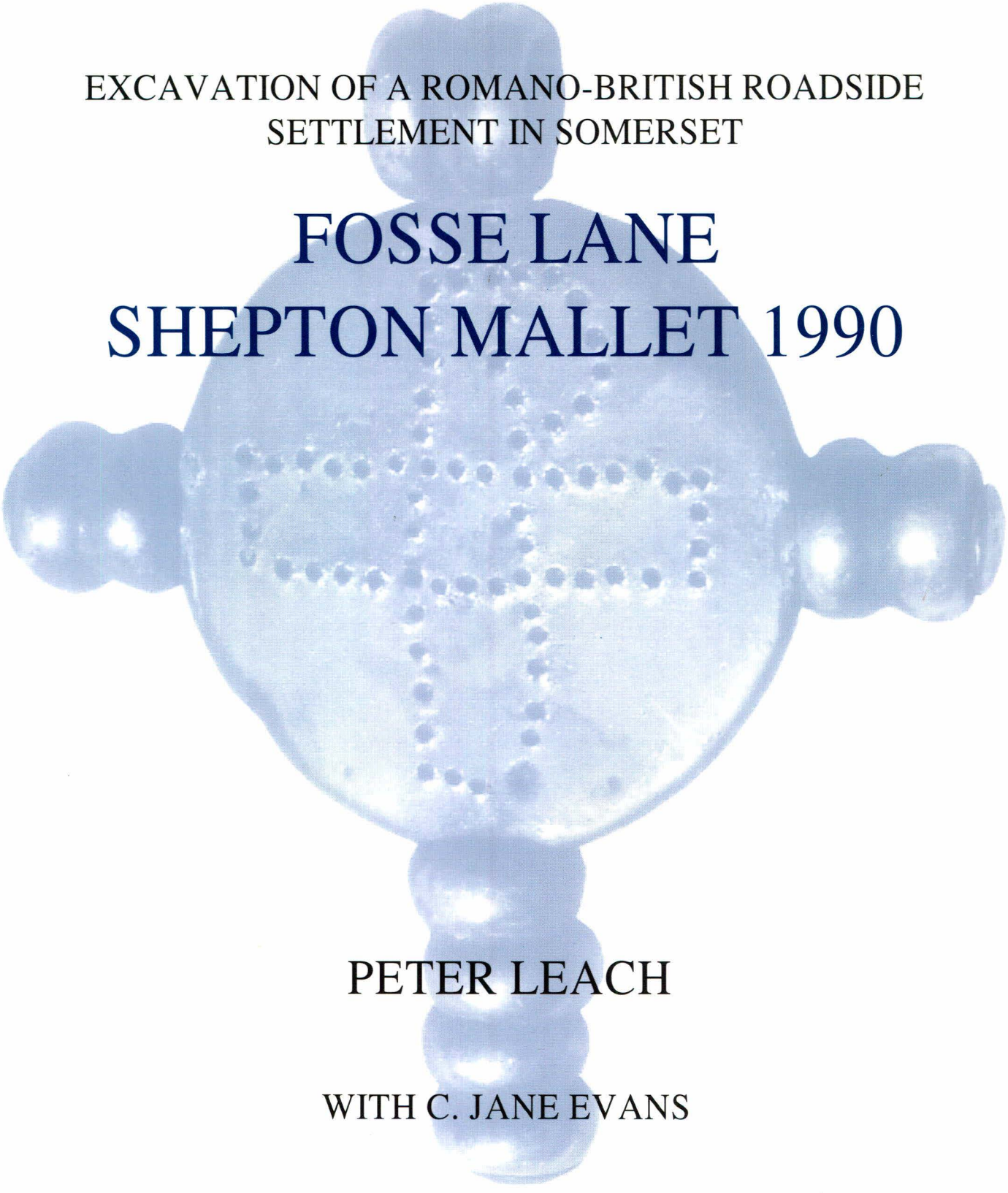
EXCAVATION OF A ROMANO-BRITISH ROADSIDE SETTLEMENT IN SOMERSET

FOSSE LANE SHEPTON MALLET 1990



PETER LEACH

WITH C. JANE EVANS

ENGLISH HERITAGE

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IN SOMERSET

FOSSE LANE SHEPTON MALLET 1990

BY

Peter Leach

WITH

C. Jane Evans

and contributions by

Lynne Bevan, Simon Esmonde Cleary, Gordon Cook, Sally Cottam, Olwen Coventry, Brenda Dickinson, Iain Ferris, Kay Hartley, Colin Haselgrove, Martin Henig, Catherine Johns, David Kendrick, Donald Mackreth, Stephen Minnitt, Graham Morgan, Derek Moscrop, Stephanie Pinter-Bellows, Jennifer Price, Fiona Roe, Julie Smith, David Starley, Vanessa Straker, Roger Tomlin, Jacqui Watson, and David Williams

and illustrations by Mark Breedon, Nigel Dodds and Liz Induni

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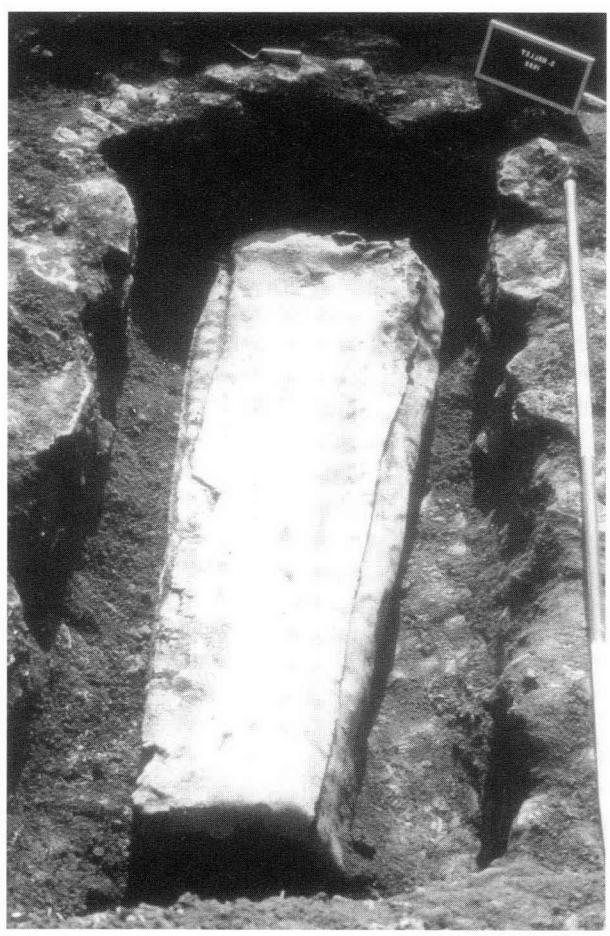
PREFACE

Archaeology and modern development rarely make good bedfellows; 'progress' and 'the past' being more often than not in opposition. In the summer of 1990 these opposites met dramatically and in some conflict beside the Fosse Way at Shepton Mallet. Such engagements, nevertheless, offer opportunities, not only for the advancement of historical and academic knowledge, but also for the past and present to be reconciled — by serving each other. The emphasis of this report is very much upon the past and our attempts at its reconstruction through the detailed examination and interpretation of the many thousands of 'facts' gathered in the course of a major excavation project. These 'facts', comprising data which range from coins and pieces of pottery through to photographs and written records, may now be all that survives of a complex of remains which testify to past human societies, their activities and impact upon their environment, and ultimately upon us — their future.

This report is both a presentation and interpretation of the data gathered in 1990, and even at this level can only be selective and to an extent partial. As is made clear, only a sample of the available evidence could be recovered and recorded, itself a sample reduced by time and decay from a more complete record within the context, nevertheless, of a more extensively surviving archaeological site. In these circumstances the interpretations offered here will, to a greater or lesser extent, be open to reconsideration, particularly in the light of possible future discoveries, but for now they provide some explanation for this site, a model against which existing or new data may be tested, and a basis for more wide-ranging comparative studies of the past, regionally and further afield. This volume documents, almost exclusively, the programme of excavations and results obtained by Birmingham University Field Archaeology Unit, which commenced with an evaluation in the Spring of 1990 and ended in September of that year at Fosse Lane. Since then, numerous evaluations and a few more detailed investigations of other areas within or adjacent to the historic Fosse Lane settlement site have taken place. Their outcome may yet form the subject of further publications and material for new interpretations, but for the time being is utilised only provisionally to contribute to a greater understanding of the results published here and of the settlement as a whole.

This volume was preceded by a popular illustrated account (Leach 1991a), produced with the support of the site's developer (Showerings Ltd.), that is by no means superseded by this, its more weighty successor. That popular forerunner will, to some extent, always be a more accessible document, offering a taste of the Fosse Lane site, its remains and the excitement of its discovery in 1990. The present work has a different purpose, the culmination of several years detailed study of the data recovered then and its presentation by a range of specialists. Although this is by no means the end of the story, it serves for now to define and characterise what was essentially a newly discovered urban roadside settlement and place it firmly on the map of Roman Britain.

PL. I The Fosse Way north towards Beacon Hill and the settlement site, excavation in progress July 1990 (right), aerial view. (P. Leach)



PL. II Lead coffin in grave F29, excavated in 1988. (Somerset County Museum)

ACKNOWLEDGEMENTS

Implementation of the field programme in 1990 and the subsequent preparation of this volume has involved many people and it is a pleasure to acknowledge all their many and various contributions, if not managing to name every individual. As owners and developers of the site, Showerings Ltd. (and subsequently Allied Domeq) made a substantial financial contribution to both the fieldwork and post-excavation programmes. Over and above this the company offered much sympathetic support, interest and co-operation to ensure that excavations could proceed as smoothly as possible, and facilitated opportunities for archaeological preservation through minor but significant design changes to the development. Our thanks to all, employees and management, and in particular to Des Glenn, Martin Howard, Cath Williams and Tony French. Thanks too to project managers and the workforce of Ernest Ireland, main contractors for the development, for their co-operation. At the commencement of work in February 1990 the site belonged to Wayopen Estates, and thanks are due to Dennis and Sue Dennet who sponsored the original evaluation and gave additional support and encouragement thereafter as excavations continued. For support and advice throughout the project our thanks to Bob Croft, Somerset County Council, Steve Minnitt, Somerset County Museum, Malcolm Williamson, Mendip District Council, and to Paul Gosling, Inspector of Ancient Monuments for English Heritage.

As project director and principal author of this report it was a pleasure to make the acquaintance of, and frequently collaborate with, so many interested and supportive local people. In 1990 the excavations and discoveries aroused a great deal of public interest and not a little controversy, both locally and nationally. Reports were carried in local and national newspapers, on radio and television, and passions were aroused — principally in defence of the archaeology. Towards the end of the excavation a very successful open day attracted several thousand visitors. Of particular note, following the discovery of the early Christian silver amulet, was the commissioning of a larger replica in silver by Showerings Ltd. and its presentation to the then Bishop of Bath and Wells, Dr George Carey. This was later worn at his investiture as Archbishop of Canterbury in 1991, and subsequently. Though in many ways encouraging, the level of public interest generated its own problems, particularly in the context of time constraints and the scale of the archaeology revealed. Nevertheless, our efforts evidently captured the imagination of many Sheptonians, some of whom were able to participate on site or provide additional help and encouragement; thanks especially to Fred Davies, Keith Faxon, Dee Leach, John Robson, and Penny and David Stokes (from the air!), among many others. On site, the initial evaluation was directed for BUFAU by Iain Ferris, Peter Ellis deputised as director during the main excavations, while site management overall was the responsibility of Jon Sterenberg, ably supported by Laurence Jones, Gwilym Hughes, Charles and Nancy Hollinrake, and a professional core team including Rob Atkins, Dick Broomhead, Ed Dickinson, Lucie Dingwall, Quentin Hutchinson, Steve Litherland, Dave Tyler, and Humphrey Woods, as well as trainee graduate and undergraduate students from the University of Birmingham. We are also grateful to Steve Search (who discovered the lead coffin in 1988) and Colin Knowles for making available metal detecting finds, some of which are included within this report.

The post-excavation project has been expeditiously managed at BUFAU by Simon Buteux and Jackie Pearson, and monitored for English Heritage by Tim Williams and Peter Wilson. Post-excavation analysis and reporting were co-ordinated by Jane Evans. The specialist contributions are accredited to their respective authors, and we are grateful to all for their input and co-operation in meeting deadlines at various stages of the project, and to members of the Ancient Monuments Laboratory, English Heritage, for helpful comments at the editorial stage. Contributions by Derek Moscrop, Julie Smith and David Kendrick formed part of their work for Certificate and Post-graduate Diploma courses in Practical Archaeology at the University of Birmingham, supervised

and edited by Iain Ferris. Donald Mackreth would like to thank Lady Pauline Richmond Brown for allowing him to study the Hildyard collection, and Dr Grace Simpson for copies of drawings from South Cadbury. Stephen Minnitt extends grateful thanks for assistance in the excavation and recording of lead coffin no. 1 to David Dawson, Mark Davis, Lesley-Anne Kerr, Bob Croft, Graham Evans, Mr R. Edwards, James Bond, Chris Knowles and Steve Search; and Dr David Starley is thanked for XRF-analyses of lead samples from the coffins. Finds conservation was the responsibility of Margaret Brooks and of the Somerset County Museum, where all the finds and a copy of the archive material is now deposited. Lynne Bevan was primarily responsible for basic finds processing and recording, on and off the site. Computerised data entry programmes and AutoCAD transcription was the responsibility of Vince Gaffney and Sally Biswell, with Liz Hooper, who also managed the drawing programme at BUFAU and carried out final copy editing. With the exception of the stone and lead coffins (by Liz Induni) all of the site and finds illustrations were executed by Mark Breedon and Nigel Dodds. The entire text has been expertly formatted and organised on disk by Ann Humphries. Finally, we are grateful to colleagues in BUFAU and the University of Birmingham, as well as outside, for support and discussion at various stages of the project, and especially to Peter Ellis for final editing.

Peter Leach
March 1995

SUMMARY

Excavations in 1990 at Shepton Mallet, Somerset revealed almost 2 ha of a Romano-British roadside settlement located on the southern flanks of the Mendip Hills and bisected by the Roman Fosse Way road. The area available lay to the east of Fosse Lane (formerly the Roman road), behind but not including its frontage. Within this zone could be charted a sequence of development which began modestly towards the end of the first century A.D., expanding through the second and third centuries, to climax in the fourth century. Decline from the fifth century ended in the eventual abandonment of settlement here after the seventh century and utilisation of the site for agriculture up to the present day. Many thousands of items were recovered and recorded, the analysis and reporting of which complements the record of structural remains and permits an interpretative account of the discoveries overall.

There are hints of Iron Age occupation at this locality, and of even earlier prehistoric land use. The former may be a clue to the origin of its Roman successor, direct evidence for which could have been present on this site (unexcavated), but has been confirmed more recently by excavations nearby to the south-west in 1995 (Birbeck 1997). Cobbled side streets and drystone-walled compounds began to appear in the area before the end of the first century A.D., probably linked to, and a reflection of, burgeoning development and properties focused on the Fosse Way frontage. Activity within the area intensified during the second century with the layout of a more or less regular series of enclosures defined by walls or ditches. At least two stone-founded buildings (VII and X) also appeared, and there are hints of other timber-framed structures located within some of the enclosure compounds. The two stone buildings were removed during the third century (both apparently destroyed by fire), when at least one other, more ambitious, stone building with an aisled hall (IX) was erected. The system of compounds was further modified or subdivided, and another side street appeared. The fourth century appears to mark a *floruit* in the history of the settlement; the scale of activities and structures within the compounds reaching their maximum intensity. Building IX was extended, and at least two more stone buildings (I and VIII) appeared. These are complemented by several more ephemerally defined buildings, probably of timber-framed construction, which appear widely across the site. Whether or not these establishments were subsidiary to, or independent of, properties on the main road frontage is unclear, although the independence of premises associated with Buildings I, VII, VIII or IX must be suspected. Many of the fourth-century buildings contained hearths or ovens, some possibly associated with small-scale industrial processes.

Towards the end of the fourth century the appearance of inhumation burials suggests a change in the status and function of certain parts of the settlement. Three small cemeteries and a few more isolated burials were located, the earliest possibly associated with Building I, and including a lead coffin and a stone coffin beneath the remains of a mausoleum. It is difficult to gauge the change and suspected decline of status and activity in the settlement from the fifth century, although the burials were almost certainly among the latest acts on the site, some perhaps as late as the seventh or eighth century. The largest group evidently reutilised one of the earlier ditched enclosures (Area III), and included with these inhumations was one in a lead coffin and one with a silver amulet decorated with a representation of the *chi-rho*. This is one of the strongest personal indicators of a late Roman, Christian burial found in Britain, and suggests the presence of a Christian community within the settlement towards the end of its life. Apart from the burials, it is difficult to demonstrate occupation continuing at Fosse Lane beyond the fifth century, and sometime during the early medieval period the site almost certainly reverted to agriculture.

The Fosse Lane settlement, barely known prior to these excavations, can now be firmly identified as one of the local roadside settlement foci or 'small towns' of Roman Britain. A concluding review of the site and the evidence recovered considers such themes as dating, function, status, trade, and regional context, and looks at site formation processes and the methodology adopted in 1990 with a view towards future research.

SUMMARY – FRENCH

En 1990 l'Université de Birmingham menait un projet de fouilles de sauvetage dans le Somerset, à côté du Fosse Way. Les fouilles dégageaient plus de 2 ha d'une agglomération secondaire de l'époque romaine, le long de la route. Les données lors des fouilles, ainsi que des anciens découverts dans le secteur et les recherches préalables à la publication, permettent que Fosse Lane puisse

maintenant s'inscrire parmi les agglomérations les mieux connues de la Grand Bretagne romaine. Le chantier, de grande envergure, livrait la dispositiion des voies, des quartiers d'habitation, des bâtiments en torchis et en dur, de quelques petites nécropoles. Les éléments de datation s'échelonnent du Ier jusqu'au IVe siècle de notre ère, avec une période de prosperité importante au courant du IVe, et le mobilier montre que Fosse Lane était un centre local pour l'expoitation agriculturelle, la fabrication, et les échanges. Les nécropoles, vraisemblablement chrétiennes, appartennaient à la phase la plus tardive d'occupation et restaient peut-être utilisées jusqu'au VIe siècle.

SUMMARY – GERMAN

Im Sommer 1990 wurden im Zuge einer Notgrabung der Universität Birmingham über 2 ha einer romano-britischen Straßensiedlung am Fosse Way in Somerset freigelegt. Durch die Informationen, die in diesem Band vorgelegt werden, und weitere Untersuchungen und Funde aus dem Umkreis fuindet die Siedlung von Fosse Lane nun ihren Platz unter den besser bekannten Kleinstädten und Straßensiedlungen ein. Die Ausgrabungen belegen die Existenz eines typischen lokalen Marktzentrums mit landwirtschaftlicher und kleingewerblicher Produktion, das sich seit dem Ende des 1. Jahrhunderts an einer Hauptverkehrsader entwickelte und seine Blüte im 4. Jahrhundert erreichte. Straßen, Einfriedungen, Grundrisse von Holz- und Steinbauten und eine Reihe kleiner Gräberfelder wurden aufgedeckt. Letztere lassen sich in der letzten Siedlungsphase nachweisen, scheinen bis ins 6. Jahrhundert hinein genutzt worden zu sein und beinhalten eine Gruppe möglicherweise christlicher Gräber.

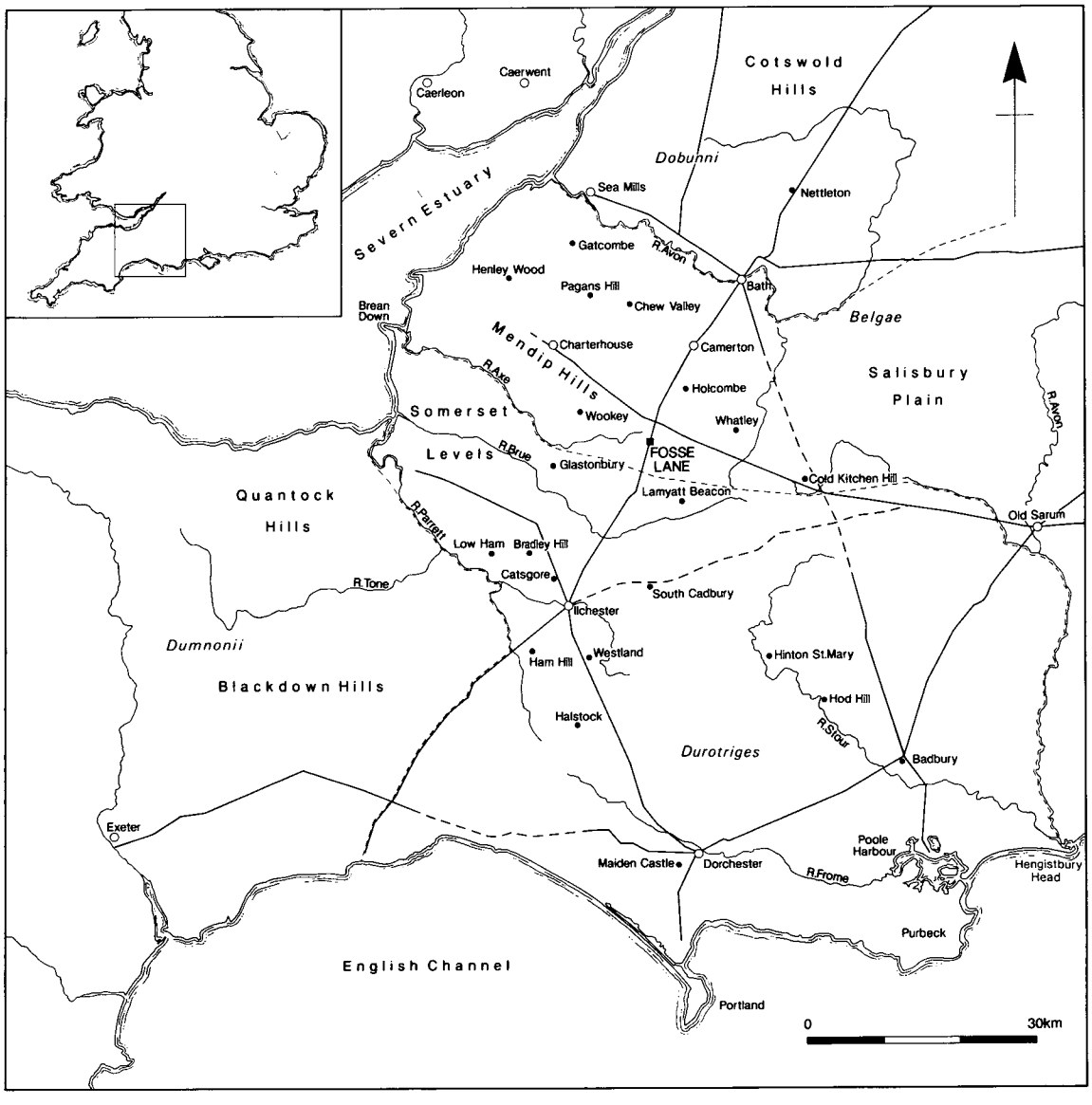


FIG. 1 Site location, south-west England

1.0: INTRODUCTION

1.1: THE SITE AND ITS SETTING

The Romano-British settlement at Shepton Mallet lies astride the Fosse Way on the southern flanks of the Mendip Hills in Somerset. This road, one of the major arteries of Roman Britain (Margary 1973, 5b), passes just to the east of the modern town running south from Bath to Ilchester and the South West (PL. I). At its highest point on Mendip, at Beacon Hill, it is crossed by an east–west road from the Charterhouse lead mining settlement, which then continues east to Old Sarum, Wiltshire (FIG. 1). This crossroad coincides with one of the premier Bronze Age linear barrow cemeteries of Mendip, while the well-preserved remains of a multivallate Iron Age hillfort occupy another high point at Maesbury Castle, less than two miles to the west. The Romano-British settlement lies almost the same distance south from the crossroads, in a valley close to the headwaters of the River Sheppey (FIG. 2).

The site lies on a gentle, east-facing slope on the south side of the upper valley of the River Sheppey, at between 160 and 170 m AOD. This stream flows west from its source at St Aldhelms Well, Doulting, at first through an open valley, before following a deeper and more incised course along the foot of Mendip between Shepton Mallet and Wells. Underlying the locality are almost horizontally bedded formations of the Jurassic Lower Lias, here a massive and well-bedded, hard, grey-white fossiliferous limestone, occasionally interbedded with grey-green clay and mudstone. This outcrop is mainly responsible for a plateau which extends westwards for several kilometres, flanked by deeply dissected valleys to the south and the Sheppey valley to the north. To the east the site is overlooked by the higher ground (over 200 m AOD) of Ingsdons Hill and Whitstone Hill, also of Jurassic (Inferior Oolite) limestone, and at Doulting occurring as a high quality building stone, quarried in the Roman and medieval periods, and subsequently. To the north and north-west the main mass of the Mendip Hills approach 300 m AOD, principally as older Carboniferous formations of limestone and shales. At the high points of Beacon Hill, Maesbury and Pen Hill (above Wells) are inliers of even older Old Red Sandstone conglomerates and sandstones of Devonian age.

