furnishing. Whereas coins were still deposited in 4th century graves, pots and vessels in general as grave-goods had gone out of fashion (Philpott 1991, *passim*). Based on these observations, it is unlikely that burial on site started earlier than the late 3rd century.

The dating evidence would suggest that burial commenced in the later 3rd century and continued throughout the 4th century. It is, however, difficult to establish whether it continued into the 5th century. Some evidence may be provided by the only grave-goods in context (*Appendix I*). These consisted of a series of bronze and ivory bracelets, and glass and amber beads from a necklace (figs. 5, 6 and 7), in the grave-fill (114) of an unsexed child burial assigned to the early years of the 5th century. Whether this burial may have represented an

exceptionally late occurrence in the cemetery area, or whether there were more graves dating to the early 5th century, is uncertain. The fact that the administrative and economic functions of *Durobrivae* may have not survived long after AD 410 need not reflect on the fate of the cemetery as a whole. However, it is unlikely that in the 5th century *Durobrivae* sustained the same population size as in the 4th century.

Internal Organisation

Given the poor state of preservation of the burial features, together with the limited extent of the investigated area, aspects of the cemetery's organisation have been discussed in the form of brief remarks. In the absence of complete data, no attempts have been made to conduct spatial analyses which would only result in fruitless exercises.

The Grave-Cuts

The grave-pits had been cut through the natural sandy gravel deposits which were visible along the sides and at the base of the drain-ditch. The depth to the top of the grave-pits varied considerably and ranged between 0.30 m and 1.30 m from the modern ground surface, the average depth being some 0.70 m. Although the limited nature of the recording work made an assessment of the grave morphology difficult, the grave-cuts generally appeared fairly regular, rectangular in shape and with round corners.

Orientation

The orientation of the burials had to be inferred from the grave-cuts since the available skeletal evidence did not allow the establishment of the precise alignment of the interred bodies.

Although the burials appeared to be on a variety of alignments, two major features seem to have guided their orientation: the bank of the urban defences, and the road which skirts outside the west corner of the defence line to join both Ermine Street to the south and the Irchester road to the west. In relation to these two land-marks, the graves were cut at approximately right angles, being on the same alignment as the pre-existing field-ditches/enclosures. Most burials were therefore north-east to south-west and east-north-east to west-south-west aligned, with some instances of north to south and north-north-west to south-south-east oriented graves, and rarer cases of west-east alignments (figs. 3 and 4).

Given the high degree of disturbance, together with the absence of clear stratigraphic relationships, it was not possible to establish patterns of orientation in relation to chronological changes. However, it appeared that the north to south and the north-north-west to south-south-east oriented burials were among the earliest features, being cut by north-east to south-west aligned interments. In turn, these seemed to be truncated by later east-north-east to west-south west graves. Whether this evidence may indicate a progressive change in orientation

towards a west to east alignment is uncertain. There were only a handful of west to east oriented burials, many of which occurred in isolation.

As most skeletons had been truncated during the original digging of the road drainage ditch, there was insufficient evidence to allow the analysis of body-postures. In the case of the least disturbed burials [e.g. (001) and (649)], it appeared that the bodies had been laid out supine and extended with some degree of care.

Burial Density and 'empty' Zones

The high density of burials together with variations in the alignments must have been responsible for the frequent intercutting of graves. Disturbance of earlier interments by later ones would also suggest that the position of the graves was not marked on the surface. As a consequence, many earlier interments had probably become obliterated by the time of the later burials.

Burial density could indicate use of the same area for burial over a relatively long period of time. Despite the fact that the cemetery was overcrowded, there was evidence for lower density of burial towards the eastern end of the site. Empty zones, i.e. areas devoid of burials, also occurred, some of which appeared to be located in the proximity of the earlier field-ditches (figs. 3 and 4).

The evidence may suggest that the former ditches only partially silted-up, and were therefore still visible by the time burial started. They may have guided the orientation of some of the graves acting, at the same time, as internal or external boundaries of the cemetery. A few graves had been cut through the ditch-fills, suggesting that the boundaries did not remain static and that, as time went by, the cemetery expanded. Alternatively, the ditches may have acted as internal boundaries for the definition of sectors, i.e. burial plots, possibly relating to land-ownership. This latter explanation is more plausible. Aspects of orderly cemetery growth would be reflected in progressive changes in the patterns of orientation, resulting in a coherent distribution of burials on the same alignments. However, there was no evidence for preferential orientation, and all kinds of alignments were present in each 'sector'. The absence of specific patterns of orientation may indicate that the same plots were used over a relatively long period of time, possibly by members of the same family or families (below). The presence of burial plots for one or more family nuclei could have been associated with ownership of parcels of land as defined by the former field-boundaries, or might have been related to deeds of rent and sale of space within the cemetery. In the absence of dating material, it is difficult to establish whether some of the ditches (e.g. [674] and [676] to [680]) may have been redefined while the cemetery was in use, or whether their maintenance was associated with the earlier phase of agricultural activity. There is evidence for continuation of established plots in Romano-British cemeteries. For instance, at Butt Road, Colchester, during Phase 2 (Period I) (3rd century-300 AD), the site appears to have been organised into loosely defined ditched parcels for agricultural-horticultural purposes. At a later stage, cremation and inhumation burials were placed near or within the boundary ditches. In the course of Phase 3 (Period I) (300-320/40

AD) most of the site was set aside for a more formally established inhumation cemetery where some of the earlier plots continued for burial use (Crummy *et al.* 1993, *passim*).

Finally, it cannot be discounted that natural or artificial constrains (such as trees, topographic features, earlier graves, *etc.*) which may have originally existed on the site disappeared without leaving any tangible traces, and caused the appearance of 'empty zones'.

Grave Groups

Groups of graves on the same alignment were found clustered together throughout the site. In some instances they were truncated by clusters of later burials which displayed a different orientation. As suggested above, changes in orientation within individual burial plots may have been progressive in chronological terms. However, it cannot be discounted that in some instances ritual preference or the will expressed by some individuals to be buried next to others may have played a major role in dictating the modality of burial, including orientation.

In addition, there were possible cases of multiple (or stacked?) burials [e.g. 4a and 4b; 70a and 70b; 76a and 76b; 665a and 665b; 180; 663a and 663b (figs. 3 and 4)]. In the first four cases, adults were associated with infants, children and juveniles. In the fifth instance, an adult male had been buried with an adult female. The last association consisted of the burial of two unsexed adults (*Appendix II*).

Without conclusive evidence for genetic traits in the osteological remains, it was not possible to establish whether the multiple graves belonged to genetically related individuals, and whether they may have represented the burials of members of the same family groups. Family groups are often identified in the context of the late inhumation cemeteries where the evidence for familial correlation becomes more visible in terms of genetic and/or ritual affinities. For instance, there is evidence for families being buried together at Butt Road (Colchester) (Crummy *et al.* 1993), Poundbury (Dorchester) (Farwell & Molleson 1993) and Lankhills (Winchester) (Clarke 1979).

Burial Rites and Grave Treatment

The burials from the rescue site consisted exclusively of inhumations some of which produced evidence for wooden coffins in the form of iron nails.

More substantial body containers were represented by two un-lined limestone coffins provided with a lid. The presence of iron nails in the coffin of burial 001 suggests that the latter may have originally included a wooden container. Both stone coffins were on a west-east alignment. In the specific case of burial 001 it was possible to establish that the head lay to the west.

There was also evidence for one possible stone-lined grave [025] (fig. 4). Although the burial had been disturbed, it was clear that stones had been placed along the edges of the grave-cut. Partial covering of bodies with stones (or tiles) has been related to the use of unnailed wooden coffins. The practice is frequently found at cemetery sites both in urban and rural contexts along the Jurassic Ridge (Philpott 1991, 63). For instance, partial linings were noted at Ashton (Northants.) where both the position and quantity of stones varied considerably (Philpott, 1991). There are also examples from Lankhills (Winchester) which would indicate that the practice became common after *circa* 370 (Clarke 1979), Butt Road (Colchester) (Crummy *et al.* 1993) and Poundbury Site C (Dorchester) (Farwell & Molleson 1993). Availability of limestone *in loco* may provide a partial explanation to the distribution pattern of the rite at sites along the Jurassic Ridge.

Brick, tile and limestone-slab fragments were found in the fills of numerous graves. In those instances, however, it was not possible to establish whether they may have originally represented deliberate stone- and tile-packing. The same materials were also found in the fills of some of the ditches. It is possible that they may have originated from the demolition of buildings located in the proximity of the site.

Finally, two possible cases of decapitation were recorded, (649) and (536) (fig. 3). Both burials belonged to adult females the bodies of whom had been laid out supine on a north-east to south-west alignment. The significance of the practice is uncertain. The care displayed towards the two interments would stand against the interpretation of the burials as belonging to executed criminals, and could have a ritual meaning (Macdonald 1979).

With reference to (649), the head had been severed but left in the correct anatomical position. This type of decapitation is only rarely found in Roman Britain and is commonly associated with special treatments of the bodies. Examples come from Helmingham (Suffolk) (Harman *et al.* 1981, 185) and Guilden Morden (Cambs). At the latter site the rite was associated with the prone burial of an adult male with hands bound behind the back (Lethbridge 1934, 117). Further instances of the practice were recorded at Bath Gate (Cirencester) where there was evidence for multiple burials of decapitated adult males (Mc Whirt *et al.* 1982, 109).

Decapitation with the displacement of the head from the original anatomical position is more frequent. The common occurrence is for heads to be placed between or by the legs or the feet. In the specific case of the second decapitated burial from *Durobrivae* the head had been removed and placed on the pelvis. There is only a handful of available comparative cases, as at Sea Mills (Bristol, Avon.) (Bennett 1985, 18-20), and Hooper Street, London (Barber *et al.* 1990, 10), which suggest that the severed heads were rarely placed on the pelvis.

Although the two cases from *Durobrivae* do not represent the most common modalities of decapitation, the practice itself is chronologically consistent with the date proposed for the cemetery site (above). As a 'rite', decapitation may

have originated in Central-Southern Britain (Harman *et al.* 1981, 163), appearing at rural sites in the late 3rd century and then spreading from the rural to the urban cemeteries where it remained a minority practice throughout the 4th-early 5th century (Clarke 1979, 374).

Animal Bone

In addition to the human remains, 18 contexts displayed evidence for disarticulated animal bone. Animal remains were also found in the 'grave-fill' of 14 burials. The quantity of retrieved bone was not sufficient to allow meaningful interpretation of the assemblage(s). Furthermore, due to the high degree of disturbance of the site, it was not possible to assign the finds to any specific contexts nor to establish whether they may have represented ritual deposits and food offerings.

The Cemetery Population

A minimum of 57 and a maximum of 59 individuals were recorded from the inhumation burials. The limited nature of the recording work meant that in no case was it possible to recover a complete inhumation; under these circumstances, the actual number of individuals represented remains in doubt (see appendix II). The skeletal remains recovered represented individuals of both sexes and all ages (including infants). From the osteological analysis, with the exception of a few instances of dietary deficiency and physiological stress, the pathology was dominated by the occurrence of changes 'commonly associated with ancient populations' (*Appendix II*).

Status

The analysis of status and wealth in burial is fraught with difficulty, since absence of status/wealth indicators does not necessarily translate into evidence for absence of status and/or wealth among the buried population. On the other hand, the presence of substantial markers and body containers, as well as quality and quantity of grave-goods and special treatments of the bodies may indicate some degree of wealth. Whether in the presence or absence of apparent means of denoting the importance of the deceased, it has to be born in mind that fashion, religious beliefs and personal choice are likely to have played a major role by dictating the modality of burial and aspects of conformity in relation to the funerary standards.

For instance, the burials from *Durobrivae* do not appear to display any marked traits associated with wealth nor to show evidence for the presence of treatments reserved for the poorest section of the community, the dominant pattern consisting of unfurnished burials. However, an exception is represented by the presence of two inhumations in stone coffins. Stone coffins are commonly found in urban cemeteries [e.g. Cirencester (Bath Gate) (McWhirr *et al.* 1981)), Dorchester (Poundbury Main Cemetery) (Farwell & Molleson 1993), York (Castle Yard) (Jones 1984), Ilchester (Northover Cemetery) (Leach 1994)),

etc.] and, occasionally, in rural locations in the context of villa-holdings or 'imperial estates' [e.g. Park Street (Herts) (Saunders 1961, 117), Combe Down (Avon) (Price and Watts 1980, 15-17)]. The association of stone coffins with major walled towns and 'high-ranking' rural settlements would indicate a correlation between status and substantial body containers, although availability of raw material (e.g. wood, stone, brick clay, etc.) *in loco* may have also affected the choice of the body containers.

Besides aspects of grave treatment and furnishing, data from the skeletal analysis could also provide evidence for living conditions, and contribute towards the reconstruction of a general picture of the buried population as representative of a proportion of the living community.

At *Durobrivae* the burials as a whole did not reveal atypical changes. However, there were rare instances of physiological stress and dietary deficiency caused by poor hygienic conditions and malnutrition.

The combination of the evidence from both the skeletal analysis and the study of burial treatments would indicate the presence of a relatively healthy population.

An 'intrusive' Grave?

Grave (114) (fig. 4) was the only furnished burial uncovered during the rescue intervention. The grave-goods consisted of ivory and bronze armlets of standard late Roman form and style together with amber and black glass beads from Southern Bavaria which are generally found in Anglo-Saxon contexts (*Appendix I*) (figs. 5, 6, 7 and 8). Even allowing for some degree of disturbance by later activities, the presence of one furnished grave out of 58 unfurnished burials, together with the typology of the grave-goods, makes inhumation 114 uncommon and raises the question as to whether it may have been foreign.

According to the literary sources, Sarmatians and Burgundians are vaguely attested in Britain under, respectively, Marcus Aurelius and Probus (Salway 1985, 549, ff.). Malcolm Todd (forthcoming) has conducted an archaeological survey, mainly in funerary contexts, from which it would appear that the earliest phase of Germanic settlement, though on a small scale, dates from the early 5th century, before the waves of invasion mentioned in documentary sources. The new data might throw light on the problem of 'foreign graves' in the context of the late Romano-British cemeteries. For instance, at Lankhills (Winchester) Clarke (1977) has defined the presence of two groups of 'intrusive graves' on the basis of classes, typologies and positioning of objects in the graves with respect to the body. The first group has been related to people who arrived around the middle of the 4th century from the Danube area (Bavaria and Hungary) and were recruited into the Roman army. The adult males were characterised by the presence of crossbow brooches and belt metal fittings as part of military uniforms, and knives; the grave goods associated with the female burials consisted of distinctive dress fasteners and other items of adornment. The identification of the second group of in-comers with later elements with Saxon affinities is less convincing, due to the absence of Anglo-Saxon artefacts.

Clarke's interpretation of the 'intrusive graves' at Lankhills is currently accepted, though his methods, and sometimes conclusions, have been criticised. Baldwin (1985) observes that the presence of 'intrusive' elements was not so consistent as Clarke suggested and that at Lankhills variation in the graves occurred as general phenomenon. Furthermore, very few of the deposited artefacts had a Continental origin. Millett (1990, 216) has drawn attention to the problem attendant upon the identification of German elements, especially soldiers, who cannot be archaeologically distinguished from regular troops. At present, it is difficult to find conclusive evidence for Germanic settlers in Britain, especially in the context of the reorganisation of the Late Roman army, and assess the impact foreign elements may have produced on both culture and administration. The matter is further complicated by the 'absence' of conclusive historical and archaeological evidence for continuity between the alleged early settlers and the later Germanic invaders (Arnold 1984).

Another burial site of significance for the identification of potential foreign graves is at Dyke Hills, outside the defences of Dorchester on Thames. There a male burial was accompanied by the fittings for the official-issue belt-suite. Nearby was the grave of an adult female with an early-Germanic brooch. The two burials were treated in association and interpreted as representing Germanic *foederati* (Cook & Rowley 1985, 30-31).

With reference to *Durobrivae*, there is inconclusive evidence to support the hypothesis of burial (114) as being foreign. The presence of common late-Roman artefacts in the same grave could simply indicate that the Bavarian items reached Roman Britain as the result of increased trades contacts with the Rhine frontier. Furthermore, the absence of male burials accompanied by official-issue uniform metal-work would stand against the presence of recruits (whether local or foreign) in the cemetery.

Religion

The burials from the rescue site did not display any explicit evidence for religious beliefs. In other words, there were no symbols or artefacts from the graves which could be associated with pagan or other cults, the rites from the cemetery at *Durobrivae* conforming to the mainstream of burial fashion in the 4th century. Inhumation represented the exclusive rite. The bodies had been placed in wood and stone containers, with possible instances of stone/tile packing. With the exception of burial (114) (above), the graves were unfurnished but for possible instances of coins and food offerings. There were cases of (ritual?) decapitation and multiple/stacked burials in cemetery plots. Although variations in the pattern of orientation together with prolonged use of the cemetery had caused frequent intercutting of the graves, the evidence would indicate that the bodies had been treated with care and respect at the time of their interment.

As for many cemeteries, the absence of religious indicators from the graves at the rescue site raises the wider question as to whether burial practices in Late Roman Britain may indicate specific creeds within the community or whether

they resulted from the adoption of fashionable trends together with the persistence of established traditions. For instance, disturbance of earlier interments by later ones, the presence of food offerings and the practice of decapitation are unlikely to be Christian features. However, the apparent progression of the graves towards west-east alignments and, more convincingly, the presence of infants being buried with adults in a formal cemetery (Watts 1990, 38-51) may indicate the presence of Christian burials. Christian burials from the cemetery would conform to the finds from the town itself, with particular reference to what is known as the Water Newton Treasure or Silver Plate (Painter 1977; Thomas 1981, 113-121). The Treasure consisted of votive leaves and items of a Eucharist set with dedicatory inscriptions and *chi-rho* symbols. It may have belonged to a house-church or purpose-built structure for the congregation of a wealthy Christian community at *Durobrivae* in the 4th century. The syncretistic nature of the Treasure in the form of Christian symbolism on votive leaves from the pagan tradition of *ex-voto* in temples would be consistent with the persistence of non-Christian rituals in the cemetery, as in the deposition of coins and personal ornaments. Similarly, practices such as west-east orientation of the graves, care for the body and absence of furnishing, generally accepted as potential indicators of Christianity, might have been adopted by Christians and pagans alike as constituted practices which were found to be consistent with their respective religious beliefs (Rahtz 1977, 54; Thomas 1981, *passim*).

5.2 The Cemetery Site in its Suburban Context

Introduction

The inhumation burials from the rescue site appear to belong to a major cemetery located outside the south-west gate of the defences of *Durobrivae*, the existence of which has long been known. During construction of the Great North Road (presently the A1 trunk road) in the middle of the 18th century, urns and vessels, together with stone and lead coffins for inhumation burials, were found to the South and South-West of the Roman town. Excavations conducted in 1956-1957 outside the south-west gate confirmed the earlier antiquarian observations, uncovering evidence for inhumation burials together with suburban ribbon-development along the road which branches from Ermine Street to join the Irchester road to the west (Sites 2,3 and 4) (Greenfield undated; Anon 1958) (fig. 2).