Evidence from all available sources suggests that the main settlement extended for almost one kilometre flanking both sides of Fosse Lane and spread up to 300 m out from it. Its northern and eastern boundaries are the valleys of the River Sheppey and a tributary stream along Frog Lane to the east. To the south it terminates close to the hamlet and road junction at Cannards Grave, while its western boundary lies along the top of a gentle slope — the highest part of the site. Fosse Lane, which bisects the site, is a modern road following closely the course of its Roman predecessor and continuing south through Cannards Grave as the A37 to Ilchester (FIG. 2). Northwards, the Roman Fosse Way is now marked by a green lane which climbs up from the crossing of the Sheppey at Charlton to Beacon Hill on the crest of the Mendip Hills. The modern town of Shepton Mallet has spread eastwards along the valley from its medieval core around the parish church, to absorb the Domesday hamlet of Charlton, bounding and encroaching upon the Romano-British settlement from the north-west. The parish boundary reflects to some extent the Roman settlement area, extending east of the Fosse Way to the Hundred stone on Whitstone Hill. This is in marked contrast to

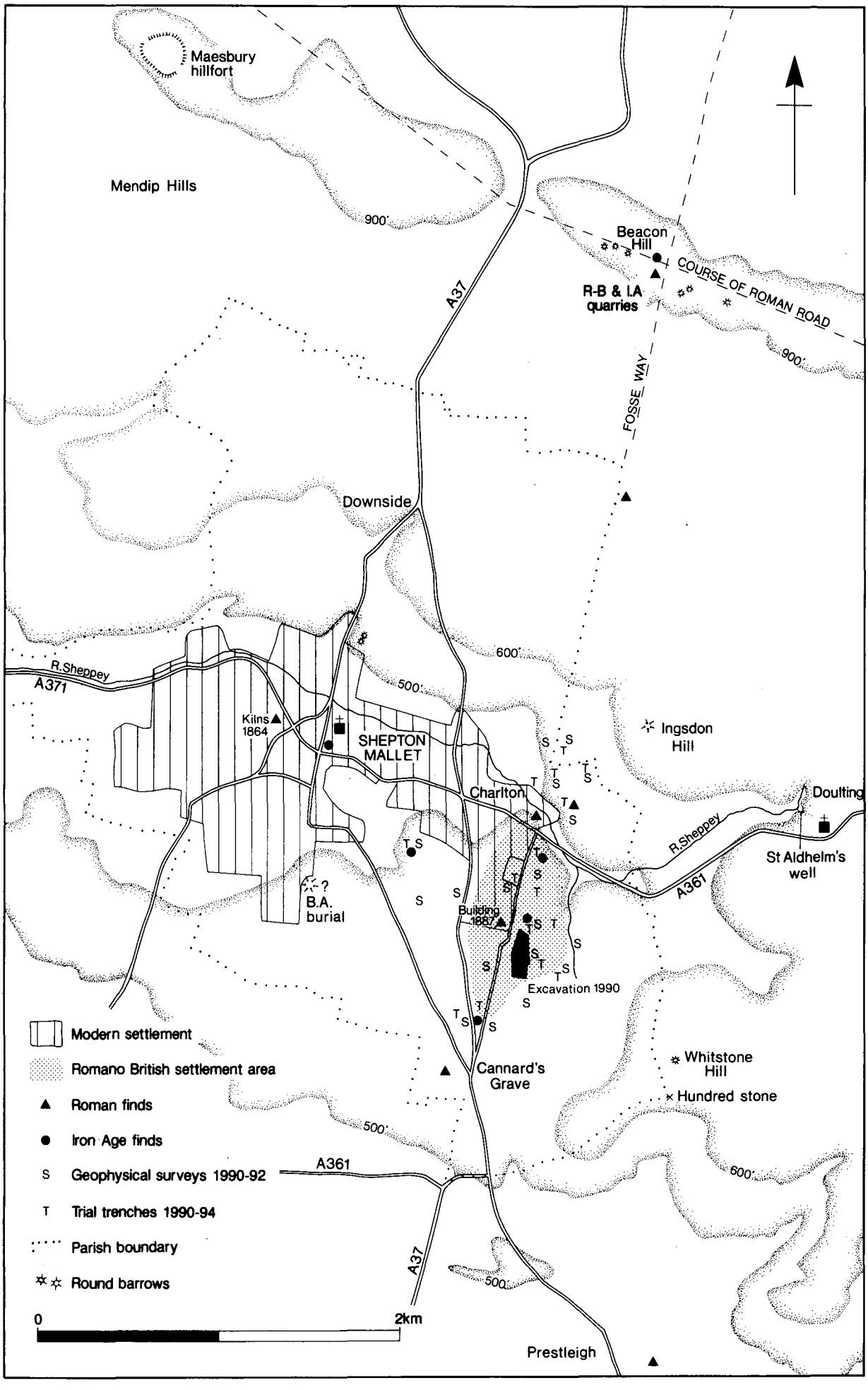


FIG. 2 Fosse Lane and Shepton Mallet, the locality

neighbouring parishes north and south of Shepton Mallet which respect the road as their boundary. Today the local agricultural regime is primarily livestock farming, in a landscape of predominantly pasture fields. There is a small percentage of cultivated arable, but woodland is scarce except on steep scarps or narrower valley sides.

Prior to development and the excavations of 1990, land to the east of Fosse Lane belonging to Bullimore Farm was divided into a series of irregular, sub-rectangular pasture fields with drystone wall boundaries. Only one of these, the most southerly of the whole development, was in regular arable cultivation. All these fields were probably created as part of the widespread eighteenth-century Enclosure, the pattern of which still survives largely intact in the landscape today despite some modifications. Previous to this the area may have been dominated by more extensive sheep pastures, particularly on the higher ground. Sheep have certainly played a major role in the local agricultural economy since at least the medieval period, as the name of Shepton Mallet testifies so graphically. The town itself evidently originated as a village (Sepetone), the property of Glastonbury Abbey at Domesday, developing as a small market town, though never with borough status, in the later medieval ownership of the Mallet family. Its subsequent growth and prosperity were linked with the cloth industry, and more recently with brewing and soft drinks (Aston and Leech 1977). These activities have left an abundant architectural legacy, both industrial and domestic, upon the surviving built fabric of the town. Charlton (Cerletone) also figures in the Domesday Book, evidently a separate focus of settlement in Shepton Mallet. The hamlet was probably centred upon the crossroads of the Fosse Way and the road to Frome (Charlton Road). In 1987 a rectangular medieval earthwork enclosure was destroyed by housing development at Brewery Lane north of the road here (Ellis 1987). The settlement may also have extended along Frog Lane to the south-east, as thirteenth-century pottery and some metalwork finds were recovered from disturbances and landscaping immediately to the west of 'Meadow View' there in 1990.

1.2: BACKGROUND TO AND CIRCUMSTANCES OF EXCAVATION

Prior to the excavations of 1990 the existence of Roman Shepton was hypothesised only from a series of disparate and generally ill-recorded discoveries made in and around the town (Smith 1987, 298). Of these, the earliest and best known was a small group of pottery kilns close to the present town centre. In the nineteenth century two railway lines converged on Fosse Lane, the first in 1858 linking Shepton with the Great Western Railway, and still surviving today as a substantial east–west embankment across the site. In 1874 the Somerset and Dorset line was opened, its north–south course crossing the Wells line just to the east of Fosse Lane. Here, in the course of further works and quarrying for stone in 1887, the remains of a substantial stone-founded Roman building were discovered. No trace of this now survives, although some of the finds (now held by the Town Council) are included within this publication. Other casual discoveries of Roman artifacts seem to have been made in the Charlton/Fosse Lane locality since that time, but are poorly documented, and Roman structures are rumoured to have been found and destroyed during construction of the housing estate at Whitstone Rise in the 1970s. The activities of metal detectorists, mainly in the regularly ploughed field south of the railway embankment during the 1980s, recovered not only coins, metalwork and some pottery, but also a lead coffin located in 1987 (PL. II). This was excavated and removed by the Somerset County Museum Service in 1988. Metal detectorists had been active in this and adjacent fields for some years, but no systematic survey or documentation of archaeological material from here had ever been undertaken. Some of this material is published in this report.

By 1989 plans had been laid for a major commercial and residential development on land along the east side of Fosse Lane, extending south from Charlton Road (A361) to fields south

of the former railway embankment (FIG. 3). At that time, prior to the issue of Planning Policy Guidance Note 16 relating to archaeology and planning (PPG 16) by the Department of the Environment in 1990, there was no formal structure for the archaeological assessment of development planning proposals in Somerset. On the advice of the archaeology officer for Somerset County Council, the Mendip District planning authority did, however, make a limited archaeological evaluation one condition of a Section 52 agreement for development planning consent. Both the timing and scope of this requirement were too limited to permit a full assessment of the entire area affected by development, but trial trenching and an area excavation were commissioned by Wayopen Estates Ltd (then owners of the site) in the zone south of the disused railway. This was undertaken by the Birmingham University Field Archaeology Unit (BUFAU) in February/March 1990, focusing upon the location of the coffin burial found in 1988 (Ferris and Leach 1990). From this it rapidly became apparent that the extensive and varied remains of a Romano-British settlement, along with at least one small cemetery, survived within an area scheduled for early development.

1.3: RESEARCH OBJECTIVES AND PROCEDURE

In the circumstances of an imminent, large-scale and potentially destructive development upon the proven, but incompletely evaluated, remains of a complex Romano-British settlement, no detailed research design for an appropriate mitigation strategy could be formulated. However, the field response adopted had three basic objectives:

1. The size of the development gave the potential for exposure in plan of a large, albeit multiphase, sample area within a Romano-British 'small town'.
2. Selective sampling by detailed excavations within the larger sample could be aimed at assessments of the site chronology, character/status, and functions.
3. The potential extent, preservation and distribution of finds material and structural elements suggested exceptional opportunities for the analysis of quantified patterns within the record.

An excavation project was mounted thereafter in response to a development timetable commencing midsummer 1990. Negotiations between BUFAU, Somerset County Council, Wayopen Estates Ltd and Showerings Ltd (a division of the Hiram Walker Group of Allied Lyons), who were to develop the site for warehousing and distribution, agreed an excavation programme commencing in May and initially lasting for six weeks. With so short a timetable it was impossible to commission a more extensive assessment, as might have been obtained by geophysical prospection, and thus devise the most effective strategy for either preservation or investigation within the development area. At this stage no scheme for archaeological evaluation of the remaining areas designated for development at Fosse Lane had been devised, although to some extent this was achieved subsequently (FIG. 3). For the Showerings' development the strategy adopted was to machine-strip the topsoil over the greater part of the warehouse building and its service area surroundings (over 2 hectares),

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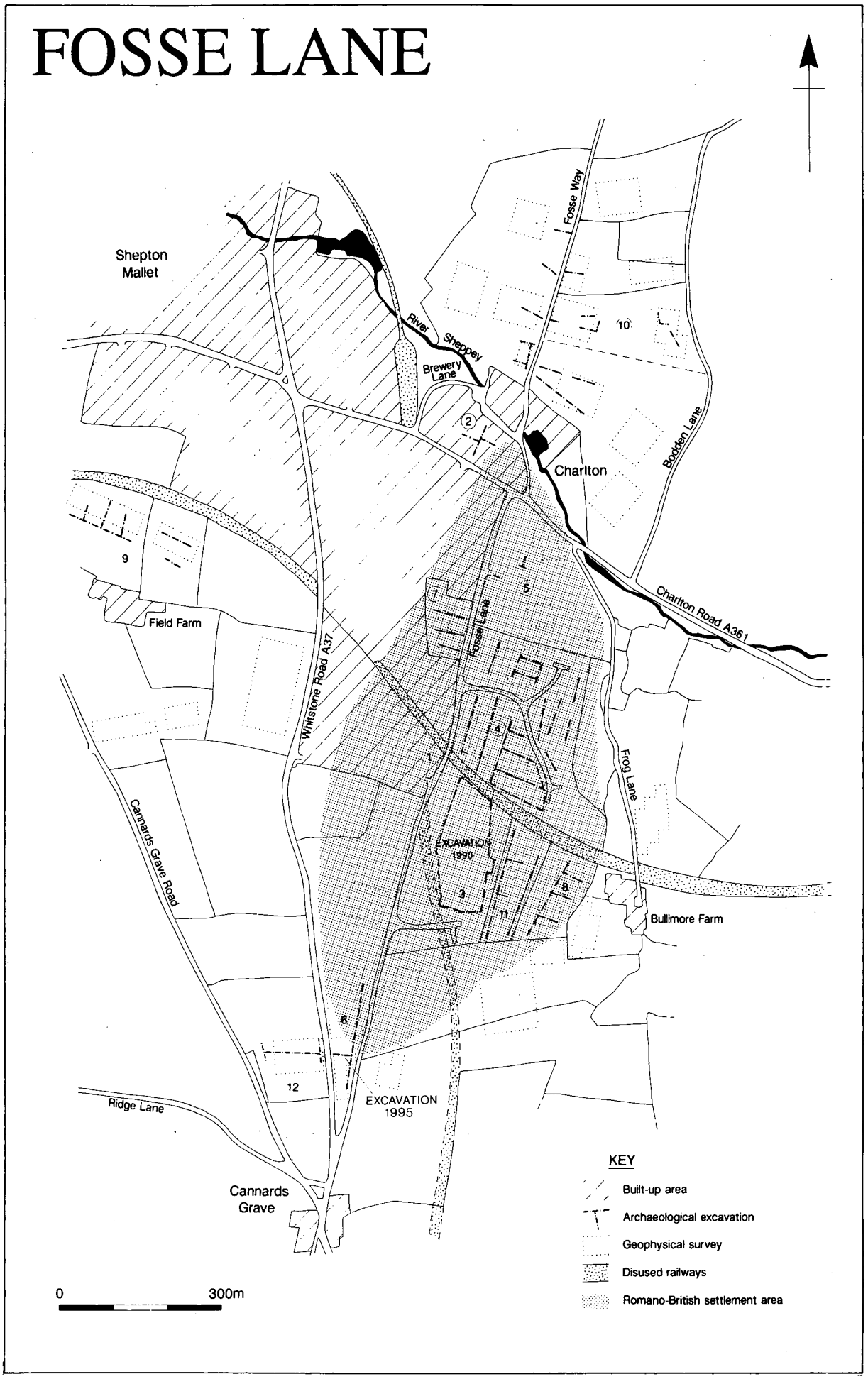
FIG. 3 (opposite) Fosse Lane, discoveries and investigations (to 1994).
Index of sites: 1) Roman building destroyed 1887; 2) Brewery Lane evaluation 1987; 3) Fosse Lane excavations 1988 and 1990; 4) Mendip Business Park evaluations and excavation 1990, 1992 and 1994: 5) Persimmon Homes evaluation and excavations 1990 and 1991; 6) Fosse Lane West evaluation 1990; 7) Wolff Construction evaluation 1991; 8) Bullimore Farm evaluation 1991; 9) Field Farm evaluation 1991; 10) Woodlands Farm evaluation 1992; 11) Fosse Lane evaluation 1992; 12) Cannards Grave evaluation 1994


FOSSE LANE
Shepton Mallet
River Sheppey
Brewery Lane
Fosse Way
Bodden Lane
Charlton
Charlton Road A361
Field Farm
Whitstone Road A37
Fosse Lane
Frog Lane
Cannards Grave Road
EXCAVATION 1990
Bullimore Farm
Ridge Lane
EXCAVATION 1995
Cannards Grave
0
300m
KEY
Built-up area
Archaeological excavation
Geophysical survey
Disused railways
Romano-British settlement area

hand-clean and record the generally undisturbed horizon of first-definition archaeological or natural configurations beneath, and select areas so revealed as sample sites for the excavation of as wide a range and chronology of the archaeological feature and context types that could then be recognised.

As the topsoil strip proceeded and manual cleaning commenced, the scale and complexity of archaeological remains preserved on the site rapidly became apparent. To attain any of the archaeological objectives a revised strategy involved negotiations to obtain relatively minor, but potentially important, modifications to the building design specifications and construction timetable, and increased resources to extend the life of the field recording project. The former concessions provided some amelioration of the effects of groundworks upon areas outside the warehouse building, in particular over zones to the north and east, where levels could sometimes be raised or a protective membrane used to seal more sensitive areas. Modifications to the contractor's operating timetable enabled the programme of excavation and recording to be extended into the beginning of September. This was complemented by the provision of additional resources by the developer, Showerings Ltd, Somerset County Council, Mendip District Council, and a substantial grant from English Heritage.

1.4: EXCAVATION AND RECORDING STRATEGIES

What was at first envisaged as a six-week programme of fieldwork commencing on May 14th 1990, was ultimately extended to over three months. An area in excess of 1.5 ha was eventually cleared using a tracked 'Hy-Mac' mechanical excavator with lorries to remove spoil. Existing constraints determined the area available for investigation, and only to the north did its bounds correspond with those of the development site against the disused railway embankment. To the west, a landscaped embankment would protect archaeological remains alongside the present Fosse Lane road frontage, where not already affected by the infilled cutting of the Somerset and Dorset railway. To the south, construction of a new access road had commenced before the excavations began. The eastern site boundary was determined by a line of live electricity supply poles, and an expectation that the development specifications required some making-up of levels and thus better preservation of archaeological horizons in this direction (FIG. 4). Development plans for the warehouse building necessitated levelling of the site by terracing into the uphill slope of the ground towards Fosse Lane. This area was therefore prioritised for examination and recording. Further north and east, where the lie of the land required little more than surfacing over, or sometimes making up, of levels above horizons of archaeological preservation, total recording of cleaned surfaces or their sampling by excavation was clearly a lower priority.

Initially, the excavation site covered parts of two fields separated by a drystone wall. The smaller, to the north, was under permanent pasture, while that to the south was in regular arable cultivation. In February/March the preliminary site evaluation had examined two areas in the pasture field (Trenches B, C, D and E) close to the Fosse Lane boundary, and a larger area (Trench A/G) in the southern field centred on the discovery site of the lead coffin in 1988. The latter was incorporated into the main excavation site of summer 1990, but the other trenches could not be included (FIG. 5). Mechanical excavation removed no more than 0.2 m of topsoil and resulted in the exposure of a subsoil horizon of variable character. Hand-cleaning thereafter revealed more clearly the form and extent of these variations; defined as the 'horizon of first definition'. Arising from this process the two most immediate concerns were to locate and record the considerable quantities of portable finds thereby encountered, and to record the cleaned surfaces so exposed. The collection and recording of the former was achieved by the allocation of finds numbers in a running sequence beginning with 0001 through to 5485, the position of each being determined by EDM survey. Material was bagged

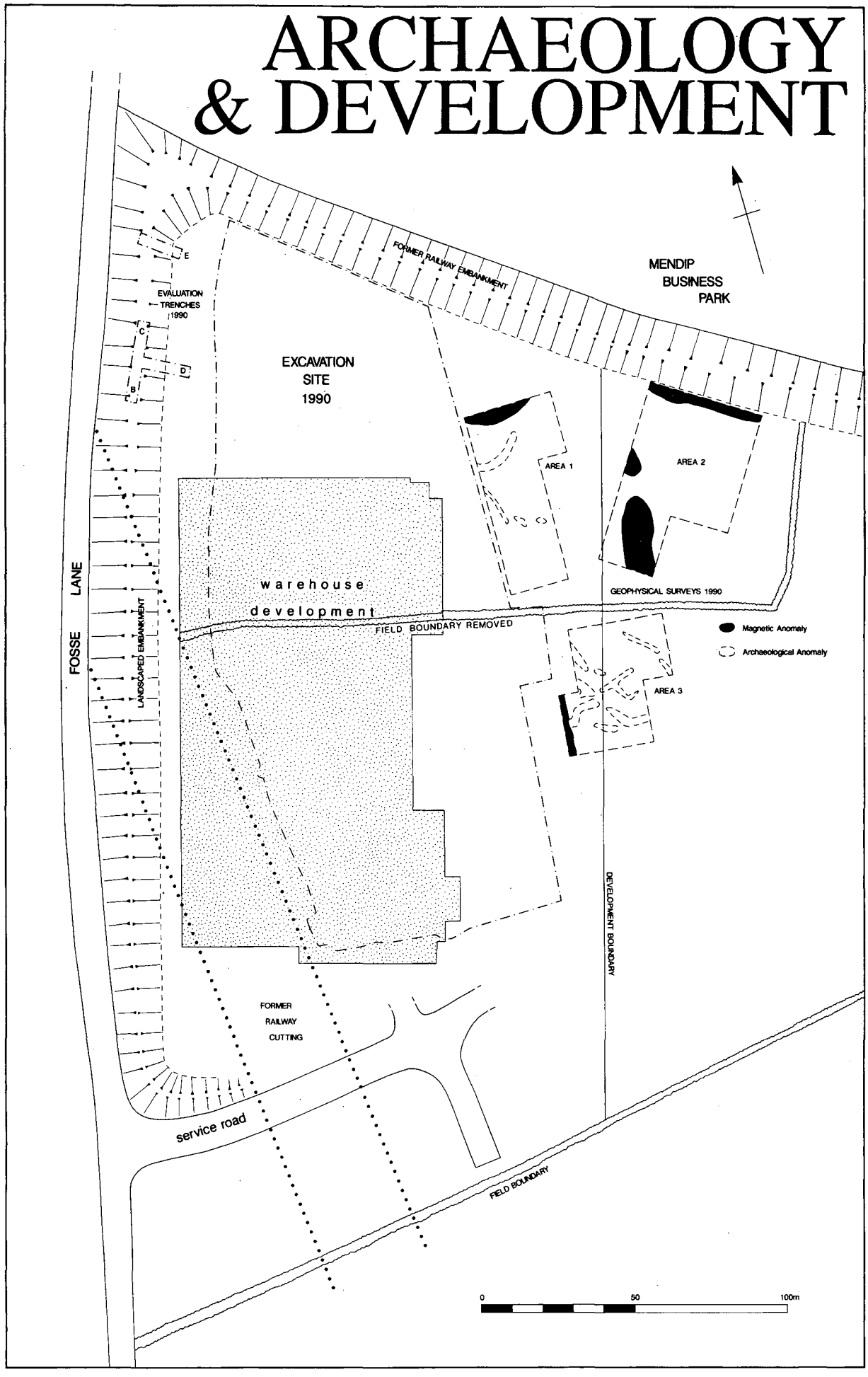


FIG. 4 Fosse Lane, excavation and development 1990

individually or in small groups as collected from within a 1 m^2 area on site by the excavators, and left *in situ* for a recorder/surveyor team to allocate numbers to bags, survey in their position, and then collect and remove from site. At this stage no other attempt was made to relate these finds to areas or suspected archaeological contexts, as revealed in the cleaning process.

Given the scale of operations and the resources available, conventional graphic planning at this stage would have been too slow and labour intensive, but the exposure of extensive and relatively level cleaned surfaces, within which was a high percentage of stone, suggested the suitability of vertical photographic recording (Renow 1985). To achieve this a 5-metre-high pyramidal, aluminium frame quadrupod tower was employed as a mount for a 35 mm camera. Positioned relative to the site survey grid as established at 10 m intervals, overlapping sets of colour prints were taken using Kodacolour 100 film and a long cable release, by moving the quadrupod in either direction parallel and within the grid over the freshly cleaned areas. Within each photograph was included a north orientation, a photo identification board, and a tape with the one metre intervals highlighted and laid along one grid axis (PL. III). Each photograph covered an area of approximately 3 m^2, of which no more than a central 2 m^2 was usable without unacceptable distortion. From the photographic negatives, prints at a scale of approximately 1:25 could be prepared most economically and mounted as sets forming a photo-montage of all surfaces exposed in cleaning (see PL. XXI). In most instances these are mounted on A1-size sheets of thin card and covered with transparent laminate for additional protection. This colour photo-montage now exists as a unique record of the first-definition horizon of the site and forms part of the excavation archive.

From this photographic record it has been possible to prepare interpretative scale drawings of those areas of the site cleared to first-definition stage, and for some areas subjected to further excavation. The production of a drawn record from the site photo-montage was aimed primarily towards a transfer and storage of this data to a computerised AutoCAD graphics programme. In practice, this involved an interpretative tracing on drawing film of the boundaries to potential archaeological (as well as natural) contexts, and coding them according to identifiable characteristics — e.g. walls, rubble spreads, cobbling, ditch fills, burnt soil/hearths, bedrock, etc. Internal detail, notably in relation to stone rubble distributions, was not normally recorded, but any subsequent context numbering or phasing information derived from excavation was also added, along with the site grid intersection reference points. To facilitate the transfer of this information to the AutoCAD programme the tracings were reduced by 50% to a format from which they could more conveniently be digitised.

In tandem with the graphics computerisation, finds identification data matched to the EDM recorded finds plots, as well as material recorded from subsequently excavated contexts, was also entered onto computer files. By combining these two programmes it is thus possible to relate the distribution of different finds categories to the site geometry. The AutoCAD programme enables a rapid depiction of the site layout relative to phasing information and finds distributions in a variety of combinations and scales. Subsequently, a Geographic Information System (GIS) analysis was applied to the computerised data, which has enhanced the interpretation of spatial distributions and site function. It has also supplied the basis for certain published figures, although more detailed site illustrations derive directly from the vertical photographic montage or other graphic records made during the excavation (Biswell *et al.* 1995).

Within the parameters of the field project first-definition clearance could not be fully achieved throughout the area of topsoil removal. Virtually all of the southern half of the site was cleared and recorded, apart from the south-east corner. This strategy was adopted in response to the proposed development programme, which required extensive terracing and building foundation works at a relatively early stage in the southern and western parts of the

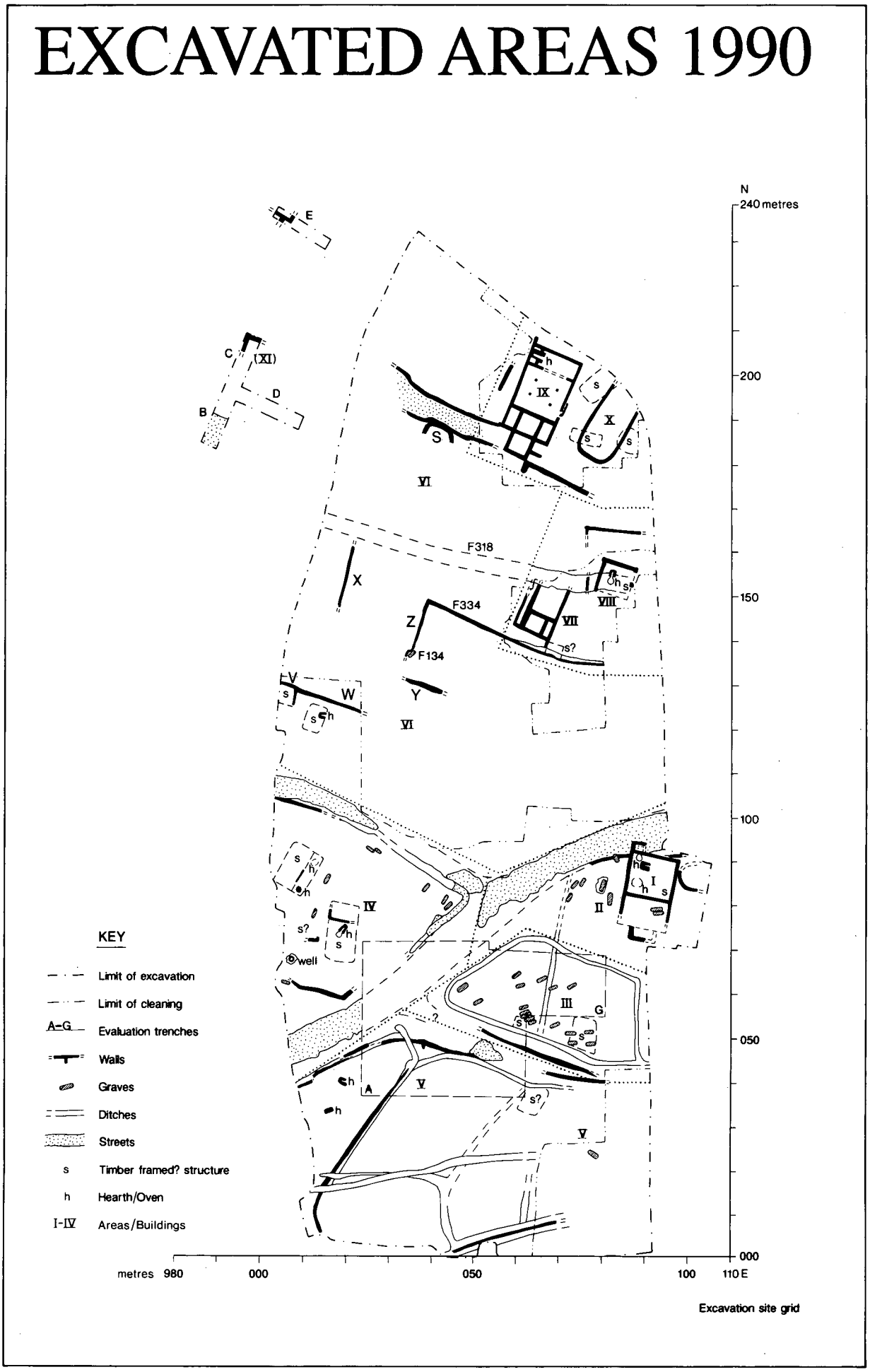


FIG. 5 Excavation site plan, principal zones and features

PL. III Vertical quadrupod photography over Building VII. (J. Sterenberg)

site. An additional factor here was the better visibility of features and deposits relative to the northern half where a deeper soil overburden was present. This appears to reflect the effect of erosion by ploughing in the arable field, while archaeological remains to the north were still partly masked by a thin subsoil layer. Nevertheless, it was apparent that several substantial structures were present there also, even before sub-surface cleaning had commenced.

Towards the end of June a revised work schedule and the now evident scale and diversity of surviving archaeological remains, required a change of emphasis in the excavation strategy. This involved more restricted excavation sampling of the range of context/feature groups which typify the Fosse Lane settlement, diverting resources away from more widespread first-definition cleaning. Effectively, this resulted in less than half of the northern half of the site being defined in this way, the process being restricted to areas where more detailed excavation was to take place. Selection of the latter, from across the whole site, focused upon the remains of more substantial buildings where the complexity and sequence of stratigraphy was likely to be greatest (PL. IV), and upon sampling a range of more discrete features representing different activities within the compounds. Priority was given to those areas where maximum destruction was anticipated. Additionally, and for political reasons, it was considered expedient to locate and excavate all known burials. The adoption of this strategy led to more conventional archaeological recording for these features and areas. This involved single context excavation and recording using pro-formae for written records accompanied by scale drawings (plans and sections), photographs (including oblique and quadrupod coverage) and the collection of associated finds. The latter were donated by Showerings Ltd to the Somerset County Museum. The finds and a copy of the site records are held by the Museum under the Accession number TTNCM 70/1990. The original paper and photographic archives, including secondary unpublished material generated or stored as electronic data, are housed at the University of Birmingham prior to their eventual deposition with the County Museum Service.

PL. IV Excavation of Building VII, view north-east. (J. Sterenberg)

Finally, during this second phase of the field project, it was possible to schedule a programme of geophysical prospection, involving magnetometry, resistivity and subsurface impulse radar. These surveys were designed primarily to investigate areas which were not topsoil stripped for archaeological recording along the eastern margin of the site (FIG. 4). Ground conditions were not ideal for any of these techniques, although magnetometry produced some indications of archaeological features in areas where recent surface activity was minimal. Data from these surveys are available in the archive (Geophysical Surveys of Bradford, Report 90/49; Impulse Radar Report 0106/1/90).

1.5: POST-EXCAVATION RESEARCH

At the conclusion of the field campaign a full assessment of its results and a research design for their publication were commissioned by English Heritage (Leach *et al.* 1991). This document was prepared according to guidelines issued by English Heritage (1991), and the approved programme, supported financially by English Heritage and Allied Domeq, was implemented between 1992 and 1995. Those proposals were the basis for a presentation of the data and its interpretation in this publication. Texts for the introductory sections (1), site investigation narrative (2) and much of the concluding discussion (4) were prepared by Peter Leach, who was also responsible for initial editing and, with Jane Evans, for organising the report overall. Section 3 comprises a series of specialist contributions, attributed to their individual authors and co-ordinated by Jane Evans, principal author of the pottery report and contributor to the discussion.

The principal themes which provide a context for the subsequent research can be expressed at two overlapping levels: 1) local and site-specific, and 2) wide-ranging, inter-site and cultural.

1. Local themes include characterisation of the settlement and its definition as a local type site for the contemporary archaeology of its immediate hinterland; its origins, chronology and fate; functions, character and status relative to its social and economic basis; while the analysis of extensive and well-recorded artifact and ecofact data provides opportunities for worthwhile intra- and extra-site comparative studies.
2. Wider-ranging themes include the study of smaller Romano-British urban roadside settlements through large areas with well-preserved remains (Society for the Promotion of Roman Studies 1985, 4.3.3; Burnham and Wacher 1990, 320); transitions between pre-Roman Iron Age and Romano-British, and between Romano-British and post-Roman/early Medieval societies (Society for the Promotion of Roman Studies 1985, 5.1.1; English Heritage 1990, 42); and, regionally, hinterland-orientated multi-period studies (English Heritage 1990, 44).

Since the excavations of summer 1990 an extensive and extended programme of site evaluation has been undertaken in the locality (FIG. 3). This has come about principally in response to a range of potential developments as a requirement of planning consents, not all of which have (to date) proceeded further. Most of these assessments involved combinations of geophysical survey with trial trenching, and have enabled plotting of the Romano-British settlement area at Fosse Lane to a fair degree of accuracy, as well as testing the potential of some peripheral areas. It is not intended that these results form part of this publication, although they contribute significantly to an appreciation of the settlement and its context and are referred to in more detail in the concluding discussion.

2.0: SITE NARRATIVE

2.1: INTRODUCTION

To present a coherent account of the discoveries and evidence recorded at Fosse Lane in 1990 the data has been organised within a spatial and chronological framework. This involved the definition of discrete structural zones across the site (a process which developed during the excavation), and the creation of a period and phasing system into which the individually recorded archaeological components are fitted to construct a sequential history of events.

Sub-dividing the excavation site into zones enables a convenient presentation and initial interpretation of all recorded structural evidence. A total of eleven zones is distinguished, defined either by the presence of major stone building remains or as sets of structures with apparent spatial and/or chronological associations, and identified as Areas/Buildings I to XI (FIG. 5). To a large extent their order reflects the sequence of investigation and recording during the course of excavation, but it is convenient to retain this in the following presentation of the evidence (Sections 2.2–2.9). This is followed by a summary interpretation of the site and its sequence (2.10).

Interpretative analysis of the structural data recorded during the excavations suggests a scheme for its sub-division into a chronological events sequence. This has resulted in the definition of six major event periods (1–6), and one other (Period 0) based almost exclusively upon prehistoric finds. A further sub-division into phases was sometimes appropriate locally, where excavated sequences proved most complex. An absolute chronology for this scheme is dependent upon the association of datable artifacts with archaeologically defined contexts; especially from the localities sampled most extensively by stratigraphic excavation. The major periods are summarised briefly below. Details of their component elements and any sub-phasing applied are considered in the narrative account of each Area/Building, which follows thereafter.

Period 0: Pre-Roman. No structural remains can be attributed with certainty to this period, the evidence for which comprises residual flint assemblages of Late Neolithic and Early Bronze Age character, and a handful of Iron Age pottery sherds.

Period 1: Later first to early/mid-second century A.D. Fragmentary structural evidence relating to building remains and boundary features underlies Buildings VII, IX, X and XI. This is supported by a relatively small, but more widely distributed, assemblage of contemporary datable finds.

Period 2: Mid-second to mid-third century A.D. Buildings VII, X, and XI, and associated compound boundaries. The earliest definition of cobbled streets and other compounds in Areas II, III, IV, V and VI are primarily of this period, although some may originate in Period 1.

Period 3: Mid-third to very early fourth century A.D. Building IX; new or re-defined compounds and streets in Areas III, IV, V and VI; structures east of Building I.

Period 4: Early to mid-/later fourth century A.D. Buildings I, VIII, and IX, with some new or redefined compounds. Further boundary redefinitions and probable structures within enclosures in Areas III, IV, V and VI; small inhumation cemetery in Area II.

Period 5: Later fourth to ?seventh century A.D. Buildings I, Phase iii and VIII, Phase ii; timber-framed structures over Building X and in Areas IV, V and VI. Small inhumation cemeteries in Areas III and IV, and occasional burials elsewhere. Eventual cessation of occupation and abandonment of site.

Period 6: Post-Roman to modern. ?Medieval field track over Building VIII; field boundary over Building IX; post-medieval agriculture and modern disturbances.

APPENDIX — LIST OF PHASED CONTEXTS AND FEATURES

Period 1: later first to early/mid-second century A.D.

Area II:	1146
Area III:	1029, F43
Area VI:	1010, 1011, ?1012, 1017, F7, F8, F9, F10
Building VII:	1370, 1375, 1397, 1503, 1522, 1588, 1589, F325, F329, F330, F368
Building VIII:	1582, 1587, F363, F364
Building IX/X:	6050, 6051, 6053, 6056, F633

Period 2: mid-second to mid-third century A.D.

Building I/Area II:	1402, 1432, F122, F428, F440
Area III:	1024, 1137, F30/F31, F129
Area IV:	?F34, F135, F137, F138, F139
Area V:	1028, F15, F16, F17, F21, ?F37
Area VI:	1006, 1009, 1019, F12, F13, F14, F47, F48
Building VII(i):	1300, 1301, 1302, 1303, 1368, 1369, 1373, 1384, 1510, 1512, 1519, 1520, 1521, 1523, 1526, 1591, F300, F301, F302, F303, F334, F371, F372, F373
Building VII(ii):	1305, 1306, 1308, 1330, 1350, 1351, 1352, 1354, 1361, 1363, 1367, 1374, 1395, 1396, 1508, 1509, 1511, 1513, 1514, 1515, 1516, 1518, 1524, 1525, 1590, F304, F305, F306, F307, F312, F313, F326, F327, F328, F331, F332, F333, F335, F370
Building VII(iii) demol.:	1304, 1307, 1309, 1310, 1311, 1312, 1313, 1314, 1326, 1329, 1331, 1334, 1335, 1336, 1366, 1372, 1386, 1390, 1391, 1394, 1500, 1504, 1505, 1506, 1527
Building VIII:	1381, 1592, 1593
Building IX:	6031, 6032, 6039, 6041a, 6055, F631, F634, F650, F653, F667, F668, F669
Building X:	6033, 6042, 6043, 6044, 6045, 6049, 6052, F612, F630

Period 3: mid-third to very early fourth century A.D.

Building I:	1145, 1443, 1448, 1449, ?1451, F431
Area III:	1136, 1138
Area IV:	?1128, ?F118, ?F136, ?F137
Area V:	1022, 1025, 1026, F19
Area VI:	1013, 1015, 1016, F11
Building VII:	1353, 1362, 1376, 1501, 1502, F318, F324
Building VIII:	1344, 1345, 1355, 1356, 1357, 1579, 1581, F351
Building IX(i):	?6020, 6023, 6024, 6028, 6030, 6033, 6038, 6041, 6046, 6047, 6054, F600, F602, F617, F620, F625, F632, F654, F661, F662, F666, F670
Building IX(ii):	6003, 6008, 6014, 6017, 6025, ?6026, 6027, 6034, 6035, 6036, 6037, 6040, F600E, F601, F615, F627, F628, F629, F655, F656, F659, F660, F663

Period 4: early–mid-/later fourth century A.D.

Building I(i):	1403, 1426, 1427, 1430, 1436, 1437, 1438, 1442, 1445, 1452, 1454, 1455, 1456, F403, F412, F422, F426, F430, F433, F436, F437
Building I(ii):	1401, 1410, 1421, 1422, 1423, 1425, 1429, 1431, 1433, 1434, 1435, 1444, ?1446, F401, F411, F417, F418, F419, F420, ?F423, F429, F432
Area II:	1105, 1106, 1107, 1108, 1109, 1110, 1120, 1121, 1122, 1123, 1124, 1125, 1130, 1144, F105, F106 (HB 12), F107, F108 (HB 13), F109 (HB 14), F110 (HB 15), F120 (HB 24), F121, F135 (HB 45), F136

Area III:	1033, F45, ?F46, ?F128
Area IV:	1034, 1118, ?1127, 1143, F32, F33, F35, F133
Area V:	?1020, 1027, F18
Area VI:	1008, F49
Building VII:	1371, 1383, 1385, 1389, 1399, 1507, F319, F321, F322
Building VIII(i):	1317, 1318, 1319, 1325, 1332, 1338, 1339, 1341, 1346, 1347, 1348, 1349, 1358, 1359, 1360, 1364, 1377, 1378, 1551, 1566, 1568, 1569, 1570, 1571, 1572, 1573, 1574, 1575, 1576, 1578, 1580, 1581, 1583, 1584, 1585, 1586, F308, F309, F311, F314, F317, F323, F350, F353, F354, F355, F356, F357, F358, F359, F361, F362, F367, F369
Building IX(iii):	6001, 6002, 6004, 6014, 6016, ?6026, F604, F605, F606, F610, F621, F624, F626, F638, F651, F652, F657, F658

Period 5: later fourth to ?seventh century A.D.

Building I(iii):	1400, 1405, 1407, 1411, 1412, 1413, 1414, 1415, 1416, 1417, 1419, 1420, 1428, 1439, 1440, 1441, ?1446, 1447, 1450, F400, F404, F405, F406, F407, F408, F414, F415, F416, F421, F424, F425, F427, F438 (HB 33), F439 (HB 34)
Area III:	0999, 1023(4–5), 1030, 1031, 2032, 1111, 1112, 1113, 1114, 1115, 1116, 1117, 1126, 1131, 1133, 1134 (4–5), 1135 (4–5), 1141, 1142, F29 (HB 1), F40 (HB 2), F41 (HB 3), F42 (HB 4), F50 (HB 22), F111, F112 (HB 16), F113 (HB 21), F114 (HB 18), F115 (HB 19), F116 (HB 20), F117 (HB 17), F123 (HB 25), F125 (HB 27), F126 (HB 23), F127 (HB 28), F131 (HB 30), F132 (HB 29)
Area IV:	1100, 1101, 1102, 1103, 1104, 1119, 1129, 1139, 1140, F100 (HB 7), F101 (HB 8), F102 (HB 9), F103 (HB 10), F104 (HB 11), F119, F124 (HB 26), F130, HB 5, HBs 6 and 6a
Area V:	1132, F126 (HB 23)
Area VI:	1007, 1018, 1012, F6, F134 (HB 31 and HB 32)
Building VIII(ii):	1320, 1340, 1342, 1343, 1365, 1556, 1557, 1559, 1560, 1561, 1562, 1567, 1577, F310, F315, F316, F360, F366
Building IX/X:	6000, 6006, 6010, 6015, 6018, 6019, 6021, 6022, 6029, F609, F613, F614, F619, F622

Period 6: post-Roman to modern

Building I/Area II:	1404, 1406, 1408, 1409, 1457, F402, F409, F410, F435
Building VIII:	1321, 1322, 1323, 1324, 1327, 1328, 1333, 1337, 1382, 1552, 1553, 1554, 1555, 1563, 1564, 1565, F320
Building IX:	6005, 6007, 6011, F603, F607, F611

2.2: AREA I/BUILDING I AND AREA II

INTRODUCTION

One of the first areas investigated (Area I) lay along the eastern limit of site clearance (FIG. 5). This contained stone wall foundations, subsequently identified as Building I, and remains extending further east beyond those limits. Following first-definition cleaning and recording, sample excavation was restricted to partial removal of the northern half of Building I, since its lower levels and remaining portions were to be unaffected by development. Area II comprised a roughly triangular compound, partly revealed to the west of Building I. The presence of inhumation burials and a mausoleum foundation led to further selective excavation here, primarily of the burials.

PERIODS 1–3

Over much of these areas first-definition cleaning exposed a weathered surface of horizontally bedded, Lias limestone bedrock, interrupted in places by natural or man-made cuts or depressions infilled with clay or other deposits. Elsewhere, the natural clay or bedrock was overlain by structural remains or other deposits, some of which were removed or

sampled by excavation (FIG. 6). Some of these deposits could be linked into a stratigraphic sequence, while others were isolated within the natural clay/bedrock, sealed only by disturbed deposits above. This, combined with only selective sampling excavation, restricts understanding of the full events sequence throughout the two areas, particularly for the earliest periods. Nevertheless, it is clear that much of what survives here does relate to activity of the later periods and that evidence of the earlier was always more disparate. Thus it is convenient to consider evidence of the first three together, identifying that to a specific period wherever possible.

The earliest context may be a fill of red-brown clay soil (1146) occupying an irregular north–south-aligned cut between two outcrops of bedrock within Area II (FIG. 6). Although not excavated here, this should continue northwards the line of a shallow rock-cut ditch (F43), seen in Area III and suspected to have been of prehistoric origin. No further investigation of this feature was made in Area II, although it was sealed beneath the cobbles of the Period 2 street (F440) to the north. The recovery of flint tools and flakes in this general area of the site, although not clearly from pre-Roman contexts, suggests the possibility of much earlier remains surviving here. Several suspected rock-cut features were recorded, though unexcavated, notably beneath and to the east of Building I, and also further south extending into Area III.

Perhaps the earliest Romano-British element in this area was the remains of a street (F440) aligned approximately north-east–south-west. This comprised a zone of cobbles (1402) up to 5 m wide, often as no more than a single layer upon weathered bedrock or natural stony clay deposits, the former sometimes also showing wear. The street surface was best preserved to the east, although cut into by the north porch of Building I, and continued eastwards beyond the bounds of the site. To the west it became progressively more fragmented before eventually disappearing at the west end of Area II. This seems to have been caused by erosion from above, most probably recent ploughing, but a further well-preserved segment was recorded on the same alignment further to the west (F138) along the south side of Area IV. There was no systematic excavation of this street, beyond the cleaning and recording of its exposure in Areas I and II, and associated finds were sparse. The best evidence of date was from its relationship with earlier and later remains: sealing the ?Period 1 ditch fill (1146) in Area II, and being cut by the north end walls of Building I in Period 4. The origin of this street is probably as part of a major settlement layout, attributed elsewhere to Period 2, which also defined a series of compounds (FIG. 28). Although no clear evidence of re-surfacing or other alterations was recorded, it almost certainly continued in use as a feature of Period 3.

Associated and probably contemporary with the street was part of a parallel southern boundary wall (F122), comprising the remains of a single-course drystone wall foundation, seen most clearly in Area II (FIG. 6). Westwards, this wall alignment survived for *c.* 10 m from the north end of Building I, its further continuation perhaps destroyed by later agriculture. Nowhere was there seen evidence of a northern boundary to the street, although any such could have suffered a similar, more complete destruction. The line of F122 did not survive beneath Building I, but, further east, foundation rubble (1432) appeared to mark its continuation as F428 (FIG. 7). This boundary wall probably also represented the north side of a compound first defined as part of the Period 1/2 settlement layout. The full extent of that enclosure is considered further in the discussion of evidence relating to Areas III and V.

To the east of Building I, in the extension of the main site area, a zone up to 8 m wide was also cleared to the horizon of first definition, though not excavated further (FIG. 7). The most important feature seen here was part of an apsidal wall foundation aligned east–west (F431). This comprised a curved, parallel setting of Lias limestone blocks, their outer faces dressed and separated by small stone rubble and some mortar (1443). Only the top course of the southern half of this structure was exposed, although its straight continuation further east over a bedrock surface had probably been destroyed by plough erosion. The northern half of the apse and any continuation further east was not exposed beneath later rubble surfaces

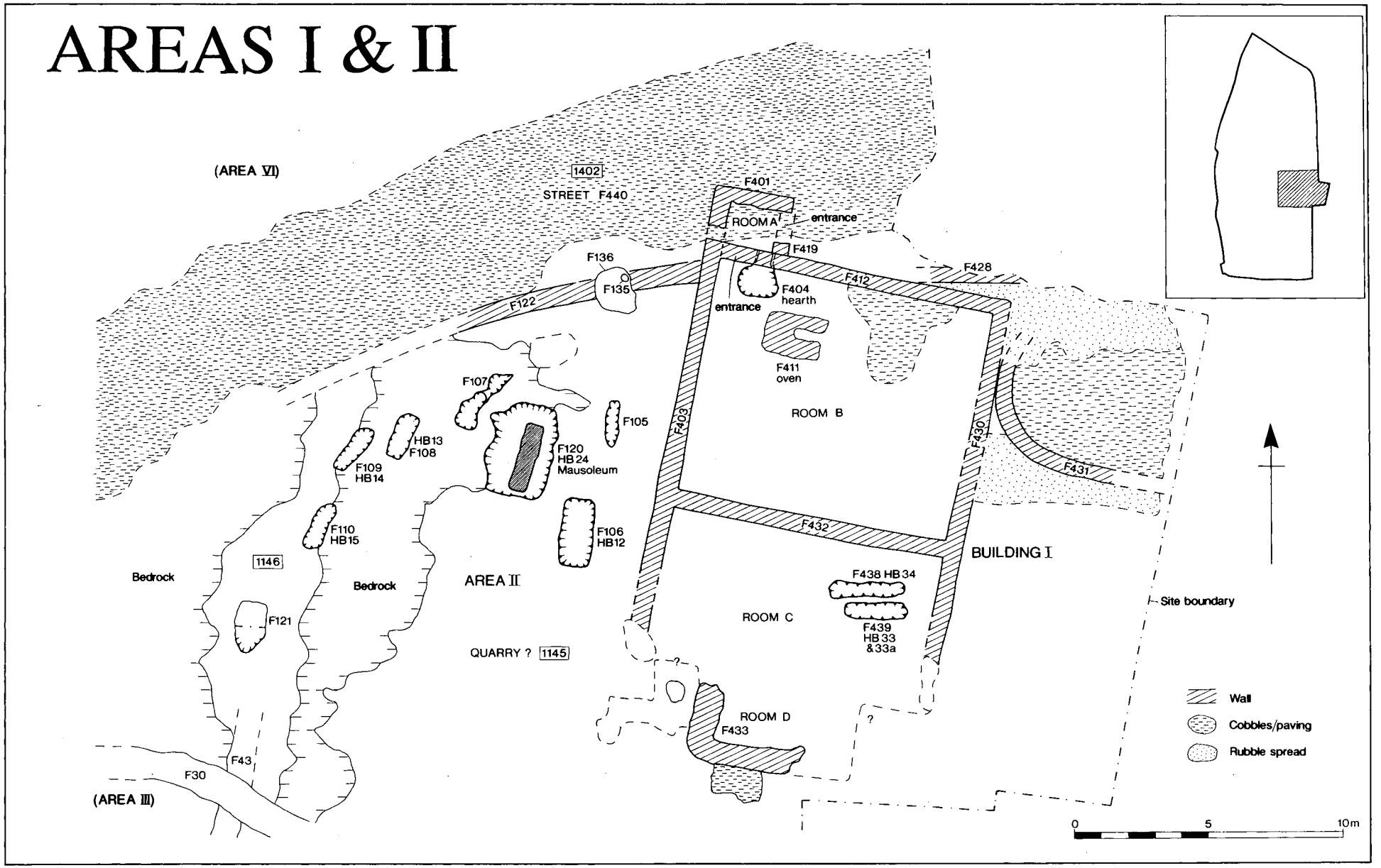


FIG. 6 Area/Building I and Area II, plan of principal features

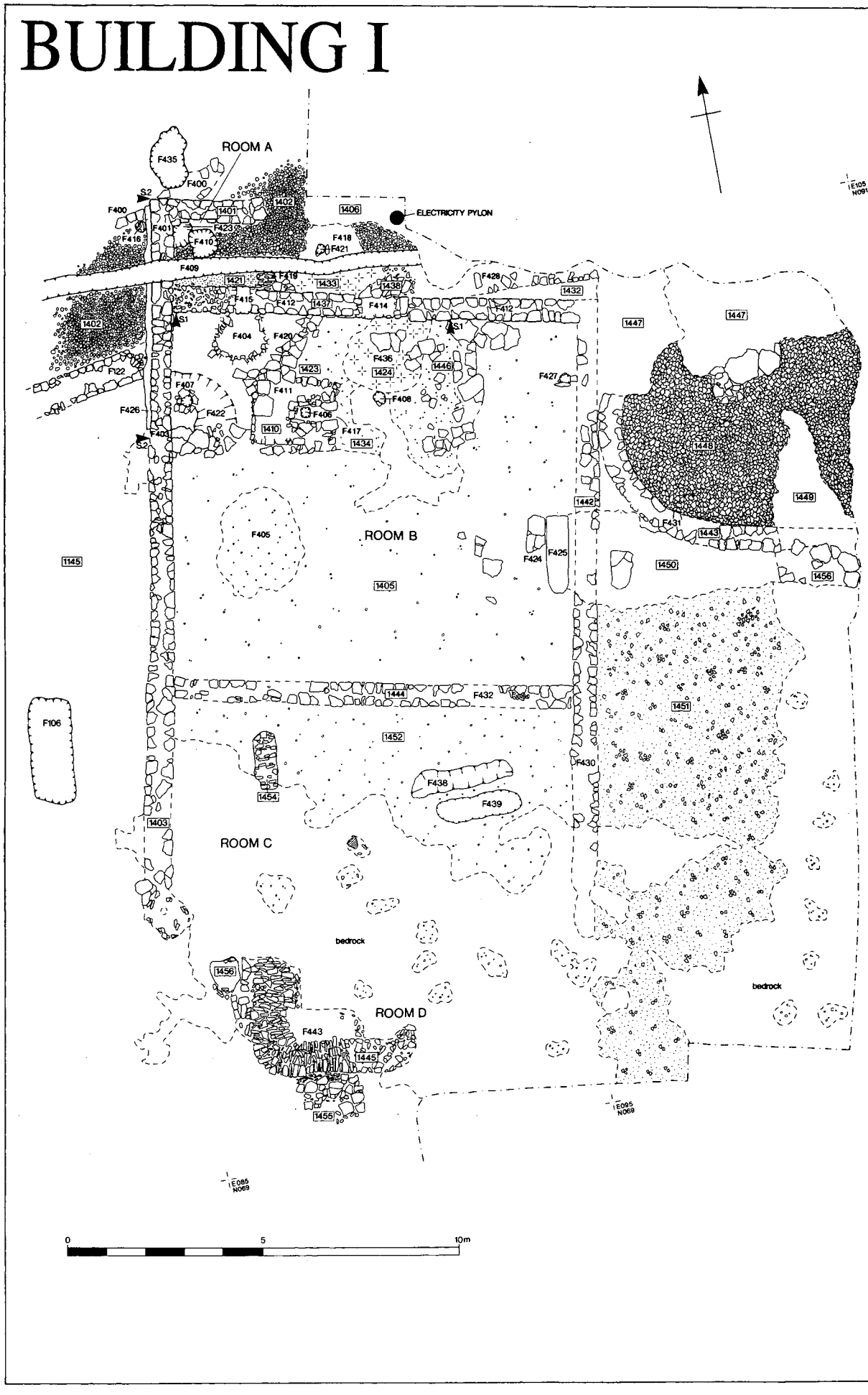


FIG. 7 Building I and environs, plan

exterior to Building I, whose east wall (F430) just touched the west exterior face of the apse foundation. An area of closely set, pitched stone footings (1448) and two large, horizontally laid flagstones with worn surfaces were contained within the foundations, representing a floor or its footings within the apsidal room. This may have continued further east where fragmentary and disturbed flagstones (1449) lay directly upon a weathered bedrock surface.