Suburban occupation emerged in the form of strip-buildings, walled enclosures, a barn, ditches, pits, ovens and hearth which entail industrial, commercial and agricultural activities. It appears to have started sometime during the 2nd century with timber-buildings (one of which contained ovens and hearths) and associated pebble-spreads. In the early 3rd century most buildings were replaced by more substantial stone structures which were in use throughout the 4th century. However, by the middle of the same century many buildings had already fallen into disrepair and were robbed. By then the main use of the adjacent area was for burial.

Six stone coffins and several unfurnished adult inhumations were uncovered near Site 4 which was located in a field locally known as 'the coffin field' as several coffins had been discovered during agricultural activities. The coffins were rescued in 1958 [(two of them are presently located in Peterborough Museum and two at St Ives Museum (Greenfield, undated)].

Infant and adult burials were also located on the extreme west limit of Site 3 (former Kate's Cabin) (fig. 2). One included a female accompanied by a complete necklace of jet beads and a bronze bangle (Greenfield undated). Further burials from Site 3 consisted of 6 infants dating from the 2nd century. These were found alongside the south-east fringe of the interior of the timber barn (Hadrianic-Antonine period) later replaced by a wider stone building (Building 2). Finally, evidence emerged for infants in pits beneath the debris of the 'bases room' of building 5 which was built in the middle of the 3rd century and destroyed by fire in the late 4th century. In addition to the infant remains, the pits also contained animal bone.

Further information on some of the coffins from 'coffin field' is provided by Cambridgeshire Sites and Monuments Record (SMR). A limestone coffin (SMR 3281, TL 12459643) disturbed during sub-soiling operations was found at a depth of some 0.37m. It was south-west-north-east oriented and contained an unfurnished adult male. Another find was located in the proximity of the present road drain-ditch (SMR 0902, TL121966). It consisted of a limestone coffin (provided with a lid) which is presently preserved on Helpston Green. The skeletal remains had been disturbed.

The South-west cemetery in relation to suburban activity.

The south-west gate cemetery seems to have been sited within a road triangle resulting from the junction of Ermine Street, Irchester Road and the road which branches off Ermine Street and joins Irchester Road to the west of *Durobrivae* (fig. 2).

Based on the evidence from past excavations together with the result from the recent rescue intervention, it is possible to reconstruct phases of activities and occupation outside the southwest gate, and locate the late inhumation burial ground in its extra-mural context.

The cemetery was established in an area formerly used for agricultural activities (mid-late 3rd century). The latter emerged in the form of field-ditches which were recorded during the recent archaeological works. By the time of the rural activities, suburban occupation along the branch off Ermine Street had already begun (Hadrianic period) at some distance from the town perimeter, beyond the field-ditches. The presence of an empty zone for agricultural activities between the town defences (constructed in or after the 2nd century) and the suburban built-up area may reflect on ownership of land on the fringes of the Roman town. At some stage, the main use of the former rural 'empty zone' was for formal burial which seems to have started in the later 3rd century. The cemetery

was in use throughout the 4th well into early 5th century, with the earliest burials (later 3rd century) appearing towards the later phase of suburban occupation (3rd-mid 4th century). In the second half of the 4th century the latter became sporadic whereas burial activity continued. The fact that the cemetery did not encroach upon the nearby buildings may indicate that the suburb was not entirely derelict, the evidence being supported by the recovery of late Roman pottery and coins (Perrin 1999, 74-77).

In comparison with the situation for the burial grounds associated with the 'major' Roman-British towns, the location of the south-west cemetery between the town circuit and the suburban built-up area is unusual. Informal burial often occurred in the context of the 'minor' urban settlements, as at Ilchester (Leach 1982, 82-88) and Ashton (Hadman & Upex 1975; *Id.* 1977; *Id.* 1979; Hadman 1984), for instance, where inhumations had been laid out in plots at the rear of street-frontage buildings. The evidence from *Durobrivae* would be consistent with what is known of many 'minor' towns where urban planning is likely to have been more flexible (Finch Smith 1987, *passim*; Burnham & Wachter 1990, 31, 316). Planning had to take into account the fact that 'unofficial' centres developed almost spontaneously due to changed economic and political circumstances which often prompted the promotion of many of these 'minor' towns to a higher status.

As seen in the course of the discussion (above), the location of the south-west cemetery may reflect on ownership of land. It was suggested that some of the earlier field-ditches may have continued to define plots for the burial of a few family nuclei, pointing, at the same time, to continuity of land-ownership. Given the evidence for agricultural activity (together with industrial production and, possibly, trade) from the suburban area, it is tempting to associate some of the burials in the cemetery with the population who resided in the extra-mural area nearby. The cemetery may have been used by both town people and suburbs residents, accounting for continuity of burial during the 4th century, at a time when the suburban zone had started to contract, but there was still a considerable population residing in town.

From a different perspective, the location of the cemetery outside the defence, may relate to some form of planning of the suburban area. Accordingly, it is possible that ribbon development was expected to occur towards the town, explaining the presence of an empty zone between the urban fringe and the extra-mural built-up area. As expansion did not occur, the cemetery came to occupy the empty zone.

Finally, the location of the south-west cemetery could be explained in terms of continuity of the earlier pattern of cemetery distribution which seems to have been guided by the outline of the defence-bank (below).

Infant Burials

The presence of infant burials on Site 3 (above) is worth noting. Infants were found buried in pits and in clusters. Discrete infant cemeteries, generally

associated with buildings, and disposal of infants in pits or ditches are commonly found on rural sites. Generally taken to indicate that infants were not kept in the same regard as adults (Philpott 1991, 98), the disposal and segregation of infant burials may have had ritual connotations (Scott 1991). With particular reference to the infants in the underground 'bases' room of building 5, the quantity of coins together with the burial of joints of animal meat and the fragments of a possible altar may indicate religious use of the building (Perrin 1999, 64).

With reference to *Durobrivae*, two interesting points emerge. Namely, the presence of infant burials would be consistent with the rural character of the suburban area. It was suggested that industrial and agricultural activities were conducted *in tandem* (above). On the basis of the available chronological evidence, the infant burials on Site 3 would appear to be earlier than the infants in the south-west cemetery, indicating changes in the attitude towards infants during the 4th century, possibly under the influence of Christianity (above).

5.3 Cemeteries around *Durobrivae*

The knowledge of the cemeteries around *Durobrivae* rests almost exclusively on antiquarian observations and recording (summarised in Haverfield 1902, 170; RCHM 1926, 52; Taylor 1926, 233-234) (fig. 2).

- North-west Gate, south of Ermine Street: stone coffins for inhumations and urned cremations were recorded during the 18th century by Artis (1828) and Stukeley respectively.
- South-east corner of the town defences, south of the river Nene: inhumations were excavated by Artis (1828).
- West corner of the defences: urned cremations and stone and lead coffins were exposed during the construction of the Great North Road in 1739.
- Irchester Road: crop-marks visible in aerial photographs suggested the presence of a system of large enclosures flanking the road. One of the enclosures near the junction with the road branching off Ermine Street contained grave-pits for inhumations. Possible square and circular mausolea were also observed. One circular mausoleum may have been contained within one of the enclosures (Wilson 1975, 10).
- Normangate Field: a stone mausoleum was uncovered. It contained four burials one of which was accompanied by a gold ring, a silver brooch and bronze bracelets (Dannel & Wild 1969, 7). Further inhumations emerged in the form of scattered finds (Burnham & Wachter 1990, 91). The site at Normangate Field may have belonged to one of the villa-estates known in the area.
- Site 2 by the Billing Brook (Excavation 1956-7): evidence for 2nd-3rd century occupation emerged in the form of a well together with ovens, post-holes,

ditches and gravel pits. There was also evidence for several disturbed inhumations and stone coffins (Anon. 1958). It is possible that this latter may have been part of the burial site located at the junction between Irchester Road and the road branching off Ermine Street.

On the basis of the available evidence, it is difficult to establish patterns of cemetery location and shift through time. The earliest burials in the form of cremations appear to have been located in the cemeteries distributed along the north and west edges of the Roman town, where inhumations were also recorded. To the south, south-west and east of the urban defences the burial grounds seem to have contained inhumations only. Therefore, it would appear that *Durobrivae* had cemeteries of mixed burial rites and areas exclusively laid out for inhumations.

By comparison with the situation for the mixed burial grounds, some of the inhumation cemeteries appear to have been re-located with a shift of the burials away from the town, as at Site 2 and Sites 3-4 where evidence for ribbon development has also emerged.

The reasons behind the shift of the cemeteries at *Durobrivae* are difficult to explain. It is possible that the early cemeteries lay too close to the town, their development being partially constrained by the presence of the river Nene flood plain to the north-west, together with the Billing Brook to the north. In particular, expansion of the cemetery outside the north-west gate would have been limited. The same may apply to the west cemetery where pressure on the available land is exemplified by the occurrence of graves which had cut through the counter-bank of the town ditch, suggesting prolonged usage (Burnham & Wachter 1990, 91). It is possible that natural geological feature made it necessary to find new areas for later, more cumbersome inhumations, although inhumations continued in the earlier burial grounds.

This may also provide a partial explanation to the trend towards re-location of the later cemeteries at a greater distance from the town, at least in comparison with the location of the earlier grounds by the town bank. Other reasons should be taken into consideration, such as availability of space (briefly discussed above) together with convenience, as in the location of the cemeteries along easy access roads to serve suburban areas.