In the absence of further excavation and because of a sparsity of associated finds it is impossible to establish the full extent or sequence of the structure represented here. Assuming that the apse foundation and floor represented a room at the west end of a larger stone-founded building, this presumably continued on an approximate east–west axis beyond the limits of excavation. In support of this, and the likelihood of other buildings in the vicinity, is the evidence of geophysical survey (Geophysical Surveys of Bradford 1990, Area 3), concentrations of coin and other metal finds reported by metal detector users in this part of the field prior to the excavation, and observations of other stone wall foundations in this area which could not be recorded during later topsoil stripping as the site was developed (see also Area V). The primary relationship of the apsidal-ended structure to Building I is strongly suspected, though not conclusively proven. A scatter of late third-century coins from first-definition clearance mainly to the south of the presumed building suggests that it may have been in use during Period 3, though possibly with an earlier origin. Spreads of stony soil over bedrock (1451) and several small rock-cut features were recorded in the exposed strip to the south, but none was excavated.

To the west of the bedrock platform subsequently to be occupied by Building I was an extensive deposit of relatively stone-free, buff-brown clay soil (1145). This occupied a lower area within the bedrock with sharply defined edges, apparently created by its extraction (FIGS 6 and 9). No specific excavation of this feature or its fills was made, although the emptying of later cuts within it revealed a fill of little more than 0.3 m above a horizontal bedrock base. Finds from first-definition cleaning over this area were sparse, but included both third- and fourth-century material. Although a natural origin for this soil-filled depression cannot be ruled out, its creation as a shallow quarry for stone could associate it with the construction of the ?Period 3 apsidal-ended building (and possibly others) to the east. Much of its infill (1145) could also have originated in that period, although with some further accumulation likely in subsequent periods.

PERIOD 4: BUILDING I (i)

The appearance of this structure, and features associated with it, represents a degree of disruption and perhaps redefinition of the settlement pattern as it had evolved over the preceding Periods 2 and 3. Building I does not appear to have developed from or superseded an earlier structure in this locality, apparently ignoring and ?replacing the apsidal-ended building to the east (FIG. 7). Its siting intruded upon the Period 2 street (F440) and boundary wall (F122), and, with a north–south axis, evidently ignored their orientation. The incomplete excavation of the remains of this building — particularly its earliest components — and the severe erosion of its southern portions inhibit clear definition of its successive phases. The best evidence was obtained from the north-west corner, where maximum preservation coincided with more detailed excavation (PL. V).

The primary structure appears to have been a stone-founded rectangular building measuring *c.* 17 x 11 m internally and aligned approximately north–south. An aisled construction is suspected on the basis of its width, though unproven, and a smaller room or entrance porch at the south end may have been contemporary. Its west wall (F403) survived best to the north, where up to three mortared courses of paired Lias limestone blocks, their outer faces dressed and separated by smaller stone rubble packing (1403), were set within a shallow foundation trench (F426) cut partly into bedrock and infilled with stony rubble (1430). No

BUILDING I

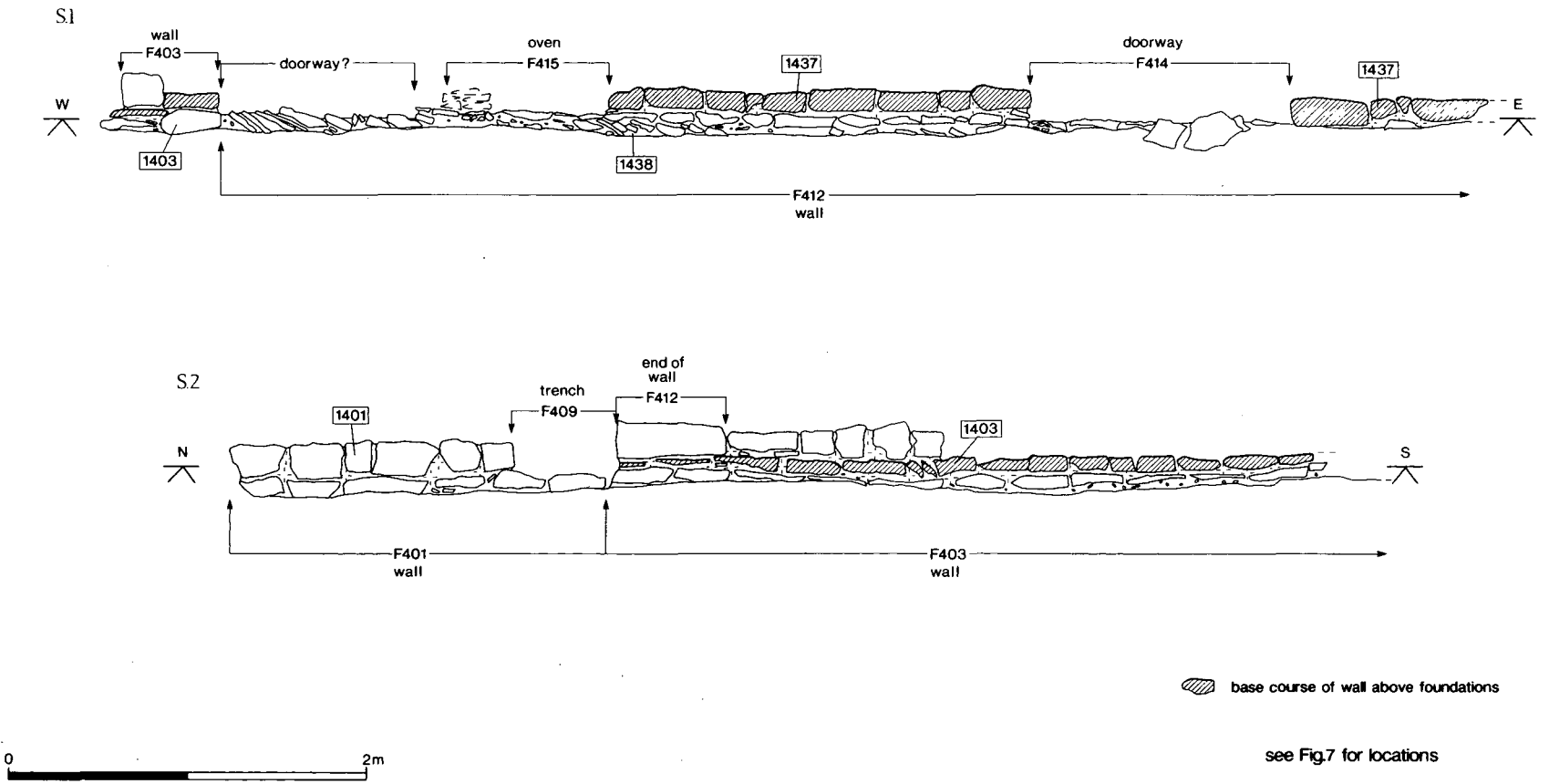


FIG. 8 Building I, wall elevations

pitched drystone foundations were seen, but the lowest wall course was bonded with the foundation course for the north wall (F412) at their junction (FIG. 8, S2). The west wall continued southwards for 16 m, where it became progressively more disturbed as a single course lying directly upon the horizontal natural bedrock surface. Plough erosion was probably responsible for its eventual disappearance, before termination at a missing south corner, although a small area of darker soil with some pitched stone within the earlier stony soil deposit (1145) to the west, may represent the unexcavated foundation of this corner.

As stated, the lowest course of the north wall (F412) was bonded with the west wall, but at this junction the absence of further courses, and wear on upper surfaces of the bottom course stones, suggests a 1.4 m-wide entrance to the building here (FIG. 6). Further east, up to three paired mortared courses of horizontally laid Lias limestone blocks (1437), their outer faces dressed and separated by smaller stone packing, were set upon a single course of unmortared, pitched stone slab foundations (1438) laid within a shallow foundation trench (F437) (FIG. 8, S1). The east termination of this wall was seen only at the level of first-definition clearance, but suggested a bonded junction at right-angles with the east wall (F430) of the building (FIG. 7). This wall was intermittently exposed as at least one mortared course of paired, externally dressed stone blocks, separated by stone rubble packing (1442). Later plough erosion had destroyed the wall courses to the south, revealing fragments of roughly pitched drystone foundation material set into a shallow groove within the solid bedrock. Only a slightly larger soil- and rubble-filled disturbance of the bedrock (not excavated) may mark the site of the south-east corner to the building here.

Between the suspected south corners of this room no trace remained of a south cross-wall which would have been supported upon the horizontal surface of natural bedrock. Subsequent plough erosion had presumably removed all evidence although an approximate line can be suggested. Even more problematic is the relationship of incompletely surviving wall foundations a little further to the south to the main structure of Building I. These comprised two short sections of pitched, unmortared stone blocks (1445) set into an area of stony clay soil (?part of 1145) to the south and west of the bedrock exposure underlying most of the building (FIG. 7). Set at right-angles to each other and aligned with the main building, these settings (F443) could represent the south-west corner of a small rectangular room extending south from the centre of the missing main south wall. Since any original link to the north had been destroyed, along with the north-east half of this room, its status as a primary element of the building is uncertain, while its original size can only be estimated at *c.* 5 x 2.5 m internally. No excavation beyond first-definition cleaning and recording took place in this area, but two other features appear to be associated with this room. Immediately to the south was a small area of worn stone slabs and cobbles (1455) which could mark the site of an entrance into the room, and perhaps the building as a whole, although not necessarily in this phase of use. Alongside the wall foundations of F443 to the west was a small pit containing charcoal and much animal bone (1456). Although not excavated, this could be interpreted as a foundation deposit associated with construction of the room and thus perhaps the primary phase of Building I.

The identification of internal features or deposits belonging to this primary phase was hampered by the limits of excavation to the north and the effects of erosion further south. At the north-west corner of the building (subsequently in Room B of Building I (ii), below), the earliest features located were parts of two hearths or ovens (FIG. 7). The remains of a circular hearth of burnt stony clay with a flue to the south (F436) lay between the north wall (F412) and the Phase ii oven structure (F411) which had partly destroyed it. This earlier complex was not excavated, and further unexcavated deposits (1427 and 1436) lay just to the south, the first also cut into by the later oven. To the west a shallow, semicircular curving ditch (F422) contained ashy soil (1426) and may be related to another unexcavated hearth or oven to the south. No other evidence of contemporary floor or occupation deposits was recognised in this area. Further south in Room C, plough erosion had removed evidence for

most features or deposits which might have survived above the bedrock surface. A few more deeply set deposits (1452 and 1454) were not investigated beyond first-definition cleaning.

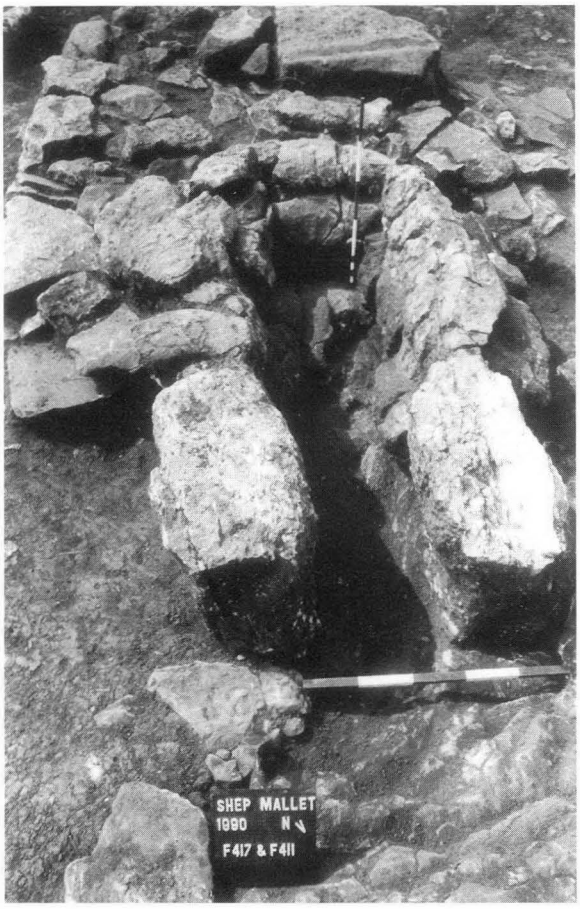
Evidence to date the primary phase of Building I was sparse. No coins were recorded from primary contexts and relatively small quantities of pottery, most of which appears to be of late third- and fourth-century manufacture, though distinctive pieces were rare. The suggestion of a Period 4 origin for Building I is based largely upon the coin and pottery evidence from later phases of use, and the virtual absence of datable pre-fourth-century material or evidence of earlier structural remains.

BUILDING I (ii)

A second phase of use for Building I is marked by modifications to its ground plan and internal features. One of the most significant was the insertion of an east–west partition wall (F432) across the centre of the former main room. This wall was investigated only at first-definition level, but comprised a paired mortared course of limestone blocks, dressed on their outer faces and separated by small stone rubble packing. East and west this was butted against the insides of the main, outer, east and west walls (F430 and F403) of the building. Disturbances of this internal wall were observed but not investigated further and no foundations were seen. The effect of this partitioning was to create two approximately equal-sized rooms *c.* 11 x 8 m in area; Room B to the north and Room C to the south. Whether this implies a conversion from an aisled building to one with multiple rooms, including an upper floor, could not be determined. The small south porch or annex (Room D) presumably continued in use, if indeed it was not an addition of this phase.

Another modification at the north-west corner of the building added a small rectangular room (Room A), *c.* 3 x 2 m internally, to the north-west exterior of the main north wall (F412).

PL. V Building 1 north-west corner during excavation, view south-east. (J. Sterenberg)



PL. VI Hearth (F417) and oven structure (F411) in Building I. (J. Sterenberg)

From the north-west corner of the main building, the line of the west wall (F403) was continued for over 2 m further north by three to four surviving mortared courses of paired Lias stone blocks, dressed on their exterior faces and separated by stone rubble packing (1401) (FIG. 8, S2). This segment of wall (F401) then continued east at 90° for approximately 3 m to form the north wall of Room A, both sections resting directly upon the underlying cobbles of the earlier street F440. The east wall of this room (F419) survived only as a short stretch of single course, pitched drystone slab foundations (1422) butted against the main north wall (F412), but did not survive beyond later disturbances to link with the termination of the Room A wall (F401) to the north. The gap here may however have been deliberate, marking the site of a doorway into the room from the east. The size of Room A and its probable east entry suggests the addition of an entrance porch for Building I in this phase. Access from the porch into the main building (Room B) will have been via the original doorway at the west end of the wall F412, unless that doorway was actually created in Phase ii.

The interior of Room A was extensively disturbed by later features, although the cobbles (1402) of the earlier street appear to have been re-utilised as its floor. A small area of burnt packing stones set into a shallow pit (F423) in the north-west corner angle of the room may have been a contemporary feature. This hearth or post pit was partly destroyed by a much later pit, but could alternatively belong to the final phase of Building I. On either side of the east wall foundations (F419) were narrow spreads of mortar (1421) and stony soil (1433) lying against the north wall of the main building (F412). Such material could have accumulated during either or both phases of the building, although the mortar is most probably a building level marking the construction of Room A. It incorporated a coin of A.D. 330–340. Outside this room to the east were the remains of a small hearth (F418) cut into the cobbles (1402) of the earlier street. The mixed burnt clay with sand, charcoal and burnt oven-chamber stones within this feature were badly disturbed by recent activity, as well as being cut by a possible post-hole belonging to Building I iii (F421). The location of a small exterior hearth here, close to the

north porch of Phase ii, makes better sense in Phase iii, despite the evidence of a post-hole possibly of that phase, unless the hearth were attributed to Phase i.

Within Room B of the main building, the principal structure was the remains of a large rectangular oven. This comprised a rectangular platform (F411) *c.* 2 x 2.4 m, of large and medium limestone blocks, some burnt and some roughly dressed, within a matrix of burnt clay, soil, mortar and charcoal fragments (1410). The lower part comprised a platform of burnt limestone fragments and some larger blocks, tile, daub and charcoal (1435) set into a shallow oval pit cut partly into the bedrock. Set within the upper oven structure was an elongated, rectangular hearth chamber (F417) comprising large, vertically set limestone blocks, heavily burnt and partly fragmented by heat during firing within the chamber. The hearth was *c.* 1.4 m long and up to 0.5 m wide, narrowing slightly towards the opening, but nothing of its upper covering construction had survived (PL. VI). Traces of perhaps the last two firings had survived as small burnt limestone fragments interleaved with thin layers of daub, charcoal and burnt sandy loam (1431) upon the burnt bedrock floor of the chamber. Extending north from the north-west corner of the oven structure (F411) to butt against the inside of the main north wall (F412) was a setting of horizontally laid limestone slabs and some smaller rubble blocks (1423). This platform (F420) appears to have been bonded with the oven and to mark a contemporary surface of use around it, the upper surfaces of its stones showing moderate wear. A substantial continuation of the platform, possibly as far as the entrance in the north-west corner of Room B, was probably destroyed by the insertion of a later oven (F404 in Phase iii) in that area.

No other certain features or deposits of Room B were investigated, although an area of large worn limestone flags, some smaller blocks and cobbling, and a short north–south-aligned segment of a possible mortared wall foundation (1446) were exposed east of the large oven (F411). This horizon could relate to subsequent Phase iii activity, but other Phase ii features may have survived uninvestigated to the south and east. Ploughing probably destroyed much of the evidence for the use of Room C to the south, although there was no further excavation within that area, or indeed of the remains of Room D, to confirm this.

AREA II

At first sight, the relationship between Building I and the street F440, which continued to the west and marked the northern boundary to Area II, suggests that the latter became redundant in Period 4 (FIG. 6). However, the encroachment of the building upon the southern street margin need not have rendered the whole thoroughfare unusable, and its continued use would be logical as an access for Building I, and probably other contemporary buildings in its locality, to and from the Fosse Way. Those features and deposits in Area II assigned to Period 4 cannot be tied more closely to Phases i or ii of Building I on the basis of finds or stratigraphic relationships. The recovery of finds across the whole area was generally sparse, even from excavated contexts, although pottery favours a fourth-century or later date for the inhumation burials which were the principal features investigated here.

As mentioned previously, a broad, shallow, soil-filled depression was observed but not excavated immediately to the west of Building I (FIG. 9). Originating in Period 3, if not earlier, the upper horizon of its fill (1145) was probably accumulating during the use of Building I in Period 4 and later. The relative sparsity of domestic debris at this horizon suggests, however, that either very little material associated with the occupation of Building I found its way in this direction or that the character of that occupation produced very little detectable material.

The principal elements of Period 4 excavated in Area II were the remains of a small inhumation cemetery (FIG. 9) (Pinter-Bellows, 3.10). Of these, the most complex was the remains of a grave and mausoleum foundation (F120) set into the western edge of the earlier

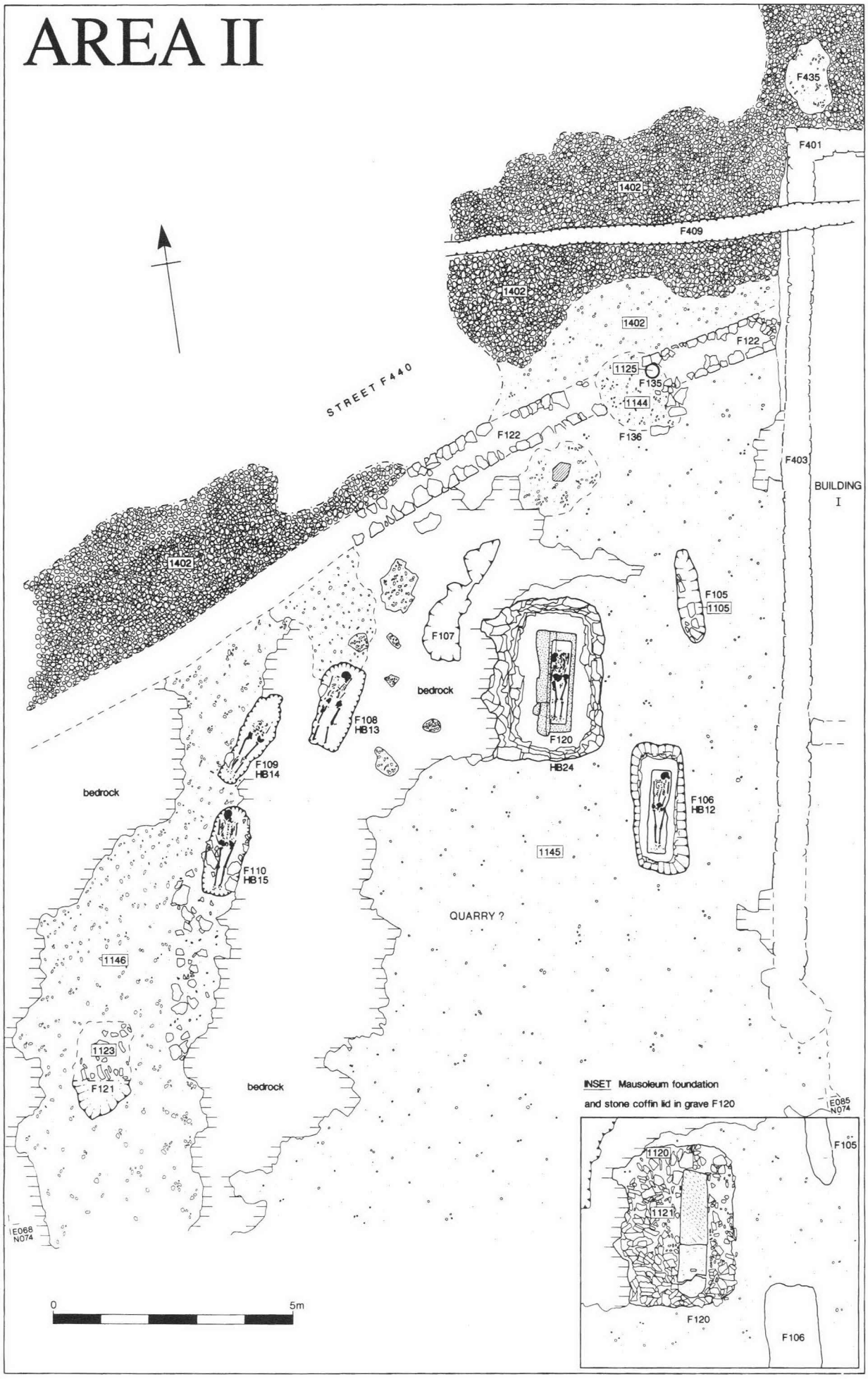


FIG. 9 Area II, contexts and features plan

quarry. This comprised in the first instance a large rectangular pit *c.* 3 x 2 m, aligned approximately north–south and cut 0.5 m deep through fill (1145) and into the underlying bedrock. Resting horizontally upon the bedrock base was a stone sarcophagus containing the remains of an extended inhumation (HB 24) beneath a humic, stone-free fill (1124) which had probably been introduced subsequently by organic soil formation processes. The skeletal remains were well-preserved and belonged to a young adult male aged *c.* 21, lying supine with his head to the north and with no accompanying grave goods. The stone sarcophagus itself comprised a main portion of a purpose-made, elongated rectangular container of well-dressed Downside limestone, having only three sides and a base (Roe, 3.9). The fourth side to the west had been created by the reuse of two segments of what had originally been part of a door frame, also fashioned of dressed Downside limestone. To hold these three elements more securely in place a broad strip of lead plate had been laid within the coffin along the side and base joints between them, with one extension up from the base plate to cover the joint between the two former door frame segments to the west. This composite lead plate was then held in place by iron nails hammered roughly through into the stonework at the top of its vertical ends, north, south and west (Minnitt, 3.9). The sarcophagus lid comprised two further separate sections of re-used door frame fashioned from dressed Doulting limestone. Both pieces had a central, rectangular mortise hole; that through the larger northern segment filled with a small rectangular stone plug. The smaller southern segment had a rounded end, but had cracked into three smaller pieces, possibly as the result of modern agricultural disturbance (FIG. 72, nos 1–3; PLS VII and VIII).

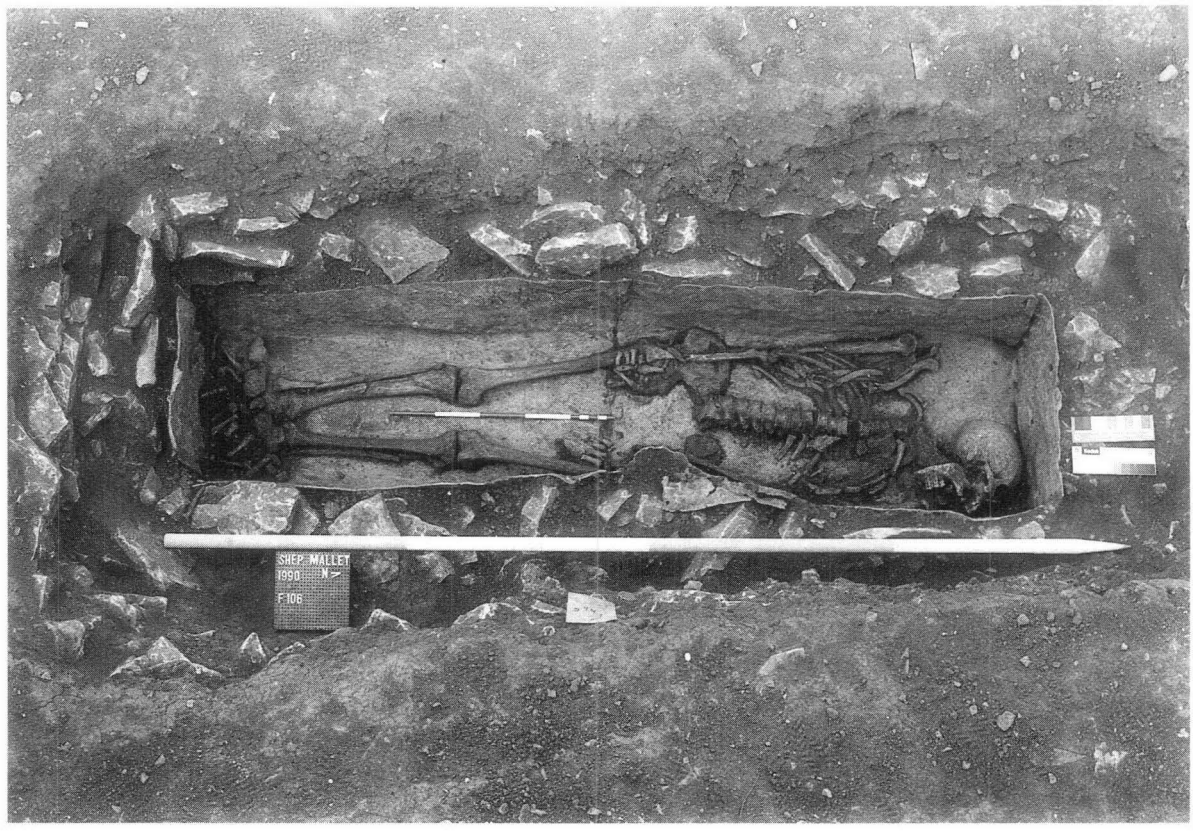
PL. VII Inhumation HB24 and stone coffin within mausoleum footings (F120), Area II. (J. Sterenberg)

PL. VIII Stone sarcophagus with lead sheeting in grave F120, Area II. (J. Sterenberg)

Surrounding the sarcophagus was a series of deposits contained within the remainder of the grave pit. These comprised two courses of unmortared, pitched stone blocks (1121 above 1122) set within a matrix of looser, stony soil and rubble (1120). This well-packed sequence of foundation material around the sarcophagus implies the presence of a structure above, probably a mausoleum built around the tomb. No trace of such a structure remained in the locality, however, to give any clue as to its original form.

Approximately 2 m to the south-east another substantial north–south-aligned grave cut (F106), *c.* 2 x 1.8 m, penetrated 0.7 m through earlier fill (1145) into underlying bedrock (PL. IX). Resting upon its horizontal floor was a plain lead coffin comprising a sheet lead container fashioned in two halves which had then been soldered together. The two ends of each half had been cut and also soldered to create the box structure, but there were no remains of a lid. Between the lead coffin and the grave edges were vertically set Lias packing stones within a matrix of stony clay soil. The upper fill of the grave was a darker, more humic stony soil within which were several iron nails. Their distribution around the top of the coffin suggests that a nailed wooden coffin was provided to enclose the one of lead; a similar pairing to that indicated within grave F29 of the Area III cemetery. Within the lower fill of the coffin were the well-preserved skeletal remains of an extended and supine elderly adult male burial with his head to the north (HB 12). A radiocarbon determination on bone from this burial produced a calibrated date between cal A.D. 420–767 at 95% confidence (GU–5294; 1440±90BP); somewhat later than is indicated on archaeological grounds, although a Period 5 attribution for the burial would not be out of place (Cook and Leach, 3.10). There were no other accompanying grave goods which could assist further with the dating.

A few metres to the north-east was another north–south-aligned strip of dark stony soil fill with some vertically pitched stone slabs (1105). Despite initial appearances, excavation revealed only a shallow gully (F105) cut into the surrounding deposits (1145), and no sign of a burial. Further north again was a much larger, sub-circular disturbance (F136) marked by



PL. IX Inhumation HB12 in lead coffin (grave F106), Area II cemetery. (J. Sterenberg)

stony brown soil with some pitched rubble (1144). Although not excavated, it clearly cut through the earlier boundary wall remains (F122). Within the larger feature a small pit (F135) was excavated containing an almost-complete grey-ware cookpot (FIG. 35, JW4.11). Within the pot was a deposit of dark ashy soil and fragments of cremated adult human bone (1125) representing another burial (HB 45). No further cremations were recorded here or elsewhere in Area II, but might have been revealed had more thorough excavation been possible.

Immediately to the west of the mausoleum grave a further exposure of weathered bedrock was interrupted by a series of soil-filled features. Of these, the most northerly excavated was a shallow irregular pit (F107) whose fill included several vertically set limestone slabs. There was no evidence of any burial, although a robbed or unused grave here is a possibility. Nearby to the south-west, however, three other rectangular rock-cut features did contain burials. The most northerly was a wide, shallow cut (F108) orientated approximately north-east–south-west, containing the remains of a young adult female inhumation (HB 13). In so shallow a grave the burial was disturbed though still mainly articulated, supine and extended with its head to the north. The stony soil fill (1108) contained iron nails indicative of a former wooden coffin that had been packed around with vertically set limestone slabs, but with no other grave deposits. A similar shallow grave cut (F109) lay just over 1 m to the south-west and on the same orientation. Within were the remains of a badly disturbed adult male inhumation (HB 14), of middle age, supine and probably extended, but with the upper part of the body and the skull to the north missing. No iron coffin nails or other grave goods were recovered from the stony soil fill (1109), although the presence of one or two disturbed side packing stones suggests that a wooden coffin may have been provided. The third grave was located approximately one metre to the south again (F110), cut rather more deeply into the eastern edge of the earlier fill (1146) and orientated almost north–south. This contained a relatively well-preserved, extended and supine young adult male inhumation (HB 15) aged *c.* 21, with its head to the north. The former presence of a wooden coffin was suggested by

the presence of iron nails within the stony soil grave fill (1110), as well as by several vertically set limestone slabs around its edge. No other accompanying grave goods were recorded. A few metres to the south-west and also within the earlier fill (1146) was another subrectangular disturbance containing a deposit of dark stony soil with some large stone blocks and pitched slabs (1123). No burial was found here, although the shallow pit (F121) was not fully excavated.

Taken together, this group of burials indicates a small, unified cemetery which may have been created over quite a short period of time. Although datable finds were sparse, some pottery of fourth-century type was recovered from most of the grave fills, and from fills of the other features excavated in this area. The suggested mausoleum structure would reinforce a fourth-century (Period 4) date, as does the apparent absence of grave goods, although Period 5 is equally possible. However, the radiocarbon date of cal A.D. 420 –767 at 95% confidence on HB 12 (above) favours the later attribution. Excepting the cremation, this close grouping of graves, similarly orientated to each other and to the long axis of Building I, suggests some association with the latter. Whether or not these individuals represent owners or occupiers of the building, a contemporary association with a late phase of Building I is a strong possibility.

No other inhumations were suspected in this area at the time of excavation, although one or two more in unexcavated areas of the quarry fill (1145) cannot be ruled out. Further cremations would have been more easily missed, although it is uncertain whether the single one found was contemporary with or, as the rite might suggest, somewhat earlier than the inhumations. Among the latter, the mausoleum and the lead coffin burials presumably denote individuals of somewhat higher status here, and perhaps within the Fosse Way community as a whole. The orientation of this small cemetery (more or less north–south) distinguishes it from the larger group aligned mostly east–west in Area III to the south. Otherwise they share such characteristics as wooden coffins, stone grave packing, and a lack of accompanying grave goods with that group. There was no evidence of a cemetery enclosure in Area II, nor of markers for individual graves, other than the suspected mausoleum structure. The degree of subsequent erosion of the site from above would in any case almost certainly have destroyed such evidence.

PERIOD 5: BUILDING I (iii)

Evidence for the latest phase of Building I implies a substantial demolition of the original structure and its probable replacement by a timber-framed building. Arguably, this is better defined as a new building, but since the old site was so deliberately reused, apparently with no significant chronological break, it is appropriate to consider the evidence as a third phase. As for preceding phases, much of the evidence for Building I iii was from excavation in the north-west corner.

Evidence for the destruction and demolition process which affected Building I was preserved in an extensive spread of tumbled stone debris and rubble (1405), surviving mainly within the former limits of Room B (FIG. 7). This material overlay the oven F411, which had been levelled and its chamber (F417) infilled with rubble (1412). Similar debris infilled the entrance between Rooms A and B to the north-west, and was spread more thinly southwards towards the partition wall (F432). More severe truncation by recent ploughing over the sites of Rooms C and D had probably removed or disturbed any equivalent demolition deposits above those parts of the building. Some of the material (1405) exposed but not excavated further in Room B may represent a surface of reuse associated with the Phase iii structure. What is less clear is the reason for demolition of such a substantial stone structure as Building I Phases i and ii, although in view of the ovens within Room B a major destructive fire must be a possibility.

The clearest evidence of a new structure is a group of post-holes which cut through the debris (1405) of the demolished earlier building and some of its internal features (FIG. 7). The most coherent set was an uneven east–west alignment of small stone and rubble-filled circular cuts, averaging 0.3 m in depth and diameter and crossing Room B. From west to east these are F406 set into the hearth chamber F417, F407, F408 and F427. The western end of a possible second row to the north was represented by F416, just outside Room A, F421, cut into an ?earlier hearth (F418) just to the east of Room A, and F423, the possible remains of a post-hole in the corner of that room, also mentioned as a feature of Phase ii (above). This area of the site was much disturbed by modern electricity supply poles and trenches and could not be fully exposed. Butted against the north exterior wall of Room A was a short segment of roughly mortared and dressed paired stone blocks (1407), surviving two courses high. This appeared to be a short wall segment (F400) aligned approximately north-east–south-west and terminated to the north by a large modern rock-cut pit (F435). A few large stone blocks, associated with post-hole F416 just west of Room A, may be a continuation of this foundation, but it is difficult to interpret the function of either. A third set of post-holes to the south could have followed the line of the Phase ii partition wall between Rooms B and C, but potential breaches in that wall were not excavated further.

Occupying the former north-west corner of Room B and presumably located within the Phase iii building, was the base of a circular oven (F404). This was edged with packed drystone rubble derived from the demolition material (1405) and filled with ashy soil beneath a dark stony soil. This was associated with a stone tile-lined flue (F415) laid across the surviving base courses of the earlier north wall (F412) and opening northwards into the area of the former porch, Room A. A sandstone tile lining (1419) overlay the disturbed truncated wall top, and was infilled with stony soil and charcoal (1416). There was some confusion here between rubble originating from the later destruction of this oven and the earlier destruction of Building I i/ii (1405), both of which contributed to a concentration of stone building debris and rubble exposed initially here in first-definition cleaning.

To the east of the oven (F404), another breach (F414) in the former wall (F412) was associated with some worn and displaced stone rubble just to the north (1438), and a more extensive area of wear upon stone rubble and roughly laid stone blocks and flags (1446) to the south. The latter may have originated in the previous building phase, or have been laid deliberately as a surface on pre-existing rubble (1405) or earlier features of the demolished building. The gap in its former north wall (F414) could mark an entrance into the reconstructed Building I iii from the north, although any more extensive remains of an exterior surface will have been destroyed by the modern activity here. If this interpretation is correct, it is possible that standing portions of the original north wall (F412) were retained to be incorporated into the Phase iii structure. This could also have applied to part of the original west wall (F403), since there was no other evidence of features marking a west end to the later building. Furthermore, rubble 1405 within Room B did not extend west beyond the line of that wall or overlie it, apart from a patch of soil (1400) above its north-west corner.

No other features or deposits of the Phase iii building were excavated, but first-definition cleaning revealed further potential elements. South of the main post-hole alignment a large, sub-circular area of relatively stone-free soil (F405) may mark the site of a contemporary feature or some later disturbance. Close to the former east wall (F430) of the earlier building were laid two large re-used blocks of dressed masonry. The larger, of Doulting limestone (F425), had two small rectangular mortise socket holes on its underside; the smaller was a broken block of Ham Hill stone (F424). Both were evidently architectural components, probably parts of door casings, which had been reused as a threshold. This impression is reinforced by the presence of an irregular strip of worn rubble and stone slabs (1450) which extended east from these blocks across part of the earlier apsidal-ended building foundations. What may have been another contemporary path or yard of similar worn rubble (1447) also extended east across the northern part of the earlier apse. Both surfaces appear

to have been external, suggesting that the line of the original east wall (F430) of Building I was also being reused in Phase iii, though now obscured or disturbed in places.

The potential loss of archaeological features and deposits from over the site of Rooms C and D applies even more severely in this period. Two features which had survived, albeit badly damaged by plough truncation, were however excavated in Room C. Two shallow grave cuts in close proximity just penetrated the bedrock here (F438, F439) and contained the remains of three badly disturbed, extended inhumations (HB 33, HB 33a, HB 34). All were aligned approximately east–west with heads to the west, but there was no surviving evidence of coffins, accompanying deposits, or other grave features within the remaining shallow stony soil fills. A radiocarbon determination on bone from HB 33, an adult of indeterminate age, gave a calibrated date range of cal A.D. 722–990 at 95% confidence (GU–5297; 1160±50BP). Alongside, to the south, the even less well-preserved remains (HB 34) were of an adult of indeterminate sex and age. The presence of these graves indicates their location after the abandonment of Building I and, as the radiocarbon determination suggests, they are very much later. The possibility of a ninth- or tenth-century date for burials here accords with no other evidence for contemporary activity at or close to the Fosse Lane settlement, but does support other evidence for the recognition of its significance on into the medieval period (see Section 4).

From all the surviving evidence for Building I iii, a tentative reconstruction of its form is offered. The most likely ground plan would correspond closely with the area of Room B, re-using in part standing walls or, at least, their foundations. The main east–west alignment of post-holes could represent an internal partition or the position of a central line of timber supports for a ridge roof. Further post-holes in the vicinity of Room A could represent a replacement of that porch by a similar timber structure, perhaps associated with the oven and flue here (F404/F415). The main entrance may have been to the east, although another entrance seems to have been situated along the north side. Whatever its precise form and function, a timber-framed structure is envisaged, aligned approximately east–west and at least 11 x 8 m. Relatively little well-dated material is available from associated contexts, but what there is (notably coins) suggests that Building I iii was a post-A.D. 360 structure. A more plentiful coin assemblage recovered from first-definition cleaning above its remains indicates use through the last decades of the fourth century, and probably into the fifth century.

PERIOD 6

With the exception of the three burials above Room B, all other evidence of post-Roman activity in this locality is of quite recent origin. The earliest may be the remains of a drystone field boundary wall (1406) which crossed the northern edge of Building I from east to west (FIG. 7). This feature, formerly the division between fields of pasture to the north and arable to the south, was probably an eighteenth- or early nineteenth-century Enclosure boundary. Its position along the north edge of Building I probably accounts for the slightly better preservation of upstanding features here, in contrast to the situation just to the south where the effects of recent agriculture were more destructive.

A more recent set of features associated with the supply of electricity across the fields had caused further disturbance along the northern perimeter of Building I. Two substantial rock-cut pits — F410 within Room A, and F435 just outside to the north — were probably former settings for electricity supply poles. Their replacements had been erected nearby to the east, standing within the remains of the field boundary wall (1406). Associated with these was a narrow and shallow trench (F409), aligned east–west and running right across the excavation site. Cutting through the west wall of Room A (F401) and into the cobbles of the earlier street beneath (FIGS 7 and 9), this contained a redundant electricity supply cable capped by

modern fired clay bricks, each stamped with the word ELECTRICITY. Finally, an even later pit (F402) had been cut through the backfill of the pit F410, possibly for a fence or gate-post, but subsequently removed.

2.3: AREA III — COMPOUND AND CEMETERY

THE COMPOUND: PERIODS 1–4

Area III is defined as a sub-rectangular ditched compound, maximum length *c.* 40 m and maximum width *c.* 24 m, aligned generally east–west and with a rounded triangular termination to the west (FIGS 5 and 10). The ditches were not always well-defined as cuts into bedrock and were partly truncated, surviving best to the south and east within deeper stratigraphy there. The curving northern sector (F30) was sampled towards its west end in three short segments (I, II and A), revealing a shallow ditch, 0.3 m deep and with a concave profile, cut mainly into bedrock. The southern sector (F129) had a slightly deeper V-shaped profile where sampled by two centrally placed short segments (A and B). A third linking sector to the east was not sampled or numbered, and was often difficult to define within the more complex deposit horizons in this corner of the site. Assuming that all three ditch segments were contemporary in origin, the limited excavation samples revealed a complex history. Small surviving portions of primary clay/silt fills (1024 and 1137) in F30 were matched in F129 by the lowest level of a composite fill (1138). A few sherds of second-century pottery from all these deposits suggest their origin, and perhaps also that of the ditch, in Period 2.

Some time thereafter, these two sides of the enclosure were redefined by the insertion of a drystone wall into the ditch. This sequence was best preserved in section A of F30, as drystone rubble wall footings (1136) above the primary fill. These footings were also apparent further west, and again in F129 as layered rubble and stone blocks within the upper part of the lower fills (1138). Associated datable finds were scarce, but some third-century pottery suggests that the drystone boundary wall originated either in Period 2 or 3, and almost certainly existed throughout the latter. Only 2 m to the south of this wall were the foundations of another, more substantial, wall lying parallel with F129 (FIG. 10). This feature (Boundary D) was traced for over 30 m, disappearing to the west where probably truncated by plough erosion, but apparently continuing further east into the complex of deposits along that margin of the site. Its relationship with the Area III enclosure was not determined, although it seems to belong with that area rather than with the southern enclosures (Area V). The visibility of Boundary D may indicate a relatively late date, perhaps as a Period 4 replacement for the wall in the parallel ditch F129. Alternatively, it is much earlier, defining the north side of a street or alley separating Area III from Area V to the south (see Area V account).

The alignment of the north-west section of ditch F30 suggests that it was laid out to respect the south-east margin of the adjacent street (F135/F440, FIG. 5). Whether or not these were contemporary events, there is an indication here of a larger triangular compound bounded north-west by the road, whose northern half was later to contain Building I and the cemetery of Area II. If so, it is possible that the outer wall foundation, Boundary D, marked its original southern definition, linking ultimately with the early boundary wall (F122) further north, flanking the street in Areas I and II. Such a large compound, extending east beyond the excavation boundaries, must have been a primary element in this part of the settlement layout, subdivided in later periods into smaller compounds or zones. This is a pattern which develops in Area V, and, less clearly, in other areas to the north.

Before Area III was laid out there was some evidence for earlier arrangements. Of these, the clearest was a shallow, clay/silt-filled ditch (F43), aligned approximately north–south

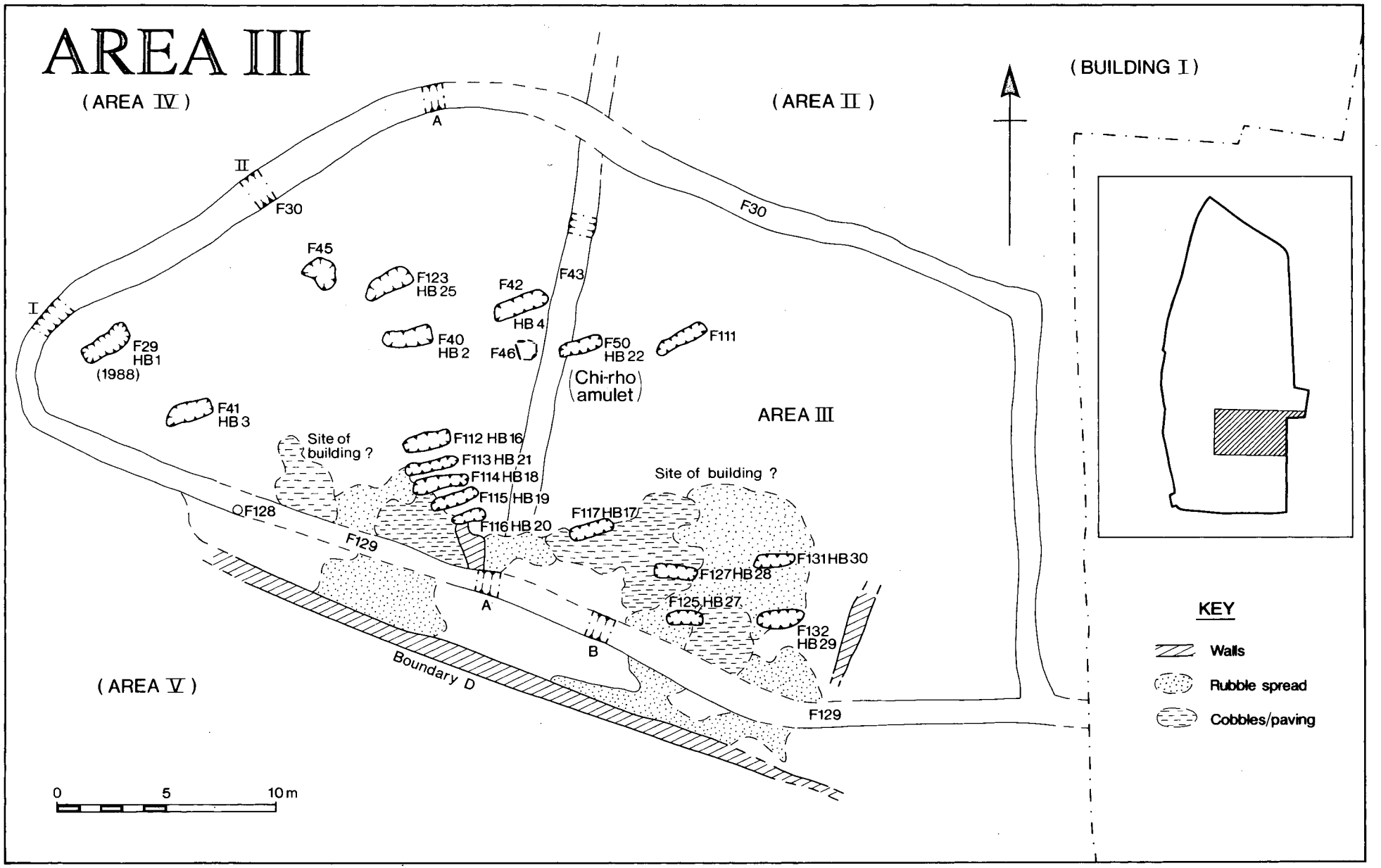


FIG. 10 Area III, plan of principal features

and passing beneath the centre of the enclosure (FIG. 10). This rock-cut feature, no more than 0.3 m deep where sampled, contained no datable finds and was traced north across Area II to disappear beneath the street F440. To the south it was lost beneath the stratified deposits at the boundary between Areas III and V, but apparently reappeared again further south to be cut by Boundary F in Area V. The lack of finds and the character of its fill, as well as its alignment at such variance with the layouts of the Romano-British settlement, suggest a feature of prehistoric origin, probably an Iron Age or earlier land boundary. Penetrating the exposures of weathered bedrock east of this ditch in Area III were groups of small discrete features, none of which was excavated, although flints of later Neolithic/Early Bronze Age character were recovered in the locality.

Other remains were very sparse, apart from the area of deeper stratigraphy to the south and east which was exposed but not sampled. First-definition cleaning here revealed several areas of cobbling, one of more substantial pitched stone paving, and two possible short wall foundations; all associated with less-coherent spreads of stony soil or coarser rubble. As previously noted, these contexts were apparently continuous with a more extensive complex extending into Area V and beyond the excavation boundary eastwards. Without further excavation, the range and sequence of activity is difficult to determine here, although some timber-framed structures with paved or cobbled floors are probably represented. Pottery and coin concentrations show occupation in Periods 4 and 5, although the sequence may begin much earlier.

Despite the overall truncation of archaeological contexts through recent ploughing, the sparsity of remains elsewhere within Area III is probably real (FIG. 10). Towards the south-west corner of the compound (in F129) was a small setting of pitched stone (F128) containing most of an upright pottery storage vessel. It was not clear whether this had been inserted or was built into the wall defining the boundary of Period 2/3 at the time of its erection. Further north a shallow bowl-shaped pit (F45) contained a deposit of animal bones, with burnt third- and fourth-century pottery and much charcoal (1033). A few other shallow deposits of stony soil with pottery and animal bone scatters were noted in the vicinity, but not excavated. Just west of the presumed prehistoric ditch (F43) was a small rectangular cist (F46) built of vertically placed limestone slabs set into the natural clay subsoil, but with no evidence of its function. None of these features gives much clue to activities within the rest of Area III prior to its use as a cemetery, unless, indeed, they are themselves associated with the burials.

THE CEMETERY: PERIODS 4/5

The largest excavated group of sixteen burials in the Fosse Lane settlement was in Area III (Pinter-Bellows, 3.10), associated with the lead coffin found in 1988 (FIG. 10). All the graves lay within the original compound, now, in its final manifestation, defined once again by a shallow ditch. To the north-west, fills of dark stony clay soil (1023; 1134), containing quantities of animal bone, fourth-century pottery, some third- and fourth-century coins (latest issues A.D. 367–378) and other artifacts, occupied a shallow linear depression or recut above earlier fills in F30. To the south, the latest deposit (1135) in the top of F129 was very similar in character and content; a layer within a broader surviving hollow, but probably contiguous with those sealing F30. The eastern boundary ditch was not excavated, but its first-definition exposure revealed a dark stony soil fill with some concentrations of animal bone which may have been deliberate depositions. This fill appeared similar to the latest deposits within the other ditches, but it is unknown whether evidence of earlier boundary sequences was preserved here.

The Area III compound was thus defined in its final phase by a shallow ditch, created either as a deliberate recut or by the removal of an earlier wall within the original enclosure

ditch. A concentration of coins above and between the ditch F129 and the Boundary D wall suggests that there was also a broad linear depression here receiving artifacts and occupation debris through most of the fourth century. The range of coins (over 30 later third-century to House of Valentinian issues) mirrors the smaller samples from the upper fills of F129 and of F30 further north. All this evidence suggests that Area III was still defined by a ditch during Period 4, which was not obliterated much before the end of the fourth century or possibly later.

Within the enclosure and close to its west corner, the burial first found in 1988 was relocated. The rock-cut grave (F29), *c.* 0.5 m deep by *c.* 2 m long, was orientated approximately east-north-east–west-south-west. The original burial (HB 1) was an extended, supine, young/middle-age female within a plain lead coffin set into the grave (PL. II). Removed in 1988, the coffin was soldered at the corners and had a plain, overturned lid. The distribution of nails around this container suggested that it had originally been enclosed within a nailed wooden coffin (Minnitt, 3.9). No other grave goods or dating evidence was recorded from either the coffin or grave fill, apart from a few residual sherds of late Roman pottery. This burial proved to be the most westerly of the group, its closest neighbour a very shallow and severely truncated grave cut (F41) on a similar orientation to the south-east. This contained the incomplete and disturbed remains of a supine and probably middle-age male inhumation (HB 3). There were no iron nails which might suggest a former wooden coffin, or other surviving grave goods, other than a few residual sherds of ?fourth-century pottery within the fill.

These two graves were relatively isolated at the west end of Area III. Further to the north-east were five graves scattered across the centre of the compound. The first was a shallow truncated cut (F40) aligned almost east–west and containing the slightly disturbed remains of a supine, young adult, female inhumation (HB 2). No iron coffin nails were found, but a few vertically set stone blocks along the north side of the grave indicate packing, and further slabs laid beneath the burial levelled up the bottom of the grave. A small collection of late third-century pottery may have been redeposited from a shallow spread of stony burnt soil through which the grave was cut, but there were no other burial accompaniments. Close by to the north was a better-preserved grave (F123), similarly orientated and cut more deeply into natural weathered bedrock. Within, were the well-preserved remains of a supine, middle-age female inhumation (HB 25). Iron nails within the grave fill suggest a former wooden coffin, around which were vertically set limestone packing stones and fragments of sandstone roof tile at the head and feet. There were no other deliberate inclusions, but the grave fill contained a small assemblage of abraded late third- to fourth-century pottery sherds. A few metres to the east was another shallow grave (F42), orientated approximately east–west, but once again badly truncated and disturbed from above. The burial (HB 4) was of a supine, young/middle-age female, considerably disturbed, but possibly by animal burrowing rather than agriculture. No iron coffin nails were found, but several flat limestone slabs above the remains were either deliberately laid or collapsed packing stones from around a coffin. A small group of abraded, late third-century potsherds from the fill was probably residual, but there were no other grave goods.

To the south-east and cut partly into the earlier ditch alignment (F43) was another east–west-aligned grave (F50). Up to 0.5 m deep and penetrating natural clay and bedrock, this contained the well-preserved remains of a supine, ?middle-age, adult male inhumation (HB 22). A radiocarbon determination from bone gave a calibrated date range of cal A.D. 70– 410 at 95% confidence (GU–5296; 1790±70BP). Vertically set packing stones were placed around the burial, which, from the arrangement of iron nails, was almost certainly within a wooden coffin. Late third- and fourth-century pottery sherds from the grave fill were probably residual, but deliberately included was the silver amulet cross recovered from beneath the pelvic area of the burial on the floor of the grave. This unique object was punched with a '*chi rho*' (or more accurately '*cross-rho*') monogram on the face of its central disc, which on

PL. X Cemetery burial group – HB16, HB21, HB18, HB19 and HB20, Area III, view south. (J. Sterenberg)

stylistic grounds should be little earlier than *c.* A.D. 400 (front cover and PL. XXIIb). A few metres further east was another similarly aligned cut (F111) containing some pitched limestone slabs in a stony clay and rubble fill. There were no other finds, but its size and orientation suggest that this feature may also have been a grave. The absence of a burial might be explained by its subsequent removal, or the failure to use a previously prepared grave cut.