Implicitly, the proliferation of the inhumation cemeteries in the course of the 3rd-early 4th century may point to increase in the size of the population at *Durobrivae*.

Another interesting aspect relating to cemetery distribution, is the presence of substantial grave markers and body containers in what seem to be preferential locations. For instance, mausolea have been found to the west of the town, along Irchester road. Similarly, the bulk of stone coffins recorded to date appears to come from the south-west cemetery.

In the absence of more conclusive evidence, attempts at interpretation remain in the realm of the hypothetical. It cannot be excluded that reasons of wealth and status, together with religious beliefs and fashionable trends may have conditioned the choice of areas for 'special' burials.

In urban cemeteries mausolea and stone coffins are often found in concentrations, as at Dorchester (Poundbury Main Cemetery) (Farwell & Molleson 1993), Ilchester (Northover) (Leach 1994) or Cirencester (Bath Gate) (McWhirr *et al.* 1982). At Cirencester, the excavator suggested that the presence of stone coffins to the west of the town may have been due to reasons of convenience, since the Bath Gate cemetery lay close to the source of oolitic limestone from the Jurassic Ridge. However, the presence of tombstones outside the west-gate of the town would show that transport problems could be overcome when necessary (Mc Whirr *et al.* 1982, 91). At Poundbury and at the Northover cemetery, both mausolea and stone coffins were concentrated in the same burial area. It was suggested that they may have belonged to Christians who were buried in formal cemeteries (Watts 1990, *passim*; Leach 1994), as opposed to pagan burials in peripheral locations.

6. CONCLUSIONS

As seen above, the site of Roman *Durobrivae* has attracted the attention of antiquarians since the 18th century. More recently, excavations and aerial photographic surveys have produced a growing body of information allowing a better understanding of the town development in Roman times. As a 'minor' walled centre, *Durobrivae* began life as a civilian *vicus* attached to a (pre-Flavian ?) military fort near the Billing Brook, and developed into a *mansio* and, possibly, a *civitas* (Rivet 1964, 135). Evidence is also emerging for the organisation of the rural interland where villas and farmsteads appear to form a consistent settlement pattern in terms of distribution in relation to the town. From a topographic point of view, not only is there potential evidence for the organisation of the town core, but also for the use of the suburban space for agricultural and industrial activity. Last, but not least, many cemetery sites have been identified (above) which could offer further potential for the analysis of phases of expansion-contraction and changes of land use through time. The results from the recent rescue excavation in the drainage-ditch along the A1 route well exemplify the kind of research questions and associated parameters that archaeologists have started to formulate in order to achieve a contextualised interpretation of the available evidence.

7. RECOMMENDATIONS

At the request of Mr D Griffiths of the Highways Agency, consideration was given to the implications of the discoveries reported above for the future management of the drainage ditch. At present it appears to require regular cleaning of its base and sides in order to function effectively. Conversations with employees of the maintenance contractor (BLN routecare) would suggest that at

present this needs to be done every six to eight years. There is no doubt that the next time the ditch is cleaned, further human remains will be disturbed. The present work has merely removed those bones and artefacts which were already loose or very near to the surface. Indeed, some long bones, deeply imbedded in the ditch sides, were not removed but merely covered. Any permanent solution must either remove all burials or other archaeological deposits from the area of the ditch, or must cover them securely, deeply and permanently.

Removing all archaeological deposits from the area of the ditch would involve full-scale archaeological excavation of the land between the northbound carriageway of the A1 and the hedge to the west, and indeed, beyond this hedge into the adjacent field if graves running under the hedge are to be excavated completely. Besides the normal high costs of full excavation and post-excavation analysis, which could anyway run into six figures, an additional element in the costs here would be the need to close one lane of the northbound A1 and to provide a secure safety barrier to protect site workers in this dangerous location.

Covering the archaeological deposits could perhaps be achieved more simply, since all that is required is piping the ditch and backfilling it, perhaps lining it with terram permeable membrane or a similar barrier material first in order to protect the exposed deposits from contamination with foreign material. If replacement or repair of the pipe or the membrane were required in the future, this could be done under archaeological supervision and may not necessarily involve further disturbance of archaeological remains.

ACKNOWLEDGEMENTS

The authors would like to thank Mr David Griffiths of the Highways Agency for his help and encouragement. The project was funded by the Highways Agency, initially through their contractors for this part of the A1, BLN Routecare, and later directly. It should be noted that without the enthusiasm and interest of Mr Griffiths, the final report on the monitoring work would not have been the exhaustive work that it is. Thanks are also due to Celia Honeycombe, Cambridgeshire County Council conservator, for her work on the bronze and ivory armlets and beads; to Nina Crummy of Colchester Archaeological Trust for the report on these items; and to Sue Holden (freelance) and Jon Cane (AFU) for the excellent illustrations which accompany this report. Last, but by no means least, thanks are due to Andrew Hatton of the AFU who supervised the work on site, assisted by one of the authors (R Casa-Hatton). The report was edited by Tim Malim, AFU Manager.

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Appendix I - The Gravegoods from Grave 114 (by N. Crummy)

Eight copper-alloy armlets, three or four ivory armlets, a necklace of ten amber and glass beads, and a possible earring were deposited with the corpse in grave 114, apparently placed in a pile close to the body. Similar piles of jewellery accompanied the remains of children and young females in other late Roman cemeteries, for example at Lankhills, Winchester, Hampshire (Clarke 1979, Table 2), and Butt Road, Colchester, Essex (Crummy & Crossan 1993, 130). Sometimes deposited jewellery was wrapped in textile (Wild 1970, 1983), or may have been held in a leather pouch or bag (Crummy & Crossan 1993, 129). A grave deposit of jewellery in any quantity with a female child, teenager, or young adult may represent a dowry (*ibid*, 130), though the influence of fashion over this particular age and sex group is very strong and it is possible that the mourners were simply conforming to the ritual of burying the dead with objects important to them in life.

Evidence from both inhumations and occupation sites suggests that the popularity of bangle-type armlets, such as those deposited at Water Newton, rose markedly in the 4th century (Clarke 1979, 301), and the change in burial rite from cremation to inhumation has aided the preservation of large numbers of these artefacts. From the bangles deposited in graves at the late Roman cemetery of Lankhills, Winchester, Clarke (*ibid*) suggests that those of iron, bone and shale were more common in the first half of the 4th century and those of copper-alloy more common in the second half. However, a more accurate view appears to be that, while bangles of all materials were deposited with burials throughout the 4th century, they were more frequently deposited in the second half of the century (Crummy & Crossan 1993, 136-7). How far this reflects a rise in fashion as opposed to an increased incidence of a burial rite is uncertain.

Copper-alloy armlets of the 4th century were decorated in a variety of ways. While simple wire, cable and cable-imitative forms can usually be easily paralleled, where the decoration consists of incised or stamped patterns it may not have a precise match. This is particularly true of armlets elaborately decorated in symmetrical panels, like 1-2 (fig 5). These belong to Clarke's Type E at Lankhills (1979, 307-9), are described at Colchester as employing 'multiple motifs' (Crummy 1983, 45, fig 47), and at Poundbury as of 'multiple units' (Cool & Mills 1993, 89). Clarke cites numerous other examples. While exactly matched patterns on this type of bangle are rare, some elements of the decoration do occur reasonably frequently, notably long panels of feathering flanking a central groove. It is often used, as here, on the last long panel at each end, with the panel often defined by one or more transverse grooves, *eg* at Lankhills (Clarke 1979, fig 37, 525, 502), Colchester (Crummy 1983, fig 47, 1725, 1732), Richborough (Bushe-Fox 1928, pl XXI, 51), and Canterbury (Garrard 1995, fig 434, 368, 371). Large and small ring-and-dot motifs, as on 2 (fig 5), are also frequently seen, the latter often grouped together in single or double rows, as seen again at Lankhills, (Clarke 1979, 525, 393, 147, 650), Colchester (Crummy 1983, fig 47, 1725, 1730-2), , Richborough (Bushe-Fox