A group of five graves was found closely arranged towards the southern boundary of the enclosure. All were orientated east–west and set in a line from north to south, and were cut relatively deeply into natural clay/bedrock, or through the edge of earlier deposits and features along the edge of Area III (FIG. 11; PL. X). Arrangements of iron nails and vertically set packing stones in the fills of each were indicative of an original wooden coffin container for the inhumations. The most northerly grave (F112) contained the fairly well-preserved, prone burial (HB 16) of a young adult ?male aged 18–21. Some late third- to fourth-century pottery and an illegible ?fourth-century coin from the grave fill were probably residual. A shallower grave to the south (F113) contained the remains of a more-disturbed, supine, young male adult (HB 21). A radiocarbon determination from these remains gave a calibrated date range of cal A.D. 260–593 at 95% confidence (GU–5295; 1610±60 BP). Residual pottery sherds, including fourth-century types, were the only other finds from the grave fill.

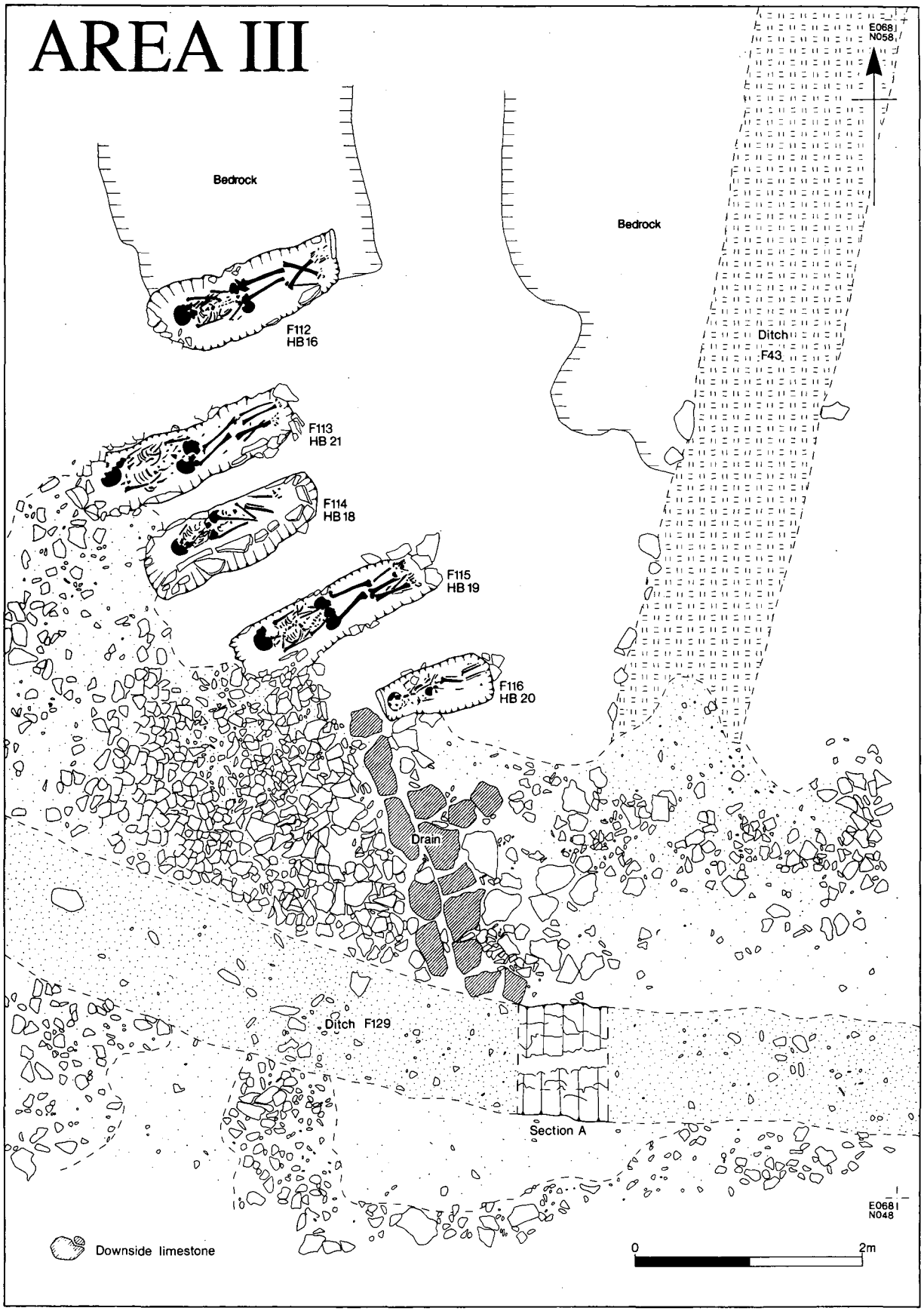


FIG. 11 Area III, plan of selected graves and features

Next in line to the south was a deeper grave cut (F114) containing the remains of a supine, juvenile inhumation (HB 18) of undetermined sex, aged 13–14. Within the grave fill was a small residual assemblage of third- to fourth-century pottery sherds. Alongside this grave a shallower cut (F115) contained the ?animal-disturbed remains of a supine, young adult female inhumation (HB 19). Residual within the fill was a small assemblage of late third- to fourth-century pottery and a very small coin (subsequently lost) — possibly a fourth-century copy. The most southerly grave (F116) was considerably shorter and shallower than the others and contained the fairly complete, though disturbed, burial of a supine child (HB 20) aged 5 (±13 months), sex undetermined, and a few residual abraded sherds of ?third-century pottery.

The final group of burials lay to the south-east, among the deposits and structural remains in that corner of Area III (FIG. 10). Five scattered graves, sharing a general east–west orientation, were not initially visible until some further machine excavation of the upper deposits here prior to development also revealed the south-east corner of the Area III compound. Examination of the vertical photographs recording the first-definition cleaned surface does however confirm that the graves cut through these deposits as later features.

The most westerly grave (F117) was visible before the machining and had clearly been cut into an area of pitched stone paving overlying earlier deposits. Within this relatively shallow grave were the remains of a fairly well-preserved, supine, middle-age adult male (HB 17). Its fill included iron nails and vertically set packing stones, indicating burial in a wooden coffin, but there were no other finds. To the south-east a truncated shallow grave (F125) also cut through an earlier area of paving, and contained the badly disturbed remains of a supine, elderly adult female (HB 27). There were no iron coffin nails or packing stones in the fill, a few sherds of abraded Roman pottery being the only other finds. Further north a better-preserved though still truncated grave (F127) contained the damaged remains of a prone, young to middle-age adult female inhumation (HB 28). Some iron nails and vertically set stone packing in the fill indicated burial in a wooden coffin, the only other finds being some residual animal bone and abraded pottery sherds. The two most easterly graves were also partly truncated, but their lower parts were still reasonably intact. The northern grave (F131) contained the fairly well-preserved remains of a child of undetermined sex, aged 8 (±2 years) (HB 30). Iron nails and pitched stone packing within the grave fill indicated burial in a wooden coffin, while residual material included some animal bone and sherds of late third- to fourth-century pottery. The southern grave (F132) contained a fairly well-preserved, supine, elderly ?male inhumation (HB 29). A large vertical stone slab was set at the head of the burial, two others along its side and one across its thighs. These packing stones and a few iron nails probably denote burial in a wooden coffin. Some residual third- to fourth-century pottery sherds and animal bone were present in the backfill, some of the bone possibly a deliberate deposit.

2.4: AREA IV — COMPOUND, STREETS AND CEMETERY

PERIODS 1 AND 2

Area IV comprises a roughly triangular area bounded by the remains of two converging streets (F137 and F138), and by the western limit of excavation (FIGS 5 and 12). The most reliably attributed feature of these periods is probably the street (F138) defining the southern boundary to Area IV. This comprised a band of tightly packed, small limestone cobbles at least two layers deep and over 5 m wide. Aligned approximately north-east–south-west, this street extended for almost 20 m north-east from the western edge of the main excavation, before its truncation by recent agricultural disturbance in that direction. Although no further excavation was undertaken, the character and alignment of this section almost certainly link

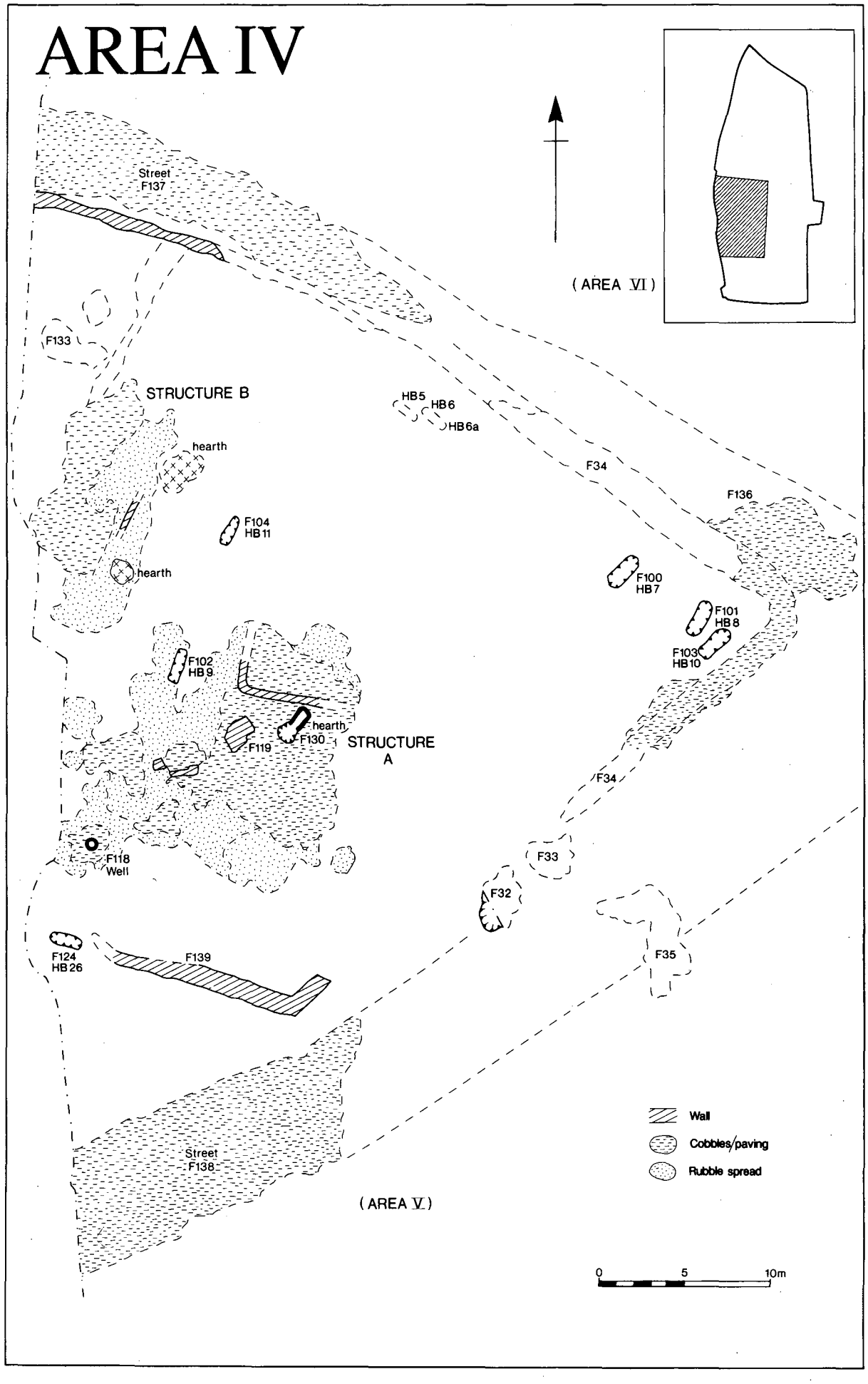


FIG. 12 Area IV, plan of principal features

it with the street (F440) defining the northern edge of Area II, approaching from the north-east. Between the two only the natural clay or underlying limestone bedrock had survived.

A segment of ditch (F34) on the same alignment as F138 was visible as a band of fill along what would have been the north-western boundary of its missing section further east. Although not excavated, this appeared to be a shallow rock-cut feature, continuing for almost 20 m before turning sharply to the north-west. The northern arm of this ditch, also unexcavated, continued up to 1 m wide for over 20 m to the north-west, where it was broken and probably destroyed for a short section by modern plough erosion. Its continuation again thereafter was partly obscured by the cobbled surface of another street (F137), parallel and encroaching upon the ditch fills from the north. Possibly within the fill of the western *c.* 10 m of this ditch, the stones of an irregular drystone wall-foundation alignment were visible. This may be a later definition of the ditch, an arrangement paralleled elsewhere (e.g. Area III, Period 2/3), or the wall could alternatively be the primary boundary. The true sequence was not investigated by further excavation here, and there was no sign of the wall continuing around the eastern segment of the ditch and its turn to the south-west. Further to the south-west there was no equivalent boundary ditch flanking the southern street segment (F138), although another boundary wall foundation (F139) approached the northern road edge here from the west. This single course of unmortared stone foundations was not set into a ditch, but to the east turned to run parallel with the street for a short distance and towards the south-west termination of the boundary ditch F34, before being truncated by recent plough disturbance. To the west F139 was cut away by a later burial (F124), though possibly turning north again here on the very edge of the excavation site.

All the aforementioned ditch and wall features appear to represent a series of boundary definitions for the Area IV compound. Their attribution to Period 2 is suggested on the basis of an apparent association with the street F138/F440, although some could have originated in or at least persisted into Period 3. The compound so defined certainly continues to the west, perhaps as a more rectangular shape which extended to a frontage on the main Fosse Way road.

PERIODS 3–5

In the later periods, definition of the boundaries to Area IV is less clear, probably due in part to the effects of plough erosion. First-definition cleaning to the north exposed a 30 m length of roughly cobbled street surface (F137), aligned north-west–south-east and up to 5 m wide (FIG. 12). This encroached upon and perhaps eventually sealed the infilled boundary ditch and wall foundation along the north side of the compound. Just south of the modern east–west field boundary, ploughing had created a slight negative lynchet, which had destroyed the cobbled street surface and a short section of the underlying ditch. Further to the south-east the ditch (F34) was once again clearly visible, though sealed in part by more compacted areas of cobbling which also survived in patches to the north (F136). These areas mark the junction between the north-western street (F137) and those to the east (F440, Area II), and to the south-west (F138), although there was no direct link between these different surviving areas of cobbling. No excavation sampled the suggested relationship between the north-west street cobbles and the underlying ditch, but unless F34 was a much earlier feature the street should not originate earlier than Period 3. The difference in character between the two areas of cobbling (F136 and F137) may be explicable as two different phases of surfacing, that to the south-east probably being the earlier. A handful of later fourth-century coins from above both sections of the street could signify use to at least that time, but this evidence is hardly reliable.

Weathered limestone bedrock or natural clay subsoil was virtually all that survived in the areas where truncation of street surfaces was total. The only exceptions were two large pits

(F32 and F33) and a more amorphous spread of stony soil and rubble (F35). Only the pit F32 was sampled, its fill (1034) including a fair assemblage of third- to fourth-century pottery. The position of these features, other later Roman surface finds and an absence of cobbles sealing their upper fills suggest cuts through the F138 street surface and into the underlying bedrock sometime during or after the fourth century — presumably after it became redundant as a thoroughfare. Cleaning of the surviving south-west street surface produced a scatter of coins from issues of the later third century through to the end of the fourth. Many of these came from a thin silting deposit above the road surface, which could suggest a decline in use by Period 5.

Within the Area IV compound first-definition cleaning suggested a division of what was exposed into two parts: an area of intense activity centred on a group of structures to the west, and a much more sparsely used area to the east and north (FIGS 12 and 13). The most clearly defined structure comprised the south and west sides of a building foundation marked by alignments of large pad-stones. The surviving interior was paved with worn Lias flagstones and smaller cobbles, but the north and east sides may have been lost to plough erosion. This is interpreted as a rectangular room aligned approximately east–west, possibly of timber-framed construction and *c.* 7 x 5 m in area, representing the northern half of Structure A. A group of nine coins recovered in cleaning over these remains spans issues between A.D. 337 and 402, suggesting that the building was in use primarily during Period 5 and was perhaps erected after the middle of the fourth century.

To the south, extensive areas of paving composed of closely set, pitched limestone blocks probably represent the southern half of Structure A, although no outer wall lines were defined. Within the paved area was a small rectangular oven (F130) comprising a short rectangular hearth chamber built of large, heavily burnt and fragmented limestone blocks, which opened to the south-west. Within was a shallow, interleaved deposit of stony clay soil with some charcoal, burnt clay and stone, and pottery sherds (1139). A similar deposit (1140) with more ash continued out from the chamber into a shallow, sub-circular stoke hole, and contained more fourth-century pottery and a coin of A.D. 350–360. The upper part of the oven chamber had been infilled with large sherds of several fourth-century coarse-ware pottery vessels, following its abandonment. Although the relationship between hearth and surrounding pavement was not tested by excavation, the associated coin and pottery evidence suggests their contemporaneity, and the likelihood that a southern room of Structure A housed this oven.

Also within this area, and a few metres west of the oven, was a setting of very large, horizontally laid Lias flagstones (F119). Initially it was suspected that these might cover a burial, but their removal revealed only a rectangular arrangement of vertical stone blocks in stony soil with some large fragments of fourth-century pottery. A concentration of over 20 coins from cleaning over the pavement and associated surfaces was again dominated by issues of the middle and later fourth century, suggesting activity in Period 5. Further south, an unexcavated vertical setting of stones within the paving could mark a post-hole. In line with this feature were two more similar stone settings in the northern half of the building. Together, these may mark the supports for a central roof-ridge and confirm its probable alignment.

To the west were less-coherent spreads of stone rubble, patches of paving, possible post-holes, packing stones and fragments of wall foundation, none of which could be ordered without further excavation. Coins, pottery and other finds, recovered in some abundance during their cleaning, were predominantly of Periods 4 and 5. One feature which was examined proved to be a well (F118), the fills of which were largely excavated. A shaft, *c.* 1 m in diameter, was exposed beneath stony soil and rubble and surrounded by a spread of rough paving and large stone blocks. Some of this material probably derived from destruction of the well head, but some was also defining the top of a rubble cone within the well construction pit. One edge of this feature was found to the south, but only the well shaft

Fig. 13 Area IV, plan of Structures A and B and environs

itself was excavated, to a depth of almost 2 m, and found to be lined with coursed and dressed Lias limestone blocks. Its fill of dark-brown stony clay contained a few sherds of third- to fourth-century pottery and a coin of A.D. 270–290. Below the lining this gave way to lighter buff-brown clay with large stone blocks at the water table, where excavation ceased at what appeared to be the bottom of the well in disturbed natural bedrock. The coin and pottery recovered from the well shaft indicate its use at least until Period 4, although it may have been constructed earlier.

Further north, and close to the perimeter of the site, elements defining Structure B included a more coherent sub-rectangular setting of pitched stone paving covering an area of *c.* 10 x 6 m, and part of an alignment of pad foundation stones to the south-east. A small semi-circular hearth made of reused sandstone roof tiles lay just to the south-east, while a more extensive sub-circular area of burnt clay and scattered stone probably marks the site of another hearth, truncated from above. Less well-defined spreads of stony soil and rubble to the south and east of the paving were probably associated, while patches of almost stone-free soil within the platform may represent internal features or later disturbances. All these remains indicate the site of a rectangular, probably timber-framed, building with a cobbled floor, aligned approximately north-east–south-west, at least 10 m long and possibly with an annex containing hearths along its east side (FIG. 13). No excavation of this structure was possible and it may have suffered a degree of recent plough erosion at its north end. First-definition cleaning recovered a concentration of finds from its locality, including a group of twelve coins. With one or two exceptions, these were mid- and late fourth-century issues, which suggest another building of Period 5 — probably contemporary with and similar to Structure A.

A strip of stony soil to the north-west of Structure B may mark a ditch which separated it from other arrangements further west beyond the limits of the exposure of Area IV. This suspected ditch extended north as far as the main compound boundary, and the fills of two large pits were revealed just to the west. The larger of these (F133) was investigated briefly in the course of later excavations in advance of building development. This revealed a pit cut over 1 m into the bedrock, which contained fourth-century pottery, charcoal and a deposit of clean grey-green clay (1143), possibly indicating its use as a cess pit. Structures A and B, and the adjacent horizons of features and deposits, are clearly only the eastern limit of a structural complex extending much further west in Area IV, possibly as far as the Fosse Way frontage. Although evidence for activity here was dominated by material of Periods 4 and 5, earlier datable finds were present, and it is likely that further excavation would have revealed a longer and more complex structural chronology.

AREA IV CEMETERY

The eastern extremity of the Area IV compound as exposed was, by contrast, almost devoid of features. Recent agricultural erosion played some role in this, but does not disguise a real difference in character. First-definition cleaning revealed the weathered surface of horizontally bedded limestone bedrock over a large part of this area, although this was masked to the west by a progressively thicker band of buff-yellow natural clay upon which the structures and surfaces exposed further west were founded. A small group of nine burials was identified and excavated here (Pinter-Bellows, 3.10), the majority towards the north-eastern corner, but a few among the structural remains to the west (FIGS 12 and 13).

Close to the eastern corner of the compound were three quite substantial rock-cut graves, all aligned approximately north-east–south-west. The most westerly (F100) contained a prone and extended adolescent inhumation of uncertain sex (HB 7) aged *c.* 12–18, whose well-preserved remains had been contained within a wooden coffin. This was represented by iron nails within the grave fill, vertical flagstone packing around the east and west sides of

PL. XI Inhumation HB 8 (grave F101), Area IV cemetery. (J. Sterenberg)

the former coffin, and a short segment of drystone wall built of six horizontal courses at the south end of the grave. A few metres to the east another grave (F101) contained the fairly well-preserved but partly disturbed remains of an extended, supine, young/middle-age, adult male (HB 8) (PL. XI). Nails around the burial suggested the former presence of a wooden coffin, but there was no obvious stone packing. Settings of iron hobnails at the feet of the burial indicate hobnail boots worn or placed within the grave, whose fill also included a considerable scatter of Black-burnished pottery sherds, including some late third-century types, which may have been deliberate. The third grave (F103) lay close by, and contained the fairly well-preserved and slightly disturbed remains of an extended and supine, young/middle-age, adult ?female burial (HB 10). The body had been decapitated, the skull having been placed deliberately beside the left foot. The grave fill contained iron nails and some vertically placed packing stones around the south end, evidence of a former wooden coffin. A fair scatter of late third- to fourth-century pottery sherds in the grave fill may have been deliberate.

The badly disturbed remains of three more burials (HB 5, HB 6 and HB 6a) lay close together aligned approximately north-west–south-east, parallel with and just inside the main north-east boundary. All had been truncated by ploughing and machine clearance of topsoil in this area prior to excavation, and no grave cuts had survived. One was an extended prone, young adult ?female inhumation (HB 6), accompanied by an infant (HB 6a), sex undetermined, aged 39–40 weeks. This lay on the right side of the adult, but was not recognised separately during excavation. Nearby, the third burial (HB 5) was a supine, middle-age adult of undetermined sex. A few iron nails recovered in the vicinity of both suggest the possibility of wooden coffins, and three coins (one of A.D. 260–268 and two issued between A.D. 326 and 335) were potentially also from one or both graves, whether as deliberate or accidental inclusions.

To the south-west, another poorly preserved grave (F104) lay almost equidistant between

PL. XII General view south-west: Area V (left), Area III (centre), Area IV and street F138 (top right). (P. Leach)

the two suspected timber-framed structures (A and B) of Period 5 (FIG. 13). Its shallow remains, aligned north-east–south-west and set into the natural clay subsoil, were evidently truncated, but contained the incomplete and badly disturbed remains (HB 11) of an extended, supine adult of undetermined age. No iron coffin nails, packing stones or other grave contents were found within the remaining fill. To the south-west again, and among spreads of rubble and paving close to the site of Structure A, was another shallow grave (F102) cut into the clay sub-soil on a north-east–south-west alignment. This was better preserved and contained the relatively complete burial of an extended, supine, middle-age adult male (HB 9). A radiocarbon determination from bone gave a calibrated date range of cal A.D. 430–680 at 95% confidence (GU-5293; 1450±70 BP). Concentrations of hobnails at its feet suggest the wearing or inclusion of hobnail boots, while a large quantity of late third- and fourth-century pottery sherds could have been a deliberate addition to the grave fill. This included several fragments of one grey-ware vessel and a face-decorated sherd (FIG. 37, MS3.11), but there were no iron nails or packing stones to suggest the provision of a wooden coffin. Finally, another single burial was discovered towards the south-west corner of Area IV (as exposed), in a shallow east–west grave (F124) cut, apparently, through the remains of the earlier drystone boundary wall F139. This contained a relatively well-preserved (though disturbed), extended and supine, ?middle-age adult male (HB 26). Quantities of third- to fourth-century pottery within the grave fill may again represent deliberate inclusion, notably sherds placed near the head and feet and from a face-decorated two-handled jar (FIG. 40, BK2.62), but there were no iron nails or packing stones to suggest an original wooden coffin.

2.5: AREA V — THE SOUTHERN COMPOUNDS

INTRODUCTION

Area V, at the southern extremity of the excavation site, included substantial portions of several compounds (FIGS 5 and 14). First-definition cleaning was achieved over most of the area, but little detailed excavation was possible. Boundary features and other contexts were, for the most part, well defined in the western part, although to the east this pattern was obscured by more complex stratigraphy, which included areas of paving, rubble, stony soils and further boundaries (PL. XII). An attempt at phasing the evidence recorded is based primarily on perceived boundary sequences, supplemented by finds from excavation or surface recovery. Where no context numbers were applied to certain suspected boundary features they are identified by alphabetical prefixes.

PERIODS 1 AND 2

One of the earliest boundaries identified was a shallow segment of ditch (F15) aligned east-north-east–west-south-west, parallel to, and to the south of, the street F138 separating Areas IV and V (FIGS 14 and 15). Although following that street's course, this ditch lay several metres south of the surviving road edge. Within its fill were segments of a single course of drystone wall foundation (F16), which suggest a subsequent redefinition. To the west the ditch was not exposed beneath later deposits, although the wall could be seen continuing in an irregular fashion within those later deposits to the western limit of the site. To the east it was terminated by a later ditch (F17) crossing from the south, but there was no suggestion of a continuation any further east. An association of this ditch with the western part of the street (F138), and later second-century pottery from its infill, indicate disuse in Period 2 and a possible Period 1 origin.