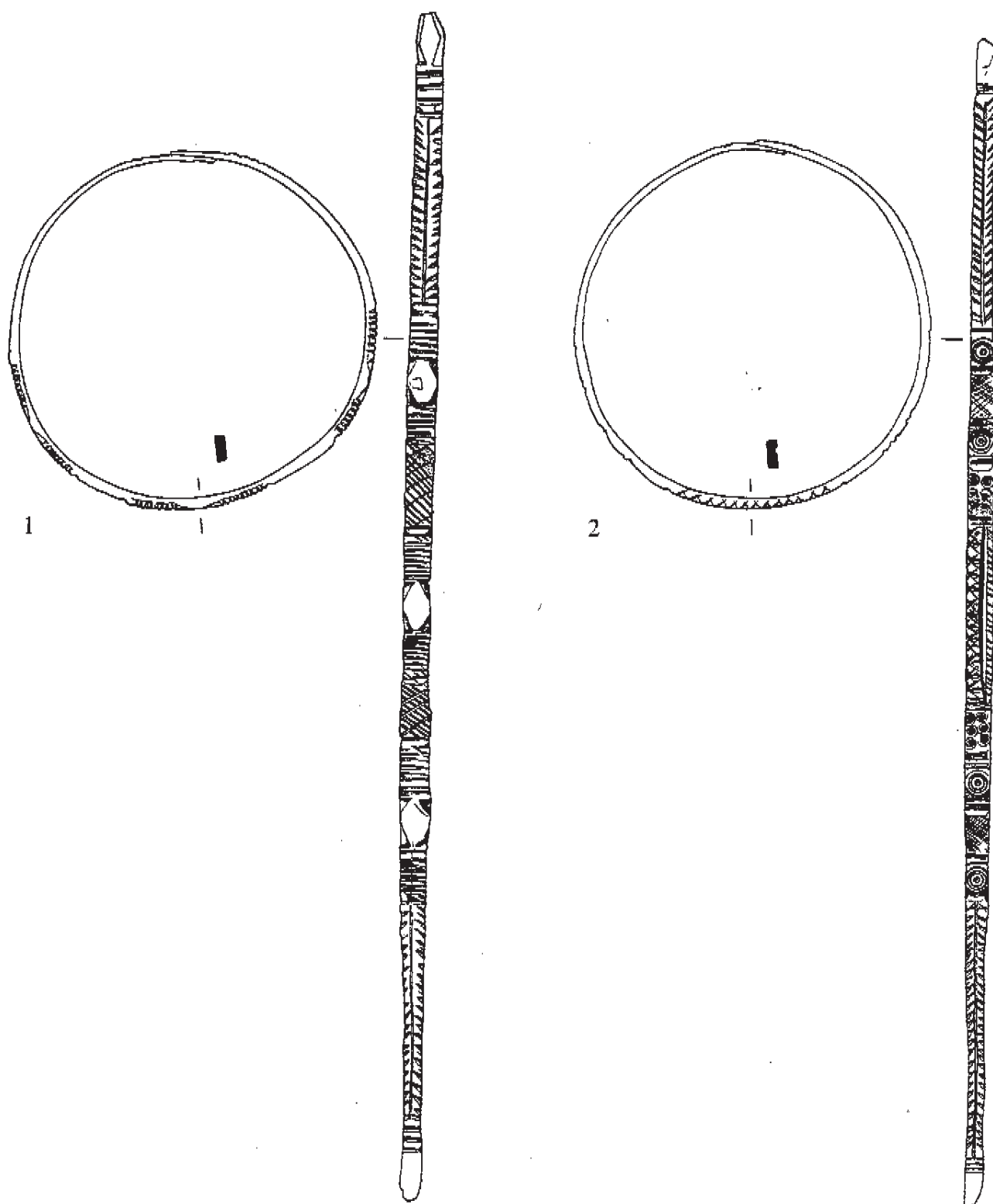


Figure 5 Copper alloy armlets nos. 1 and 2; scale 1:1

1928, pl XXI, 51), Canterbury (Garrard 1995, fig 434, 371), and also Lydney (Wheeler & Wheeler 1932, fig 17, D, E, G, H, K). Other elements, such as the bead-imitative lozenges, are less common on this type of armlet, but are found as the sole motif (Clarke 1979, fig 37, 166; Crummy 1983, 44-5).

Armlets 3-5 (fig 6) have not been directly paralleled, but hatched decoration occurs at Colchester (Crummy 1983, fig 46, 1714). Both hatching and alternating diagonal grooving techniques were clearly intended to catch and reflect light. The stout hook and eye clasp on armlets 7 (fig 6) and 8 (not illustrated), is matched at London (Pierpoint 1986, fig 39, 1), Poundbury (Cool & Mills 1993, fig 66, 12, 17), Colchester (Crummy 1983, 1651), Lydney (Wheeler & Wheeler 1932, fig 17, 56) and Richborough (Bushe-Fox 1928, 49, pl XXII, 59). The angled scoring on the upper and lower edges of 7 (fig 6) can be seen as a debased version of the cable-imitative grooving found on the illustrated Richborough armlet (*ibid*).

Ivory armlets do not survive well in the ground, though others are known from 4th-century graves at Lankhills (Clarke 1979, 312-13). The surfaces of the examples from Water Newton are roughened with decay and discoloured by contact with the copper-alloy armlets. Ivory armlets can be in one piece, cut in the round, or in sections butted together and held by one or two sleeves of sheet metal (*ibid*). Clarke suggests that a single sleeve shows that the armlet was made from a strip bent into a circle, as fig 6, 9, while two sleeves show that the armlet was formed from two half-circles cut in the round. Ivory armlets 10 and 11 (fig 7) may fit together, but, if so, the sleeves are not set opposite each other.

The incomplete thin wire copper-alloy ring (13, not illustrated) is probably an earring, though the terminals are missing. Copper-alloy earrings of thin wire are often too delicate to survive deposition. That only one was recovered here suggests that the second has decayed completely, though there is a possibility that it was missed on excavation.

While the Water Newton armlets and earring can be recognised as of standard late Roman forms and styles, contemporary necklaces and bead armlets are usually made up from small beads of brightly coloured glass, coral, shale, or jet (eg Guido 1978, fig 37; 1979, 292-300; Johns 1996, 100-3), whereas the group of ten beads from this grave at Water Newton is strikingly different. Six are amber (14-19, fig 8), three are of black glass enlivened with coloured zigzags (20-22, fig 8), and one is a gadrooned bead of plain black glass (23, fig 8). All are fairly large. The amber beads are roughly disc-shaped, and those of decorated glass barrel-shaped to annular. Some are wedge-shaped along one axis, enabling them to fit together closely when strung. They are sufficiently few in number to suggest that they may have been strung as an armlet, though it is possible that they grouped together at the front of a necklace, leaving thread or thong bare at the sides and back.

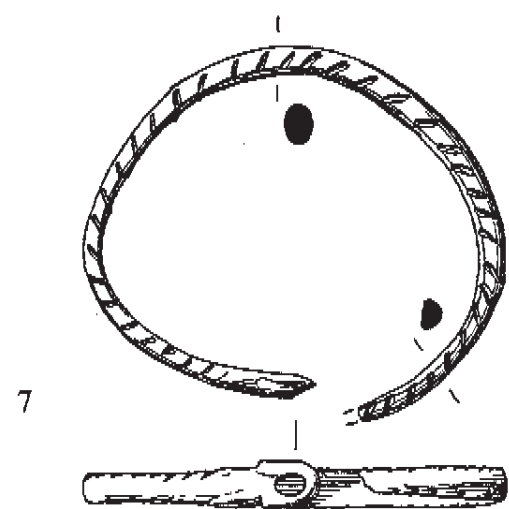
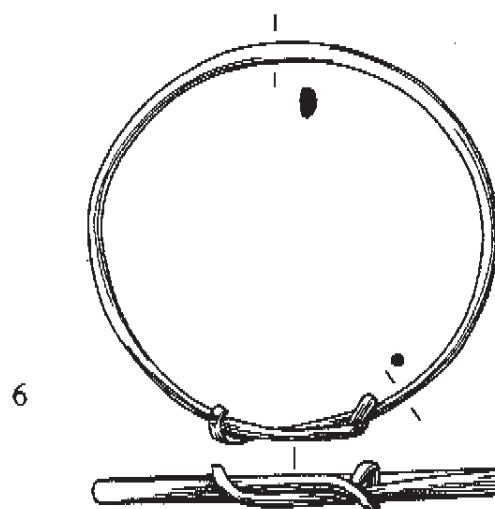
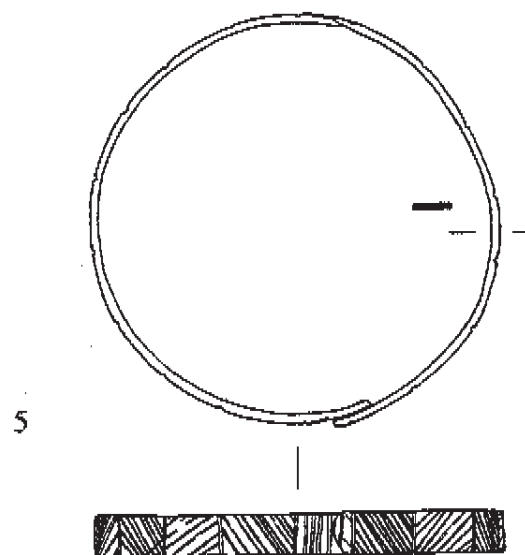
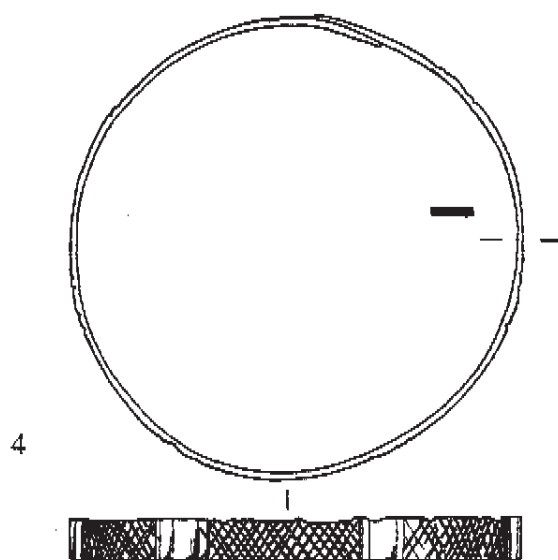
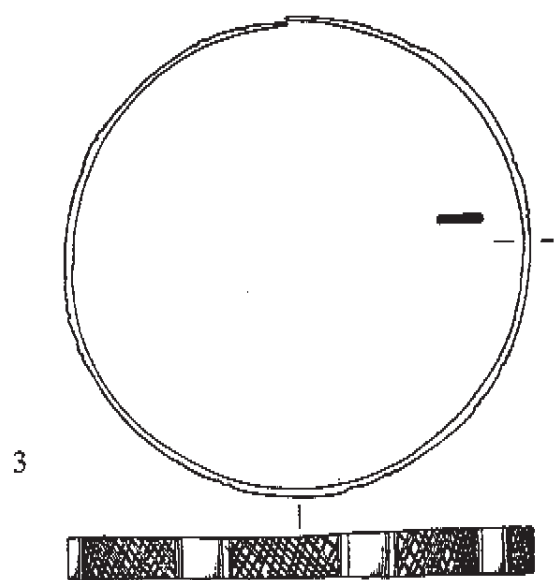