The stone boundary wall foundation (F16) curved away to the east, cut through first by the later ditch (F17) and then by another converging ditch (F21) from the west. This foundation, presumably the base for a drystone wall, may mark the primary northern definition of a major compound at this end of the site, though later sub-divided by other arrangements to the east. Segments of boundary wall foundations seen further east in Area V could include a continuation of F16 as Boundary E, but proof of this would have required some excavation. There was no evidence for a ditch (equivalent to F15) as a Period 1 forerunner to this stone boundary wall, but the creation of a major compound here in Period 2 would conform with the appearance of other similar boundaries on the site, perhaps as a single phase property layout.

A long and relatively straight boundary extended from the south-west, comprising a succession of ditch and drystone wall definitions, but in its earlier phases terminating to the north-east before reaching F15/F16. The wall foundations F19 appeared to succeed a primary ditch F18 (FIG. 15, S1), echoing the F15–F16 succession, and may thus be contemporary with the latter. Close to the south-west corner of the site the F18/F19 boundary turned to the south, possibly to link with another and similarly composite boundary to the south-east, Boundary F (not sectioned). If all three main boundaries were indeed associated, they appeared to define three sides of a large eastern compound, and the smaller tapering portion of a western compound which continued beyond the site towards the Fosse Way (FIG. 14). The gap between the north termination of boundary F18/F19 and F15/F16 appeared to have been deliberate, probably representing an access between the eastern and western enclosures which may have been gated. This hypothesis is supported by a short spur of wall foundation extending south from F16 towards F19 at this opening.

Evidence for contemporary activities within the earlier phases of these compounds was

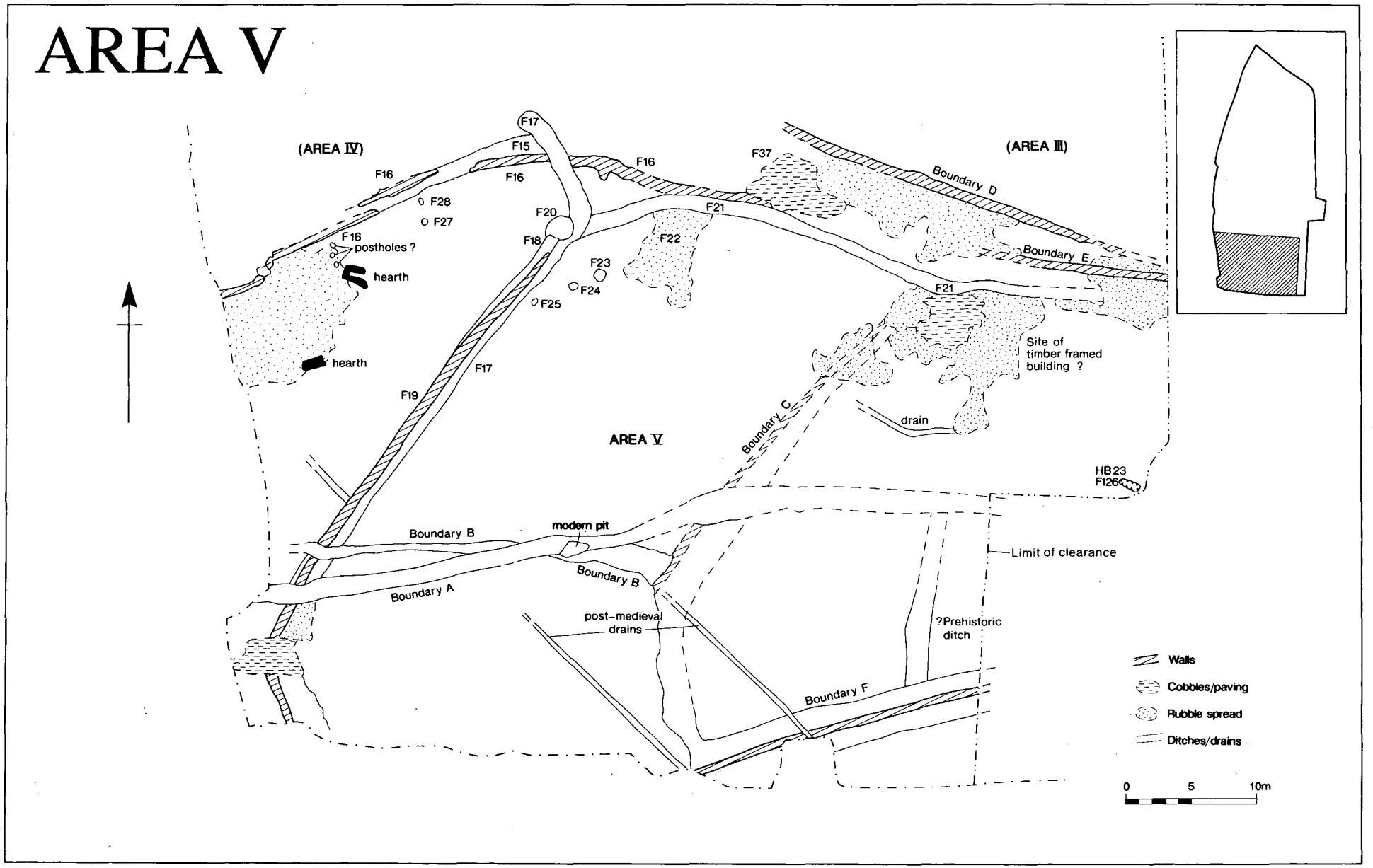


FIG. 14 Area V, plan of principal features

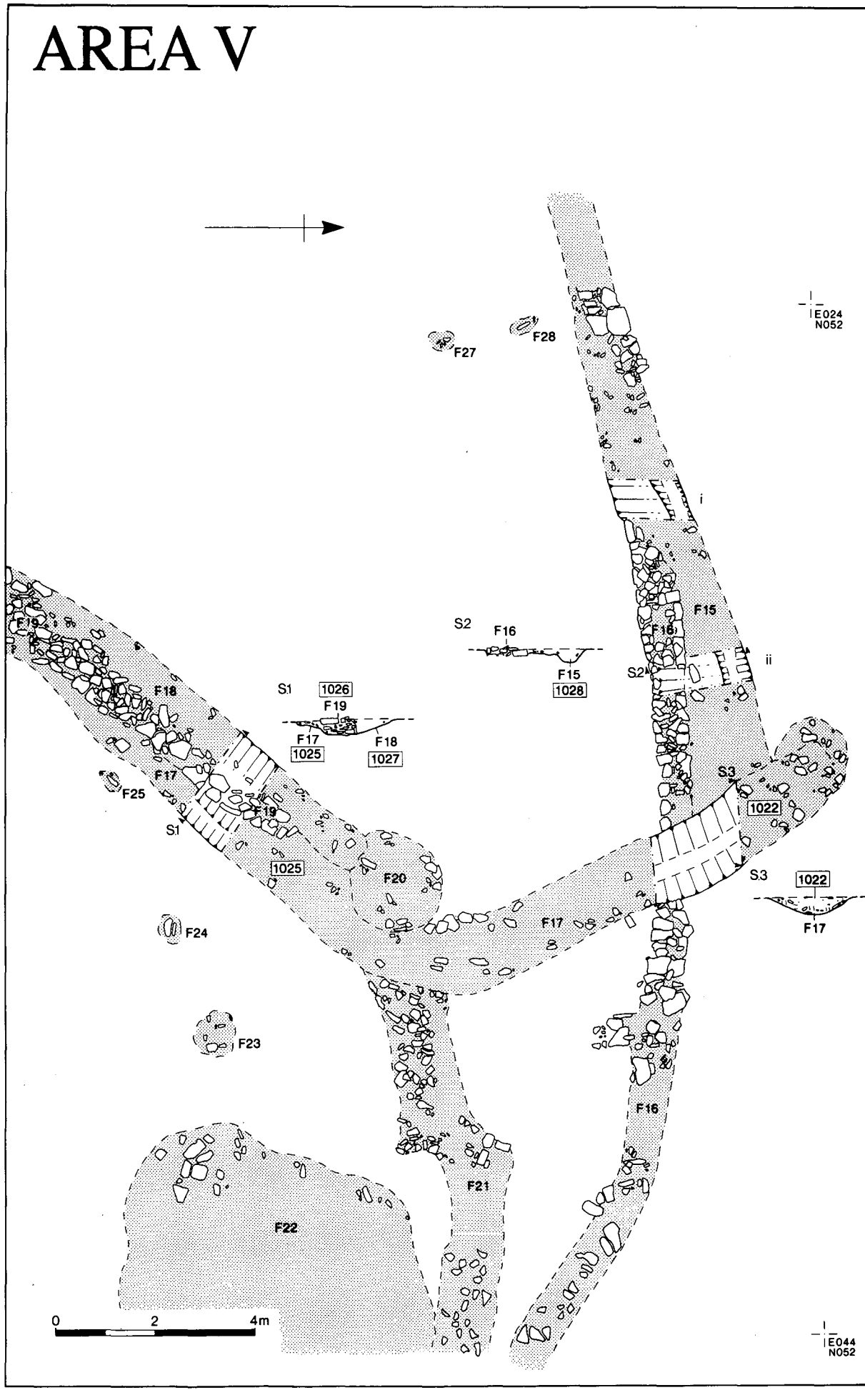


FIG. 15 Area V, plan of selected boundary features

limited to datable finds of Periods 1 and 2 recovered in first-definition cleaning (notably pottery and brooches). This evidence was concentrated along the western edge (as seen) of the west compound, and towards the north-east corner (as seen) of the east compound. No features or deposits were excavated, or otherwise identified, apart from the boundaries themselves. A small part of what may have been another major compound south of Boundary F occupied the south-east corner of the site, but no further information on its content or extent was obtained. Separating Area V from Area III to the north was a narrow boundary zone, partly obscured in later periods by structural debris and surfaces. The possibility that this was occupied originally by a narrow street has already been raised in the account of Area III. An area of cobbles (F37) at the west end of this zone was sealed by rubble and soil (1020) containing third- and fourth-century pottery. This was bounded to the south by the wall foundation F16, but did not survive as far north as Boundary D and could not be traced further east. If Boundary E represents the continuation of F16, it may be that these defined the southern edge of a street or alley extending south-east from the main street F138. The convergence of Boundary D with E suggests that the former was a later alignment, contradicting its interpretation as part of a primary definition of Area III (see Area III narrative). Separating Areas III and V, the street F37 originated either in Period 1 or 2 as an access to properties further east, but may have become redundant during Period 3 or 4 and was then encroached upon.

PERIODS 3–4 AND LATER

From Period 3 there is evidence for some modification to the arrangements of the two main compounds in Area V, as well as an intensification of activity within them. At some point during Periods 3 or 4 the northern boundary to the west compound (F16) was replaced by a ditch (F21) which connected it directly with the boundary F18/F19 to the south-west. This blocked the access between the east and west compounds, but may still have respected the course of the street separating Area V from Area III. Later still a ditch (F17) was dug across the former opening between the compounds and through the remains of the wall F16. This appears to have continued south-west as a shallow cut along the south-east side of the boundary wall F19, although not necessarily replacing it. Later still, perhaps, a pit (F20) was dug at the north-east termination of the F18/F19 boundary (FIGS 14 and 15). There was no clear evidence for a redefinition of the F15/F16 boundary, although the street F138 would have represented a northern limit to the west compound here. The sequence of Boundary F definitions to the south was not explored, but is likely to have been maintained, perhaps by a ditch recut, as the southern perimeter of the east compound.

Within the east compound further linear boundaries were apparent, though none was excavated. The earliest of these was a north–south-aligned segment of ditch cut by Boundary F, thought to be a southern continuation of the prehistoric ditch F43 identified in Areas II and III. One of the earliest divisions of the east compound is represented by Boundary C, apparently redefined more than once (most recently as a stone-lined drain) and linking with Boundary F to the south. Its relationship with the later northern boundary ditch (F21) was not revealed, but the course of Boundary C finds an echo further west in that of F18/F19, hinting that it could have a contemporary origin in Period 1 or 2. Subsequently it was linked with Boundary B, a later ditch which extended west to cut across the line of F17/18/19. Later still, the broader ditch of Boundary A cut all three earlier boundaries on an east–west axis. This feature may represent a medieval or later field boundary of Period 6 and was itself cut by a modern pit containing early twentieth-century rubbish. Also of this period and in this area were portions of stone-lined field drains on a north-west–south-east axis (FIG. 14).

Within both compounds, first-definition cleaning revealed rather more evidence relating to activity of later periods, as suggested by generally associated datable finds. In the western

compound this included the remains of stone-lined hearths, groups of suspected post-holes (including F27 and F28), and spreads of rubble and other deposits, none of which was excavated. Coin and pottery evidence indicated activity persisting here until at least the end of the fourth century, though part of a sequence which probably commenced in Period 1 and perhaps similar in character to that seen more extensively in Area IV.

In the east compound between Boundaries F17/18/19 and C, evidence for internal activity was sparse. A rubble spread (F22) and possible post-holes (F23–F25) were recorded in the north-west corner, while rubble and possible surfaces overlying the boundary in the south-west corner may represent a structure of Periods 4 to 5, built after the division between the east and west compounds had become redundant.

The north-eastern part of the compound was occupied by a complex sequence of deposits and features, including several boundary alignments, which extended into Area III, the details of which could not have been disentangled without excavation. Within that area, spreads of stone rubble, paving, stony soil, and part of a stone-lined drain probably represent the sites of one or more structures. Coins and pottery were not abundant, but indicate activity up to the late fourth century at least. A notable concentration of coins was however recovered along the former boundary between this area and Area III, much of it perhaps originating from the latter (see Area III narrative). Timber-framed structures, comparable and perhaps contemporary with those identified in Area IV, may also have been present in Periods 4 or 5. An isolated shallow grave (F126) to the south-east is likely also to belong to Period 5, the only one recognised in Area V. This was badly disturbed and contained the poorly preserved remains of a ?supine, adult inhumation (HB 23) of undetermined age. There was no evidence of a coffin or grave goods, apart from some ?residual fourth-century pottery in the surviving fill.

2.6: AREA VI — THE NORTHERN COMPOUNDS

INTRODUCTION

In contrast to the southern half of the site, first-definition cleaning in Area VI was limited in scope, apart from the separately defined Areas VII, VIII, IX and X containing stone buildings to the north and east. Its coherence as a well-defined unit within the Fosse Lane settlement is thus somewhat limited. Evidence from a pipe trench just to the west of the main excavation site and from the initial evaluation trenches B, C, D and E dug earlier in 1990 is also included within this account (FIG. 5).

COMPOUNDS

Within the main body of Area VI the most important area cleared was in the south-west corner, continuing directly from the definition of Area IV (FIGS 5 and 16). This comprised a strip *c.* 20 m wide extending 25 to 30 m north from the street (F137) forming the northern boundary to Area IV. Towards its northern edge were two sections of drystone wall foundations; the larger (Boundary W), which survived to at least two courses high in places, was exposed over a 15 m length. To the east it continued for an unknown distance beyond the limit of clearance; westwards it was butted against the curving corner of another wall foundation (Boundary V). This boundary continued the line of W to the edge of the site and beyond, but turned south to continue for only a few metres from the junction. Without further excavation the relationship between these walls could not be confirmed, the corner of Boundary V could alternatively have been superimposed upon the eastern Boundary W.

Within the corner setting of V was an area of pitched and closely set limestone cobbling

FIG. 16 Area VI, first-definition plan, structures — south-west corner

representing either a yard or an internal floor. Its full extent to the west was not revealed and there were no other clearly associated elements. This may mark the footings for a timber-framed structure comparable to those recorded in the adjacent Area IV. Immediately to the east, and bounded to the north by the wall foundation W, was a much larger area of rough stone paving with patches of cobbling and spreads of looser stone rubble, particularly to the south-west. Close to the eastern edge of this horizon and set within the paving, were the remains of a small, rectangular oven or hearth. The heavily burnt stones of the hearth chamber and other burnt clay and stone deposits were exposed, but not excavated further.

Alongside, a small lead ingot cast with what may have been the producer's name, MINNIVS (Tomlin, 3.8), hints at a function of this hearth for the smelting of lead, although it should be stressed that no samples were taken from it which might corroborate this suggestion. The hearth and compacted stone surfaces in its vicinity suggest the site of another timber-framed structure, or an extension of the building to the west, although its ground plan was otherwise unclear. Concentrations of pottery, coins and other finds indicate an intensity of activity and occupation here in Periods 3, 4 and 5; the coins including later third-century, early, mid- and later fourth-century issues.

To the south, the cleared area was bounded by the street F137 where there was no other clear evidence of structures. The particular property revealed in this part of Area VI was a rectangular compound, *c.* 20 m wide, aligned on and perhaps fronting upon the Fosse Way to the west. As in Areas IV and V, there is evidently a contrast between more intensive activity approaching the Fosse road frontage and a less intensively used zone to the rear. Only a small part of the adjacent enclosure to the north was cleared, where a strip of rubble along the north side of the stone boundary walls V and W presumably represents debris from their collapse, but no other intelligible arrangements were revealed.

Elsewhere, within the southern half of Area VI, limited clearance beyond the northern margins of the streets bounding Areas II and IV (F137 and F440) revealed little of obvious coherence. Occasional patches of cobbling and thin spreads of stony soil above extensive exposures of bedrock or natural clay subsoil suggest a general sparsity of remains across this area. Clearance of over 20 m^2 to the south of Building VII revealed that much was still masked by subsoil, possibly accumulating against the southern boundary (F334) to Building VII and its environs. To the south, where bedrock reappeared, a small group of large paving slabs and areas of burning, including slag and hearth debris, signify the remains of further hearths or ovens with associated structures. A scatter of late third- and mid- to late fourth-century coins in and around this area probably reflects some activity here during Periods 3 to 5, but the area cleared was insufficient for a fuller interpretation.

The composite boundary (F319/F334) separating this part of Area VI from Buildings VII and VIII to the north was traced westwards across the site as a drystone wall foundation (FIG. 5). This was built almost parallel with the main boundary wall exposed to the south-west (Boundary W), but was not traced as far as the western edge of the site, terminating some 20 m west of Building VII at another wall foundation (Boundary Z) which then extended south at a right angle for at least 12 m. At this point a grave (F134) was located, aligned with and impinging upon the east side of the wall footings. Since this was not recognised until the contractor's excavations for the new development were underway, only a rapid salvage excavation was possible. The shallow cut, aligned approximately north-east–south-west, contained the disturbed remains of a supine, adult female inhumation (HB 31), of middle age, decapitated, with the skull placed at the feet to the south. Immediately alongside to the right were the almost-complete remains of an infant of undetermined sex (HB 32), aged new-born to two months, on the same orientation. Both burials were apparently contained within a single wooden coffin, iron nails from which were recovered, and surrounded by vertically set packing stones. There was no other dating evidence or sign of other burials in this locality, although their context may have been a small dispersed cemetery of Period 4 or 5, similar to that in Area IV.

A few metres south of these burials was another *c.* 10 m-long segment of drystone wall footings (Boundary Y), set parallel to the wall F334. There was no visible link between this wall and any others, but it suggests the third side of an elongated rectangular enclosure here. Approximately 20 m north-west of the burials was another isolated segment of drystone boundary wall (Boundary X), aligned almost parallel to Boundary Z. This was perhaps a sub-division further west within a larger compound, bounded to the north by a continuation of the wall F334. Although these boundary features were only selectively and incompletely exposed, their presence suggests the layout of a system of rectilinear compounds in this part of the settlement, fronting on and set at right-angles to the Fosse Way further west.

This suggestion is further supported by the remains of two parallel drystone boundary wall foundations (F667 and F668) to the north, cut through by the southern end walls of Building IX (FIGS 5 and 24). No thorough first-definition cleaning was undertaken west of Building IX, but the wall lines were traced and recorded. Both appear to flank a narrow street or alley which approached Building X from the Fosse Way. Although somewhat irregular, their general alignment conforms with some of the boundaries further south in Area VI, and they probably represent the long sides of parallel compounds on either side of the alley, north and south. Building X presumably lay towards the east end of a northern compound, but very little was seen of the interior of its southern counterpart. One exception was part of an area of pitched stone foundations, paving and rubble overlying or butted against the south side of the southern boundary wall (F668), potentially the remains of a building on a similar alignment to Buildings IX and X, but incompletely exposed.

One other feature of Area VI was the large, east–west-aligned, rock-cut ditch (F318), which removed the north end of Building VII in Period 3 following its demolition (FIGS 5 and 18). This continued all the way across Area VI to the west, but was only excavated at one point adjacent to the building. Its fills and relatively rapid infill during Period 4 suggest that this ditch acted as a drainage facility across the site, possibly from the Fosse Way. Whatever its function, it appears as somewhat intrusive within the settlement, though relatively short-lived.

EVALUATION TRENCHES

Two trenches were cut during an evaluation of the Fosse Lane development site early in 1990 to the west of Area VI (FIG. 5). These were designed to test the potential for archaeological preservation towards the site boundary on Fosse Lane, and closer to the original street frontage. Total excavation of all archaeological contexts within these trenches was not the objective, but their sequences can be linked with the main site chronology (FIG. 17). In the most westerly trench (B/C), aligned parallel with the modern road, the earliest context was a buried surface of silty clay (1017) incorporating scatters of small stone, charcoal and sherds of second-century pottery. Sealing this horizon were two extensive deposits of stone rubble; that to the west comprising compacted limestone rubble layers (1009) which extended for almost 6 m to the south end of the trench. Little of this was removed, although a few sherds of second-century pottery were recovered in its make-up. Its surface, disturbed in places, was well-worn, and this yard or street (F7) probably extended east from the Fosse Way. A gap of up to 3 m separated its northern edge from a more extensive deposit of medium-sized, angular, limestone rubble (1016) which extended most of the way along the north arm (C) of the trench, and for *c.* 6 m east along Trench D. There were no datable finds, but in Trench D this layer sealed a narrow linear cut (F8), and a small, shallow pit (F9). The gully could have marked a timber beam-slot, while the pit contained a worn coin of Vespasian (A.D. 69–70).

The rubble layer (1016) was removed at the north end of Trench C to reveal the junction of two unmortared wall-foundation courses set into the surface of natural clay beneath. One (F47) continued south for an unknown distance beneath 1016, but joined with an east–west-aligned foundation (F48) in the north-west corner of the trench. This section had been disturbed by a later pit (F49) which had also cut through the rubble above. Neither wall foundation had visible construction or robbing trenches, but they probably represent the corner of a room or building of mortared-stone wall construction identified with other remains (see below) as Building XI. The relationship of this structure with other features sealed beneath the rubble 1016 is uncertain, but the latter may in part derive from collapse or dismantling of that building.

Between the northern edge of the street F7 and the rubble 1016 was a thin mixed layer of

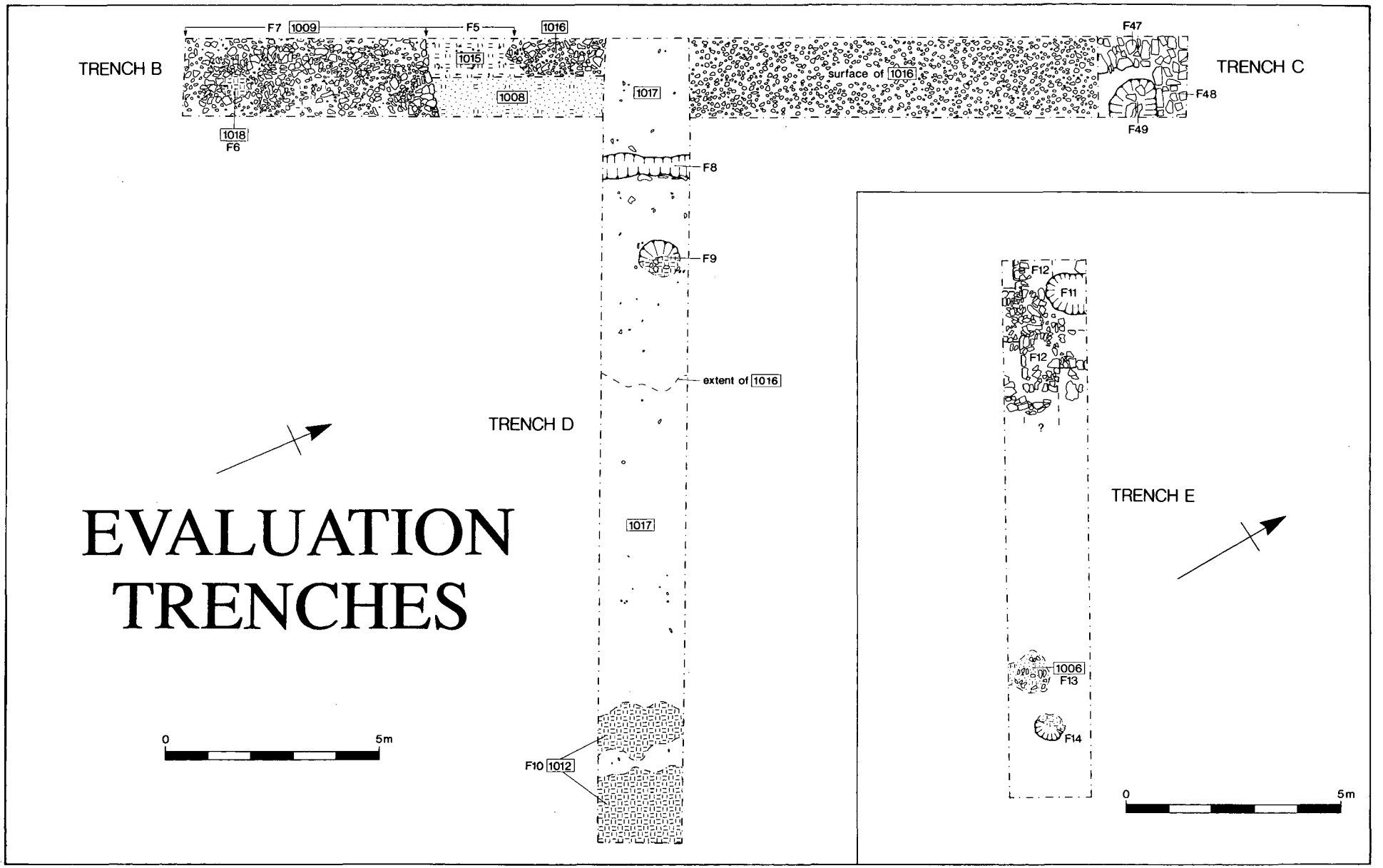


FIG. 17 Evaluation Trenches B–D, detail plan

clay and mortar (1015), containing some later second-century pottery, within a hollow (F5), which also overlapped the rubble but not the street surface. Sealing all three was a deposit of silty clay soil with charcoal (1008) containing fourth-century pottery, which effectively infilled the original hollow between the street and the rubble horizons. A second phase of dumping was represented by a thick layer of large and medium-sized stone rubble (1007) sealing 1016 and the hollow (F5) between it and the street (F7), but respecting the latter. A northern continuation of this dump (1021) along Trench C probably also sealed the pit F49. The only datable material from these rubble deposits was a few abraded sherds of second- and third-century pottery. The street was not covered by these deposits, suggesting that it still remained in use. Its latest surface was well-worn and uneven, with repair patches, including a hollow (F6) infilled with clay (1018), possibly a later disturbance. Beyond the eastern extent of the rubble (1007) in Trench D was a compacted clay floor (F10/1012) surviving in patches on the natural clay. This was undated and its relationship with the sequence further west not determined.