Figure 6 Copper alloy armlets nos 3-7: scale 1:1

The beads are not unique in late Roman Britain, but they are rare. A single annular amber bead came from Lankhills in a grave dated to AD 350-70 (Guido 1979, 295), and another singleton from Icklingham, Suffolk (Liversidge 1973, fig 52a). In both cases these were threaded onto necklaces composed of beads of standard late Roman form. There is a rather different picture at Colchester where twelve amber beads came from five graves in the 4th-century cemetery at Butt Road, two from grave 1, three from grave 15, one from grave 69, five from grave 406, and one from grave 609 (Crummy & Crossan 1993, Tables 2.52, 2.54-5). Both grave 1 and 15 also contained exotically-shaped beads of black glass (*ibid*, Tables 2.52, 2.55; Crummy 1983, fig 37, 1501, 1504, 1505). The amber beads in graves 1, 69 and 609 were strung on necklaces of conventional style, but those in graves 15 and 406 were part of armlets or necklaces that can be attributed with a specifically amuletic character, both of which included pierced coins that date the burials to the last quarter of the 4th century, or possibly the early years of the 5th century. Grave 1 can be similarly dated by a coin residual in its backfill, while graves 69 and 609 have been dated to later than AD 360 (Crummy & Crossan 1993, Table 2.67).

Amber, a fossil resin, comes primarily from submarine deposits around the coast of the Baltic. Like jet, it was prized in antiquity for both its appearance and its electro-static, seemingly magical, qualities. By the 2nd century BC the trade-route from the Baltic passed southwards through Aquileia, which became a centre for turning the raw product into finished carvings of high quality (Cunliffe 1997, 220; Strong 1966, 33-4). This point of control may account for the paucity of amber in both late Iron Age and Roman Britain. It is interesting to note that occasionally raw lumps of amber can be washed up on the East Anglian coast (Shepherd 1985, 204), suggesting that amber objects in Roman Britain may not necessarily have been imported, but be purely home-produced. An East Anglian origin could certainly account for both the Water Newton and Colchester amber beads, but the increasing flow into eastern Britain of migrants from northern Europe bringing matching increased trade contacts is probably more likely to be responsible. Amber beads certainly occur rather more frequently in pagan Anglo-Saxon Britain (Evison 1987, 57-60; Guido 1981, fig 19, 1-8; Myres and Green 1973, 210-11 (citing several others); West 1985, fig 275, 5-8; 1988, 22 *passim*).

The black glass beads also originated in mainland Europe. Guido notes that 4th-century glass gadrooned beads such as 23 (fig 8), though rare in Britain, occur in greater numbers in southern Bavaria (1978, 99). The three beads with coloured zigzags, red, yellow and white, belong to Guido's 'wave-decorated' Group 5. She suggests that black examples with coloured waves were of Frankish origin and certainly reached Britain before the end of the 4th century, while those with a white wave may not arrive till slightly later (*ibid*, 135). They may therefore be of different origin as well as date. This appears to be borne out by the Water Newton trio, for the red and yellow zigzags are well marvered into the dark matrix of their beads, while the white is an unmarvered trail on the surface of a

smaller and differently profiled bead, indicating different working practices in a different workshop. The white-wave beads that Guido lists from Britain that were in association with datable objects are Anglo-Saxon, to which may be added two others from Anglo-Saxon cemeteries in Norfolk and Kent (Green & Rogerson 1978, fig 69.7, Jviii; Evison 1987, fig 55, 2e).

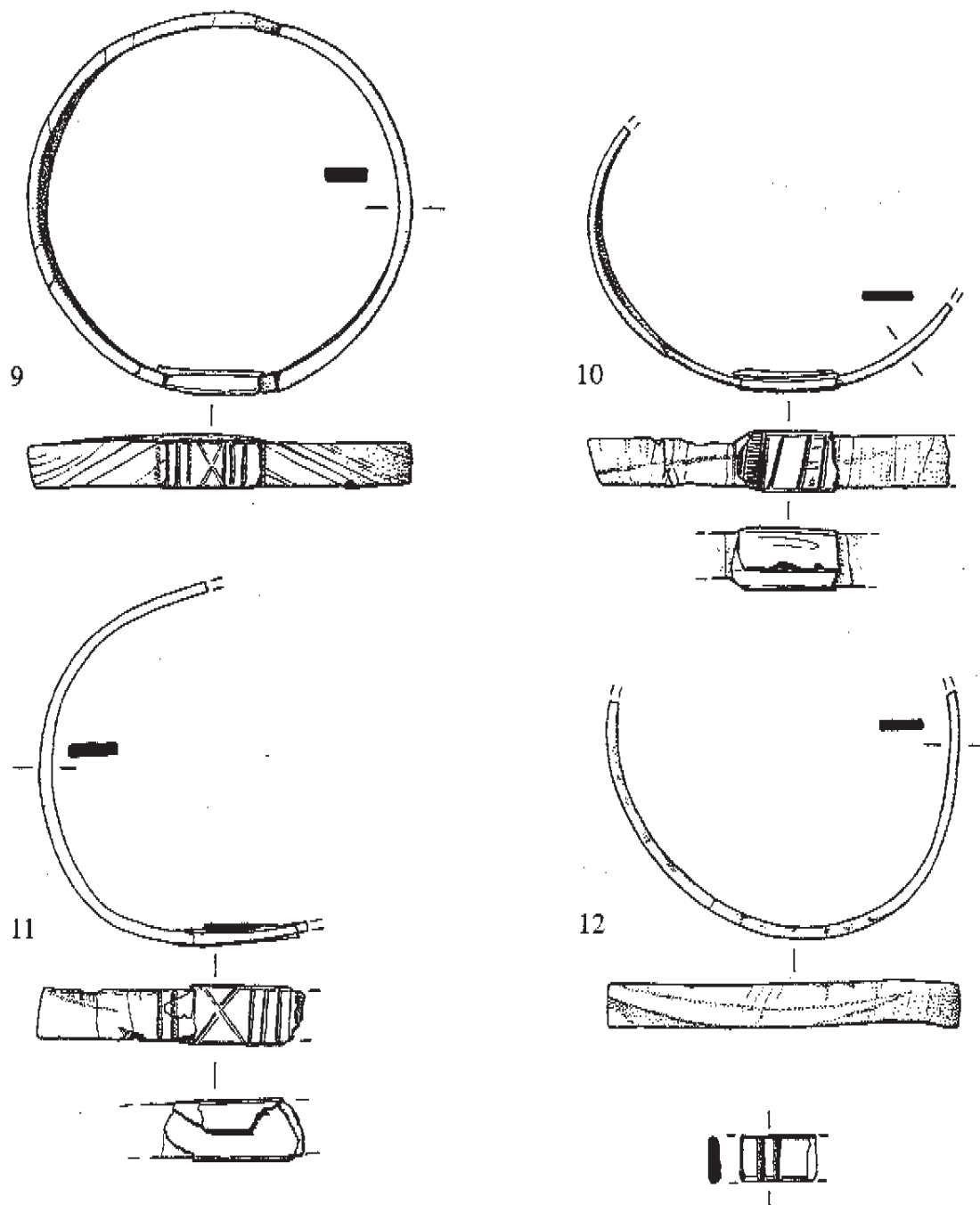


Figure 7 Ivory objects nos 9-12; scale 1:1

The white-wave bead from Water Newton appears, then, to be the latest item in the assemblage. While the armlets from the grave are positively Roman in character and suggest a date in the later 4th century, the amber beads and two of the glass ones can be used to refine this to the final quarter of the century, while the white-wave bead provides the best evidence that the burial may not have taken place till the early years of the 5th century. A conservative date range of *c* AD 390-420 may therefore be offered for the inhumation.

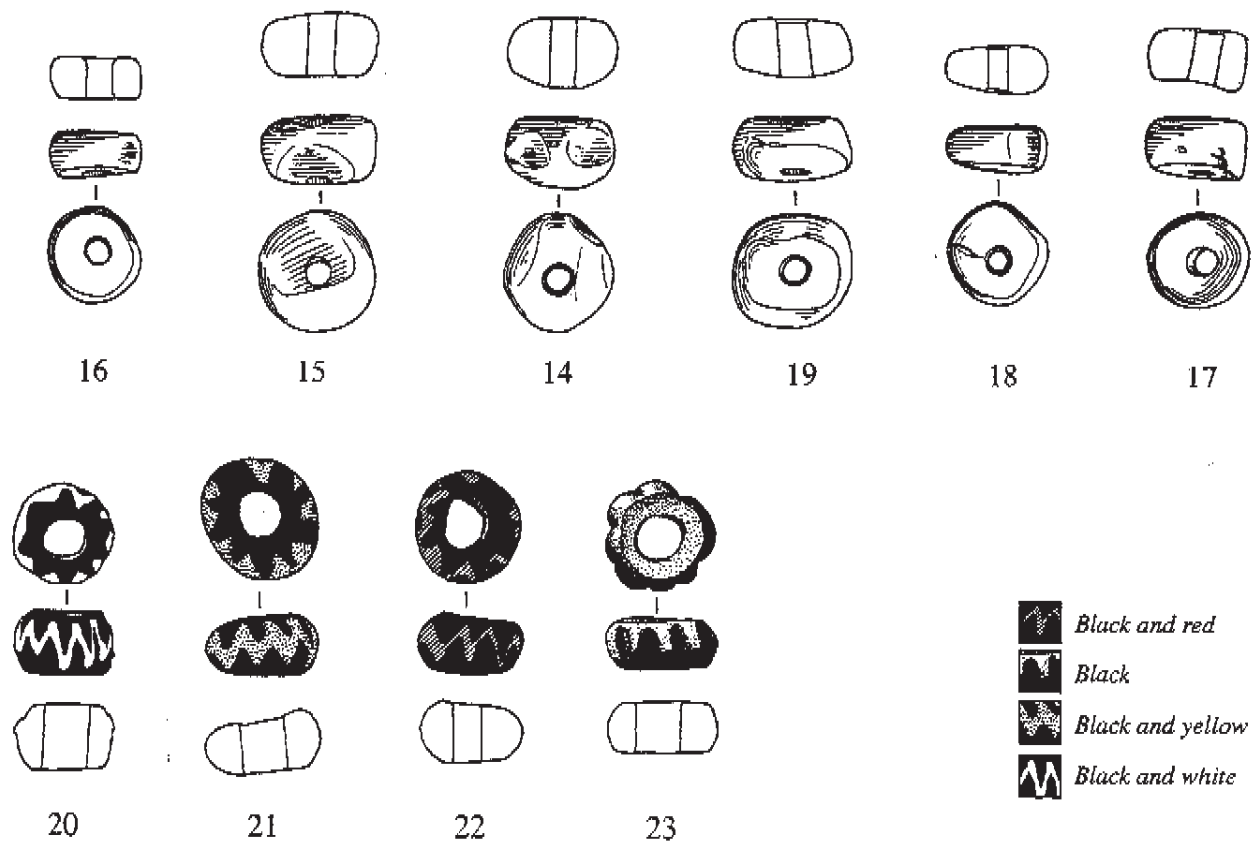


Figure 8 Glass and amber objects nos 18-23: scale 1:1

Catalogue

The finds, when excavated, were lifted in a single block of soil, and so were not given individual small find numbers. Upon examination by the conservator the separate copper alloy and ivory armlets and beads were identified. Some of the armlets were given individual lab numbers, and the beads sub-numbers under separate lab numbers for amber and glass types. All individual objects have now been given new publication numbers, and this is how they are referred to in this catalogue and elsewhere in this report. The catalogue entry gives the publication number, followed by the context number (in brackets), then the lab number and any sub-number (beads only), followed by the relevant figure number.

1. (114) Lab no 508 (fig 5). Complete copper-alloy armlet with lapped terminals. Maximum internal diameter 60 mm, rectangular section 4.5 by 1.5 mm. The decoration combines, in a symmetrical pattern, panels of transverse grooves, feathering, hatching, and raised lozenges imitative of strung faceted beads. The uppermost terminal is decorated with a raised lozenge reminiscent of a debased snake's head.
2. (114) Lab no 509 (fig 5). Complete copper-alloy armlet with lapped terminals. Maximum internal diameter 60 mm, rectangular section 4.5 by 1.5 mm. As with 1, above, the decoration is a symmetrical arrangement, here using panels of transverse grooves, feathering, large and small ring-and-dot motifs, and an unusual central panel with feathering on one side, a central groove, and complex notching on the other creating a row of alternating raised and sunken triangles.
3. (114) Lab no 510 (fig 6). Copper-alloy armlet with lapped terminals. One terminal is original. The other end appears to be broken, but the metal on the back is scarred, showing that it was soldered onto the original end. They have now sprung apart. Maximum internal diameter 61 mm, rectangular section 6 by 1 mm. The decoration consists of hatched panels separated by plain, slightly faceted panels flanked by narrow transverse mouldings. That the lapped joint is a repair, rather than an example of scamped work, is supported by the fact that the original terminal abuts a plain panel, while the other provides a hatched panel much shorter than the others. However, the terminals on 4, below, are exactly similar, making a break unlikely.
4. (114) Lab no 511 (fig 6). Complete copper-alloy armlet with lapped terminals and decoration similar to 3. Maximum internal diameter 61 mm, rectangular section 5 by 1 mm. As with 3, one terminal is original, the other apparently broken, though see above. Both are slightly wider than the main part of the armlet, suggesting that they were lightly hammered together.
5. (114) Lab no 507 (fig 6). Copper-alloy armlet with butt terminals. Maximum internal diameter 55 mm, rectangular section 6 by 1.5 mm. The decoration consists of panels defined by single upright grooves and filled with fine diagonal grooving, alternately angled to give the impression of chevrons.
6. (114) Lab no 512 (fig 6). Copper-alloy armlet of plain wire with simple twisted join. Maximum internal diameter 52 mm, D-shaped section tapering to the clasp, maximum 4 by 2.5 mm. No decoration is obvious, but the metal is quite rough with corrosion and slight decoration, as on Crummy 1983, fig 43, 1656, may be obscured.
7. (114) Lab no 513 (fig 6). Copper-alloy armlet with hook and eye clasp, the hook end missing, the eye end almost flat and slightly expanded. Maximum internal diameter,

slightly distorted, 50 mm, section elliptical tapering to D-shaped near the terminals, maximum dimensions 5.5 by 4 mm. The upper and lower edges of the hoop are scored by slanting grooves. This very minimal decoration can be seen as an extremely debased form of the slanting grooves passing over the outer face of armlets in imitation of cabling (eg Bushe-Fox 1928, pl XXII, 59).

- 8 (114) Lab no 514 (not illustrated). Missing, catalogue from photographs. Complete copper-alloy armlet with hook and eye clasp. The hook is a stout bar rising up and slightly backwards from the terminal. The eye is a large expanded loop. Just in from the eye is a protuberance similar, though smaller, to the hook. This prominent clasp arrangement is very similar to that on the imitation cabling example from Richborough referred to above.
- 9 (114) No Lab no (fig 7). Ivory armlet held together with a sleeve of copper-alloy. Internal diameter 53 mm, rectangular section 6.5 by 2.5 mm. The sleeve, and the ivory beneath it, is ribbed at either end. Between the ribs is an incised cross. The shallowness of the cross suggests that it is not impressed into a cross cut in the ivory beneath.
- 10 (114) No Lab no (fig 7). Fragment of an ivory armlet with a ribbed sleeve of copper-alloy. Maximum internal diameter 53 mm, rectangular section 8 by 1.5 mm. May belong with 11 to form one armlet with two sleeves (Clarke 1979, 313).
- 11 (114) No Lab no (fig 7). Fragment of an ivory armlet with a ribbed sleeve of copper-alloy. Internal diameter 50 mm, rectangular section 8 by 1.5 mm. May belong with 10 to form one armlet with two sleeves (Clarke 1979, 313).
- 12 (114) No Lab no (fig 7). Fragment of an ivory armlet. Internal diameter 51 mm, rectangular section 7 by 1.5 mm.
- 13 (114) No Lab no (not illustrated). Two fragments of a ring of thin copper-alloy wire. Internal diameter 14 mm, thickness 1 mm. Probably an earring, as Allason-Jones's Type 1, a basic form that cannot be closely dated (1989, 2-3).
- 14 (114) Lab no 517 (1) (fig 8). Disc-shaped amber bead. Maximum diameter 15.5 mm, length 9.5 mm.
- 15 (114) Lab no 517 (2) (fig 8). Disc-shaped amber bead. Maximum diameter 16 mm, length 9 mm.
- 16 (114) Lab no 517 (3) (fig 8). Disc-shaped amber bead. Maximum diameter 12.5 mm, length 6 mm.
- 17 (114) Lab no 517 (4) (fig 8). Disc-shaped amber bead. Maximum diameter 12.5 mm, length 8 mm.
- 18 (114) Lab no 517 (5) (fig 8). Disc-shaped amber bead. Maximum diameter 13 mm, length 6 mm.
- 19 (114) Lab no 517 (6) (fig 8). Disc-shaped bead amber bead. Maximum diameter 15.5 mm, length 8 mm.
- 20 (114) Lab no 516 (7) (fig 8). Annular bead of black glass with off-white zigzag trail. Maximum diameter 13.5 mm, maximum length 8 mm.
- 21 (114) Lab no 516 (8) (fig 8). Annular bead of black glass with marvered yellow zigzag trail. Maximum diameter 16.5 mm, maximum length 8 mm.
- 22 (114) Lab no 516 (10) (fig 8). Annular bead of black glass with marvered red zigzag trail. Maximum diameter 13.5 mm, maximum length 7.5 mm.

- 23 (114) Lab no 516 (9) (fig 8). Grooved bead of black glass. Maximum diameter 14 mm, length 6.5 mm.

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Appendix II The Human Remains (by C. Duhig)

Seventy contexts were received, plus three bags of unstratified material. Eighteen contexts contained only animal bone (these were passed to the zooarchaeologist together with 14 other animal bone samples found with human) so human bones have been recorded for 52 contexts and one unstratified fragment. Although the bones have been broken by the ditching activities they are generally sound with only some surface erosion. Methods used are those of Cho *et al.* (1996) and Ubelaker (1989).

In the inventory below, the bones present are listed only by element and side. Very few were complete, and the actual portions present, such as 'proximal', 'distal', 'head' (of long bones), the various parts of the skull vault, face and base, and so on, are recorded in the skeletal file held by the author. The note 'one individual' means that it is clear that all the bones from this context are compatible by virtue of age, unusual size and/or condition; this does not mean that other contexts necessarily contain more than one individual — indeed, they probably do not — and in the few cases where more than one person can be identified in a single context this is shown by 'a' and 'b' suffixes to the skeleton number.

Inventory

Context	Human/ animal	Bones present	Age	Sex	Pathological changes	Other
2	H+A	cranium, ribs, R clav, scaps, L ul, rads, L calc/tal/nav	c. 16-18 y	N/A	L calc/tal/ nav: fused ¹	-
4a	H	tibs, fib	adult	-	-	1 indiv
4b	H	hum, ribs	c. 0.5-1.5 y	N/A	-	1 indiv
6	A	-	-	-	-	-
8	A	-	-	-	-	-
20	H	R tib	adult	-	lipping at distal tibio- fibular joint	-
22	H	L tib	c. 7.5-8.5 y	N/A	-	-
24	H	L innom, R innom, L fem	34-86 y, mean 61.2 y	male	L fem, L isch tub: lipping, spicules and nodules, ??DISH	1 indiv
26	H+A	L fib, L tal, R mt1	adult	-	-	-
28	A	-	-	-	-	-
30	A	-	-	-	-	-
32	H	cranium, innom, verts, L ul, R fem	adult	?male	verts: o/a; R fem: new bone on less troch	1 indiv, robust
38	H	L fem, R tib	adult	-	-	1 indiv

40	H	cancellous bone lump	-	-	-	-
42	H+A	calvaria, ribs	25-49 y, mean 36.2 y	male	metopism, lambdoid ossicles, cribra stage 2 ²	-
46	A	-	-	-	-	-
48	H	R tib, R fib	adult	-	-	-
50	H	L calc	adult	-	-	-
58	H+A	fem	adult	-	-	-
60	H	L fem	adult	-	lipped linea aspera	-
68	H+A	skull, vert	adult	-	EDDs ³	-
70a	H	R fib, R calc, R tal	adult	-	-	1 indiv
70b	H	fem	c. 1.5-2.5 y	N/A	-	1 indiv
76a	H	ribs, R innom, L fem, R hum, R ul, R rad, R calc	23-57 y, mean 35.2 y	male	fem: lipping of head (++) and linea aspera	1 indiv
76b	H		<16-20 y (depends on sex)	-	-	1 indiv
88	H	R fem	c. 0.5-1.5 y	N/A	-	-
104	A	-	-	-	-	-
114	H+A	cranium, fib	5 y ± 16 m	N/A	-	Cu alloy stains on L occipital and lower left molar
118	H	tibs	adult	-	-	-
124	H	L tib, R tal	adult	-	-	-
130	H	R fem, fem, R pat	adult	-	-	-
138	H	L tib, L fib, R fib	adult	-	R fib: distal fracture	-
140	H	R fem	c. 2.5-3.5 y	N/A	-	-
142	H+A	L innom, R ul, R rad, R mt3	adult	-	-	-
144	H	vert, L hum, l/b sh frags	adult	-	-	-
152	A	-	-	-	-	-
158	H+A	tib	adult	-	-	-
168	H	rib	adult	-	-	-
176	H+A	L tib, fib	adult	-	-	and sherd
180	H	all R: innom, ul, rad, fem, pat, mc1, mc2	adult	male	innom: acet shallow, ?congenital deformity	1 or 2 indivs: fem head not altered by shallow acet
186	A	-	-	-	-	-
188	A	-	-	-	-	-
190	A	-	-	-	-	-

502	A	-	-	-	-	-
504	A	-	-	-	-	-
526	H +A	fib, R tal, mts	adult	-	-	1 indiv, v. gracile, perhaps same as below ⁴
528	H	vert, tib	adult	-	-	1 indiv, v. gracile, perhaps same as above ⁴
536	H	cranium, vert, ribs, R innom, R ul, L fem, fem	c. 35y	female	cribra stage 2; one rib: lipping and cysts of tubercle; L fem: rugosity and lipping of insertion of <i>Glut max</i>	-
540	H	sac, L pubis	26-70 y mean 38.2 y	female	-	-
542	A	-	-	-	-	-
555	A	-	-	-	-	-
565	A	-	-	-	-	-
575	H +A	cranium	adult	-	-	and ?ferrous lump
597	A	-	-	-	-	-
601	H +A	rib, scap, L hum, l/b shaft	18-25 y	-	-	-
615	H	R tib	imm	N/A	-	-
617	H	fem Fs	adult	-	-	-
619	H	fem	adult	-	-	-
623	H	innoms, R fem	c. 30-34 y	female	-	1 indiv
627	H	cranium	adult	-	-	-
637	H	hum	adult	-	-	-
639	H	R hum	adult	-	-	-
643	H	sac, R ul, R rad	adult	-	-	1 indiv
649	H	skull, hums	adult	female	??cut on L petrous ⁵ , spotted enamel (EDDs), severe caries	-

651	H	skull, verts, ribs, clav, scaps, hums	32-65 y, mean 45.5 y	male	severe a/m tooth loss, caries, abscesses and mal- occlusion; verts: o/a; scaps: lipping of fossae; R hum: rugosity of insertion of <i>Pec mag</i>	-
655	H	ribs, hums, L mc2	adult	-	-	-
659	A	-	-	-	-	-
661	H	verts, ribs, sac, innoms, L ul, rads, fib	18-25 y	-	-	1 indiv
663a	H	L tib, fib	adult	-	-	1 indiv
663b	H	R tib	adult	-	-	1 indiv (larger)
665a	H + A	L fem	<14 y	N/A	-	1 indiv
665b	H	R ul, R rad	?adult	-	-	1 indiv
667	A	-	-	-	-	-
673	H	innom	adult	-	-	-
681	H	innom, L rad, L fem	<12 y	N/A	-	1 indiv
Unstrat	H + A	R hum	<12 y	N/A	septal aperture	-

¹all are fused together by disorganised new bone proliferation, mainly nodular, which surrounds, but does not intrude upon, the joint surface; there is also proliferation around the articulations with the malleoli; all except the most medial of the distal navicular facets are extremely cystic/eroded; absence of the rest of the skeleton prevents further description or diagnosis of this arthropathic disorder (following Rogers *et al.* 1987)

²*cribra orbitalia* is a sieve-like appearance to the upper orbit, produced by several anaemias and related conditions, the most common being iron-deficiency anaemia, usually produced by parasitism and infection rather than by inadequate dietary intake of iron (e.g. Stuart-Macadam 1989: 218-9)

³EDDs are enamel developmental defects, also known as enamel hypoplasia, caused by episodes of starvation or severe febrile illness (e.g. Goodman & Rose 1990)

⁴if not contradicted by archaeological evidence, it is suggested that these two contexts contain the remains of the same individual

⁵this horizontal cut or break is in the position to be expected from a decapitation, but is too eroded for its cause to be determined

The minimum number of individuals is 57. This can be increased to 58 if context 180 contains two individuals and to 59 if contexts 526 and 528 can not possibly contain material from the same individual. Males, females and children down to infancy are represented, although the fragmentary nature of the skeletons prevents sexing of most of the adults and precise ageing of all but one child and a few adults. The pathological changes are dominated by dental disease and the arthropathies, a situation usual for

skeletal remains from the ancient world, but there are also signs of dietary deficiency or physiological stress in the conditions of *cribra orbitalia* and enamel developmental defects.

The amount of information obtained from this small and disturbed sample, and the reasonable condition of the bones, suggests that full excavation of this site would provide a highly informative skeletal assemblage.

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Appendix III **The Pottery (by M. Wood)**

Given the location of the site, it is hardly surprising that the products of the lower Nene Valley kilns, especially those nearby at Chesterton, Water Newton and Stibbington should all be well represented in the assemblage. Locally produced shelly wares are also fairly well represented. In essence the overall assemblage is later Roman in character although there are a couple of exceptions which are second century (context 28 for example).

There are no real surprises in the products themselves, although unusual forms from the Nene valley have been noted as well as the presence of products from further afield. These are principally the samian and amphorae. Dressel 20 form the bulk of the amphorae with a solitary sherd of a Gauloise 4 flat-based wine amphora; the latter is far from an unusual find in Britain though it may be rarer in this region. The only other products of note are two sherds of Black Burnished ware 1 from Dorset and a single sherd of Oxfordshire red colour coated ware. The presence of a couple of burnt sherds should not be too surprising either, since the site is a cemetery.

A complete catalogue of all the pottery examined has been placed in the project archive.

Appendix IV The Coin List (by C. Montague)

<i>MD. No.</i>	<i>Denomination.</i>	<i>Obverse</i>	<i>Reverse</i>	<i>Mint</i>	<i>Date</i>
1	AE 3, 13-14mm	Barbarous Radiate (Tetricus or Claudius Gothicus)	Standing figure holding trident	-	mid
2	AE 3, 17mm	Valens	Standing Victory holding spear and <i>labarum</i>	-	364-
3	AE 3, 15mm	Magnentius	Two standing winged Victories holding shield. Inscribed T.I.V.P.	Amiens	350-
6	AE 3, 15mm	Gratian or Valens	Standing figure with spear	V.I.R.B. (Rome or France)	seco 3rd
7	AE 3, 13-14mm	Constantius II?	Baby in arms inscribed ... TAS	-	337-
8	AE 4, 15mm	Constantinopolis ¹	(No legend)	-	330-

¹ Helmeted Bust of Constantinopolis wearing imperial mantle, holding sceptre and spear and leaning on shield. Commemorative issue of Constantine I (330-340 AD).



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