To the north, a less complex sequence of deposits was revealed in Trench E. Below a deep topsoil overburden (*c.* 0.5 m) were the remains of another stone-founded building, set once again upon a surface of natural clay. These comprised three sections of unmortared limestone blocks and rubble wall footings (F12), the largest, 3.8 m long and *c.* 1 m wide. This was set at approximately 90° to the Fosse Way, continuing beyond the trench in that direction, and turning north at a right-angled corner to the east. To the west, another short section of foundation linked with the south side of the main wall alignment represented a third wall continuing beyond the trench to the south. No other features or deposits were associated with these remains, and natural clay and bedrock were exposed below the topsoil further east. Into this were cut two shallow features: one (F14) containing dirty clay and mortar and some second-century pottery, and the other (F13) a darker silty fill with charcoal. Neither could be related to the building remains, but part of a later pit (F11) was cut into the north side of the main building wall foundation (F12), and contained some third-century pottery.

During the subsequent development at Fosse Lane a watching brief was maintained on a pipe trench cut along the north and west boundaries to Area VI. One section of this trench, located just to the north of evaluation Trench C, intercepted the substantial remains of a stone-founded structure, Building XI. These comprised a *c.* 6 m length of mortared stone wall footings, aligned approximately east–west and surviving to three or four courses with its outer face dressed, and a similar, though slighter, linked section extending at 90° to the south. North of the main wall was an area of limestone paving slabs above a mortar floor base. Another area of mortar floor to the south was seen in the angle between the two wall sections. No more detailed record could be made of these remains, but a substantial quantity of second- and third-century pottery was recovered. In view of their proximity to the building remains at the north end of Trench C, both sets are thought to be components of a single structure (Building XI). Approaching this area from the east were the boundary walls (F667 and F668) and street, though not encountered in either the pipe trench or the evaluation trenches.

In the context of subsequent excavations the results from the earlier evaluation Trenches B–E become more comprehensible. These trenches, sampling areas closest to the Fosse Way road frontage, hint at the stratigraphic complexity which might be expected there. The evidence suggests at least three main structural phases, the earliest of which may have featured timber-framed buildings and a contemporary soil/occupation horizon. Associated dating material was sparse, but indicates activity of Period 1. The remains of Building XI, and a second building to the north in Trench E, whatever their full history, may originate in Period 2, when there is evidence elsewhere on the site for the appearance of major stone buildings and other features indicative of the organisation and expansion of the whole settlement. Contemporary with these buildings was the layout of a side-street (F7), which may then have continued in use throughout the remaining life of the settlement, although it could not be

traced across the site further east. The demolition of at least one part of Building XI is implied by extensive spreads of rubble over its foundations in Trenches B/C, possibly in Period 3. Other structures and events of Periods 3 and 4 were more difficult to discern, although deposits of Period 4 seem to have been accumulating over the rubble spreads (1016) here. Building XI may have been modified or rebuilt in those periods, as may other buildings in the vicinity. A second extensive dump of building demolition rubble (1007) surely signifies major stone-built structures in the locality in later periods. Datable material was not plentiful, but a second phase of demolition may have occurred during Period 5.

2.7: AREA/BUILDING VII AND ENVIRONS

INTRODUCTION

The recognition of stone-founded structural remains, subsequently identified as Building VII, and the latter's relatively well-preserved state in association with well-stratified archaeological deposits, prompted more detailed investigation by extensive excavation sampling of this building and its environs; a strategy also applied to the adjacent remains and locality of Building VIII (FIG. 18). The walls of Building VII were left substantially intact, as were some pre-building features and levels. For excavation purposes, three areas or rooms within the main building were defined by walls as A, B and C, and a fourth by slighter walls to the west as D. To investigate the exteriors and their relationships with the building, several broad transects were cut at varying distances out from the walls to sample the full depth of stratigraphy. From east to west these were F and H (east), I, G and part of K (south), and J and part of K (west); all of which were ultimately linked as a single area of clearance to the level of the old land surface.

PERIOD 1: PRE-BUILDING VII

The primary level recognised in this area was a contaminated horizon of stony, red-brown clay (1522) sealing weathered limestone bedrock at shallow depths or merging into deeper uncontaminated natural clay (FIG. 21). The same horizon was identified in Areas F and H (1503), in Areas I, G and K (1375), and in Areas J and part of K (1397) (FIG. 19). Although essentially a common pre-building horizon, finds of early/mid-second-century pottery incorporated into some surfaces could be contemporary with the construction or early use of Building VII in Period 2.

A small rock-cut pit (F368, fill 1589), containing a few sherds of late first-century pottery, was sealed by a more extensive Period 2 deposit of stony clay (1588) (PL. XIII and FIG. 19). To its north were the remains of two drystone wall foundations crossing diagonally. Of these, F329 was the earlier, a single course set into the old ground surface, which continued to the east as a better-preserved alignment (F325) several courses high, beyond the confines of the later building. No western continuation of this boundary beyond Building VII was recorded. The remains of the second boundary wall foundation on a north-west–south-east alignment (F330) cut across or merged with the first foundations (F329) beneath Room C. There was no trace of this feature continuing either to the east or west of the later building, although rubble (1370) associated with second-century pottery in Area F could have derived from a collapsed eastern continuation. The presence of these boundary features implies compounds, perhaps of two phases, on the site, prior to the construction of Building VII.

PERIOD 2: BUILDING VII, PHASE i

The primary definition of Building VII comprised the foundations and bottom courses of

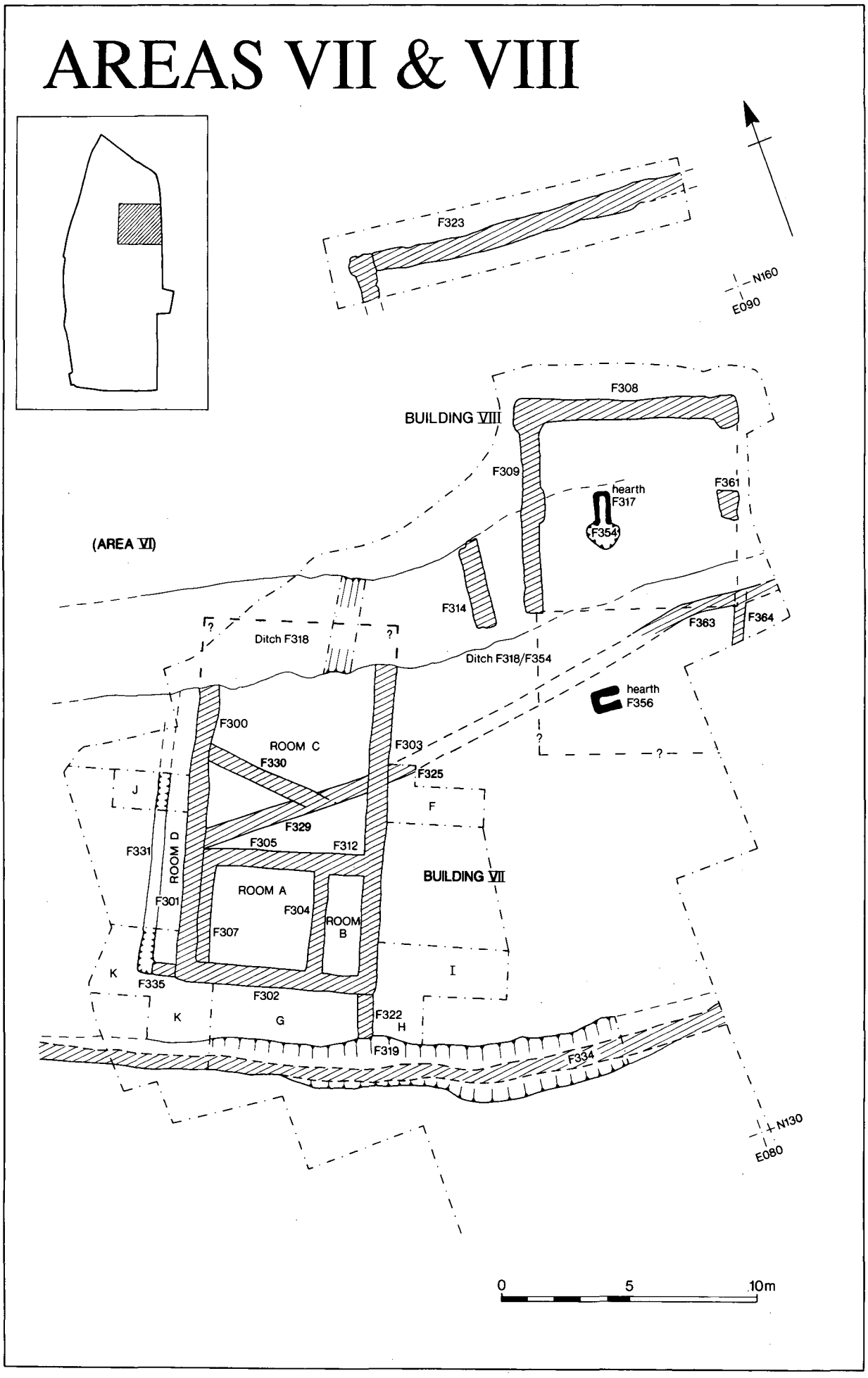


FIG. 18 Areas/Buildings VII and VIII, plan of principal features

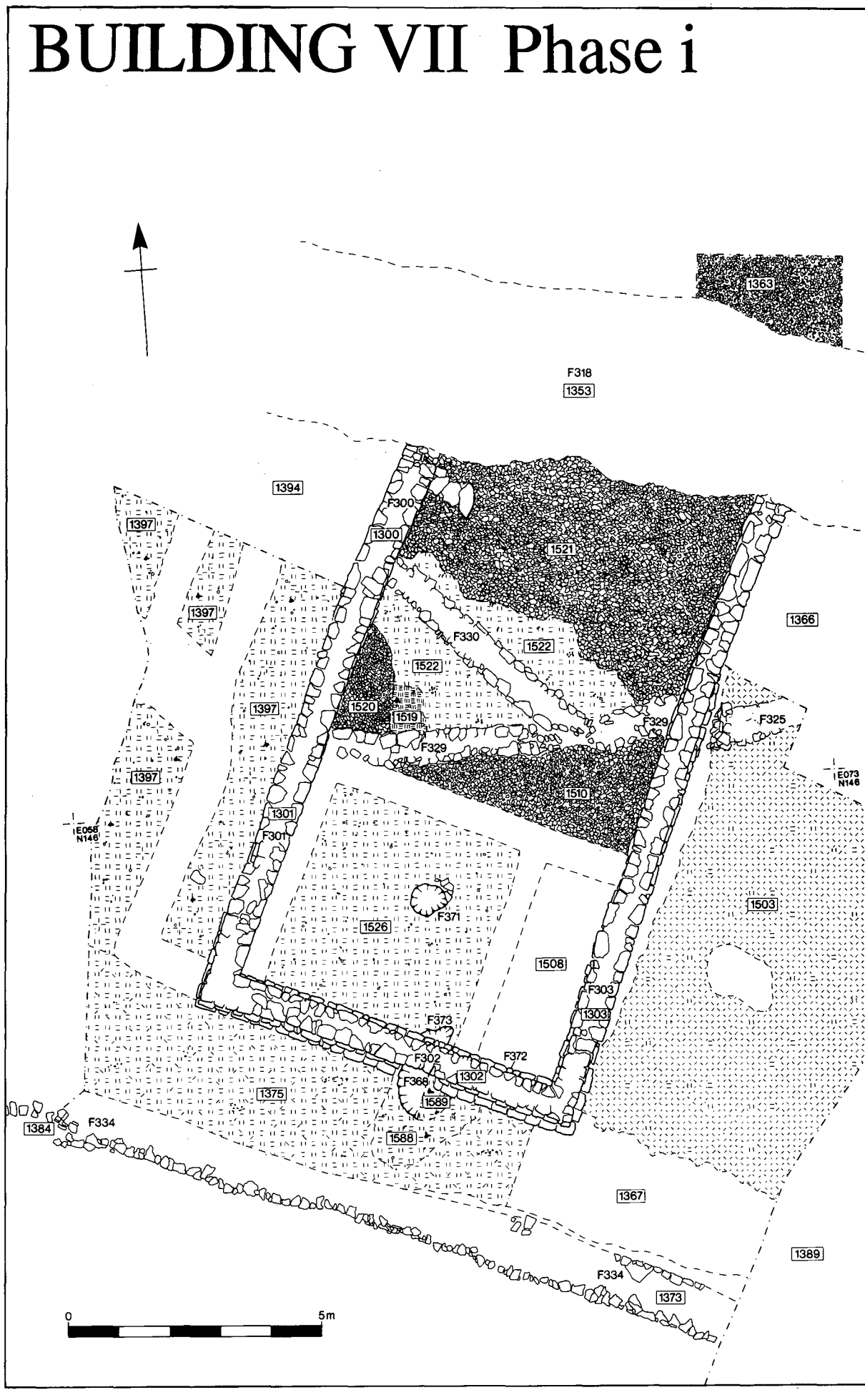


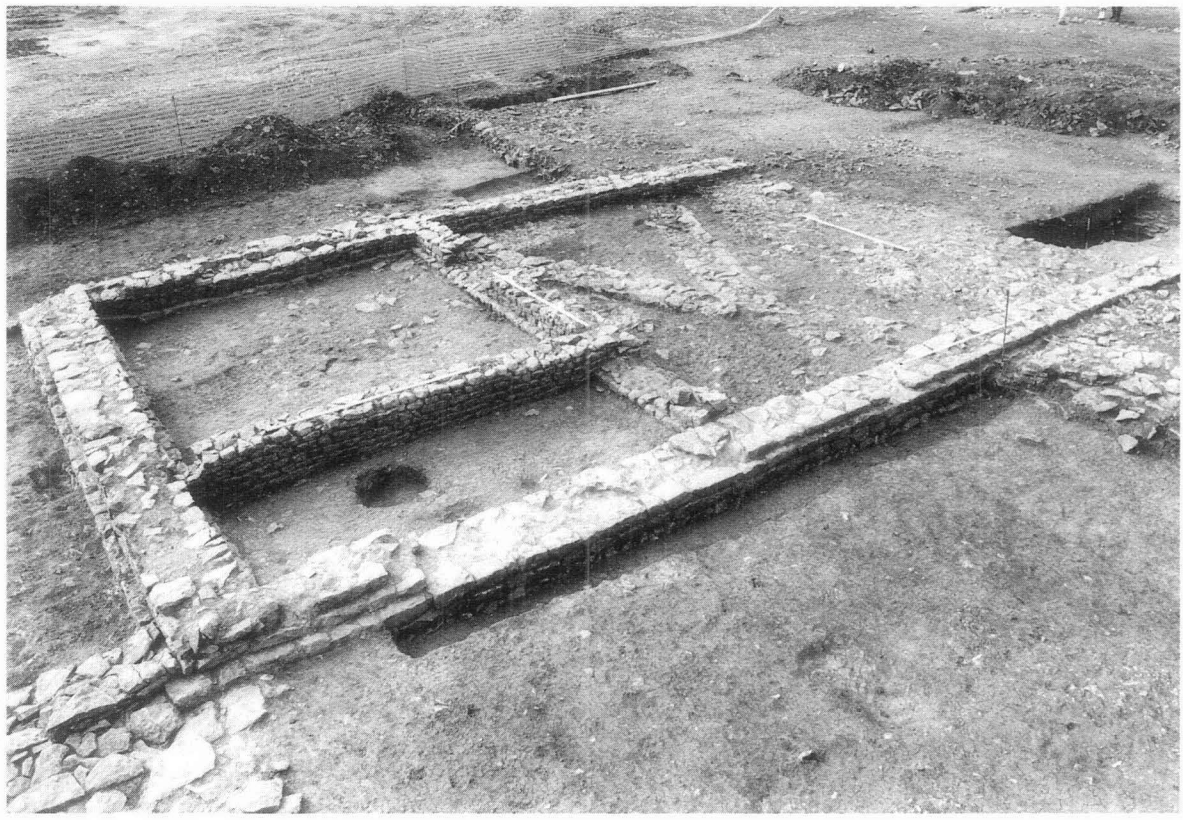
FIG. 19 Building VII, Phase i detail plan

PL. XIII Pit F368 below south wall (F302) of Building VII, view east. (J. Sterenberg)

three wall alignments which outline the south, east and west sides of a rectangular, mortared stone-built structure aligned approximately north–south (FIG. 19 and PL. XIV). This covered an area approximately 12 x 8 m, but the north end wall was lost through the excavation of a later ditch (F318) and an original length of *c.* 13 m is presumed. The west wall was recorded as F300 to the south and F301 to the north, though all of one build. It comprised one course of unmortared, pitched stone footings supporting three mortared, horizontal foundation courses *c.* 0.7 m wide, and one surviving upper wall course *c.* 0.5 m wide offset at foundation level. The south wall, F302, was of similar construction, up to four upper mortared wall courses surviving in places. The east wall, F303, had only two foundation courses above pitched footings, supporting two surviving upper wall courses. The wall foundations were normally set within shallow cuts into the clay subsoil or bedrock (FIG. 21). A small setting of vertical stones, resting upon flat stones (F372) within the inner foundations of the south wall (F302) in Room B, may have been an integral drain through the wall.

The remains of floors or other features associated with this phase of the building were affected by the later, Phase ii, conversion which created the three ground-floor rooms (A, B and C). Beneath Room C, surviving Phase i deposits comprised rubble and clay foundation material (1510) in the south-east corner, a small area of burnt clay soil (1519), and a small spread of stone rubble (1520) towards the west wall. A much larger spread of clay and rubble make-up (1521) occupied the northern half of Room C; its relatively greater depth here provided as levelling-up for a floor above a natural fall of the ground to the north. From among these deposits sherds of early to mid-second-century pottery were identified.

Beneath the later Room A was a floor of compacted, dirty brown clay (1526) incorporating second-century pottery sherds and charcoal. A shallow cooking hearth (F371) set into this floor contained ashy soil (1591) and the base of an amphora reused as a lining. Another shallow ash-filled pit (F373) cut into the floor lay against the south wall of the building. Beneath the adjacent Room B no primary floor levels or features were identified.



PL. XIV Building VII, general view looking north-west. (J. Sterenberg)

In its primary phase, Building VII may have been an open hall (possibly aisled, although no evidence survives) or one large room with an upper storey. Alternatively, the hearth towards the south-west corner indicates a partitioning of the south end, perhaps of slighter character but on similar lines to Phase ii, the evidence for which has been destroyed through direct replacement. There was no indication of an entrance to this building in any of the surviving walls, the suggestion being that one lay to the north and would have been destroyed by the Period 3 ditch (F318).

The identification of contemporary exterior features or deposits was sometimes hampered by subsequent activity and deposition. To the east, a spread of angular rubble in clay (1369) overlay the old ground surface (1503) and was sealed by a clay silt (1368). Also beneath this silt another shallow deposit (1523) appeared to fill a shallow gully crossing this area. Another deposit of grey clay silt (1512) here may have been equivalent to 1368. Sherds of second-century pottery were associated with all these deposits. To the south were the remains of a drystone boundary wall (F334) aligned almost parallel with the short axis of the building. Only one or two courses of stone survived in most places, and the double alignment was much disturbed or destroyed along its north side by the cut of a later ditch (F319). This ditch had destroyed any direct evidence of the relationship between Building VII and the primary boundary wall, but the two are likely to be contemporary in origin. This wall foundation appears to mark the northern boundary of another compound to the south. No features or deposits of Phase i were identified in the transects west of the building.

PERIOD 2: BUILDING VII, PHASE ii

The adaptation of Building VII in Phase ii involved the creation of three separate rooms by internal subdivisions at the south end of the original building (FIG. 20 and PL. XIV). An

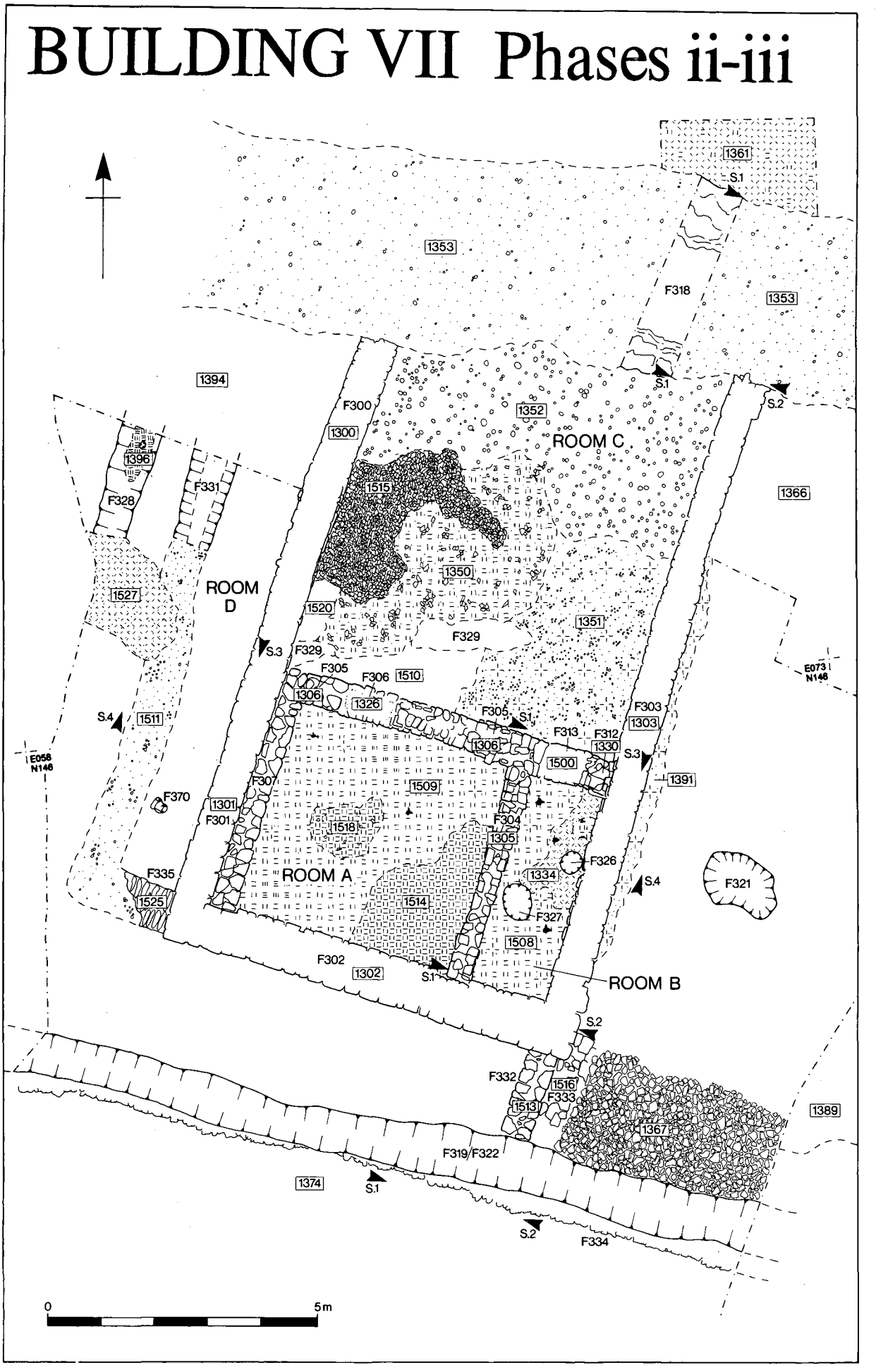


FIG. 20 Building VII, Phases ii and iii detail plan

east–west wall alignment (F305) survived as up to three mortared courses of dressed limestone blocks, set two-deep and almost 0.5 m wide, resting upon a slightly wider stone foundation course (*c.* 0.6 m wide) above footings of limestone chippings in clay. This cross-wall was butted against the inside of the main west wall (F300/301). To the east, the wall F305 was bonded with another of similar construction (F304) set at right-angles to it, from which point it continued as one build (as F312) to butt against the inside of the main east wall of the building (F303). The cross-wall divides a larger area to the north, Room C (*c.* 56 m^2 as surviving), from two smaller southern rooms, Room A (18 m^2) and Room B (8 m^2). The partition wall between Rooms A and B (F304) was butted against the south wall (F302) of the building, as was a secondary inner west wall to Room A (F307). The function of this secondary wall, which was bonded with the cross-wall F305, is unclear, although additional strengthening may have been required at this corner of the building, particularly if Rooms A and B had upper storeys. Access to these rooms was via two doorways opening from Room C, marked by gaps in the cross-wall F305/F312: F306 into A and F313 into B (FIG. 21).

In Room C, patches of mortar, pebbles and limestone chippings (1351 and 1352), and an area of pitched stone blocks (1515), may all have been levelling-up foundation for a compact clay/beaten-earth floor (1350). This had been disturbed by the collapse of rubble from the building above at the time of its destruction, while to the south the floor gave way to patches of burnt soil and ash, probably also arising from the destruction of the building. To the north, both the clay floor and north end walls of Building VII were cut away by the later ditch F318 in Period 3. Only a small sample area was investigated to the north of this ditch, where a cobbled yard or path (1363) may have been a contemporary exterior to either phase of the building, and was sealed by silty clay (1361) containing a late third-century coin. The cobbled surface probably represents an approach to the entrance into the building maintained from Phase i, evidence for which would have been destroyed by the later ditch cut.

In Room A a heavily fire-affected floor of pink/yellow mortar with patches of burnt soil and charcoal overlay a more compact silty clay (1509). Beneath were patches of dark red-brown stony clay (1514 and 1518) which were either levelling over the earlier floor horizon of Building VII, Phase i, or were remnants of it. In Room B an equivalent, compact, silty clay floor level, with patches of mortar and charcoal (1508), was again affected by burning associated with the final destruction of the building. The levels beneath were not investigated further, but two small pits cut into the floor were probably contemporary with its use. One of these (F326) contained the base of an amphora, sherds from a large portion of the remainder lying within the destruction layer (1334) above. A small pit (F327) nearby may have had a similar function, although its contents derived largely from the subsequent destruction of the room above.

Finds associated with the deposits and structural components of Building VII, Phase ii, were predominantly pottery of second- to mid-third-century types. The best assemblage was the storage-type vessels broken *in situ* from Room B, which may thus suggest its original function as a store room; Room A was possibly a kitchen, while C may have been a living area. The substantially built walls and the additional wall F307 in Room A suggest that Building VII had an upper storey, although there was no evidence for an access stair.

Along the west side of the building another room or corridor (Room D) was added in this phase (FIG. 20). A robbed foundation trench (F331) was aligned parallel with the west wall of Building VII. At its southern end, a junction at right-angles with another shallow foundation trench (F335) containing pitched stone footings (1525), which butted against the outside of the main building wall, marked the south end wall of this corridor. No more than 1.5 m wide, the corridor/annex probably ran along the full length of the building, although its north end, and likely truncation by the later ditch F318, was not uncovered. No floor level was identified within Room D, although a small post-hole (F370) close to its southern end may belong to some internal arrangement. Likewise, there was no evidence of an external entrance or internal access to the remainder of the building.

BUILDING VII

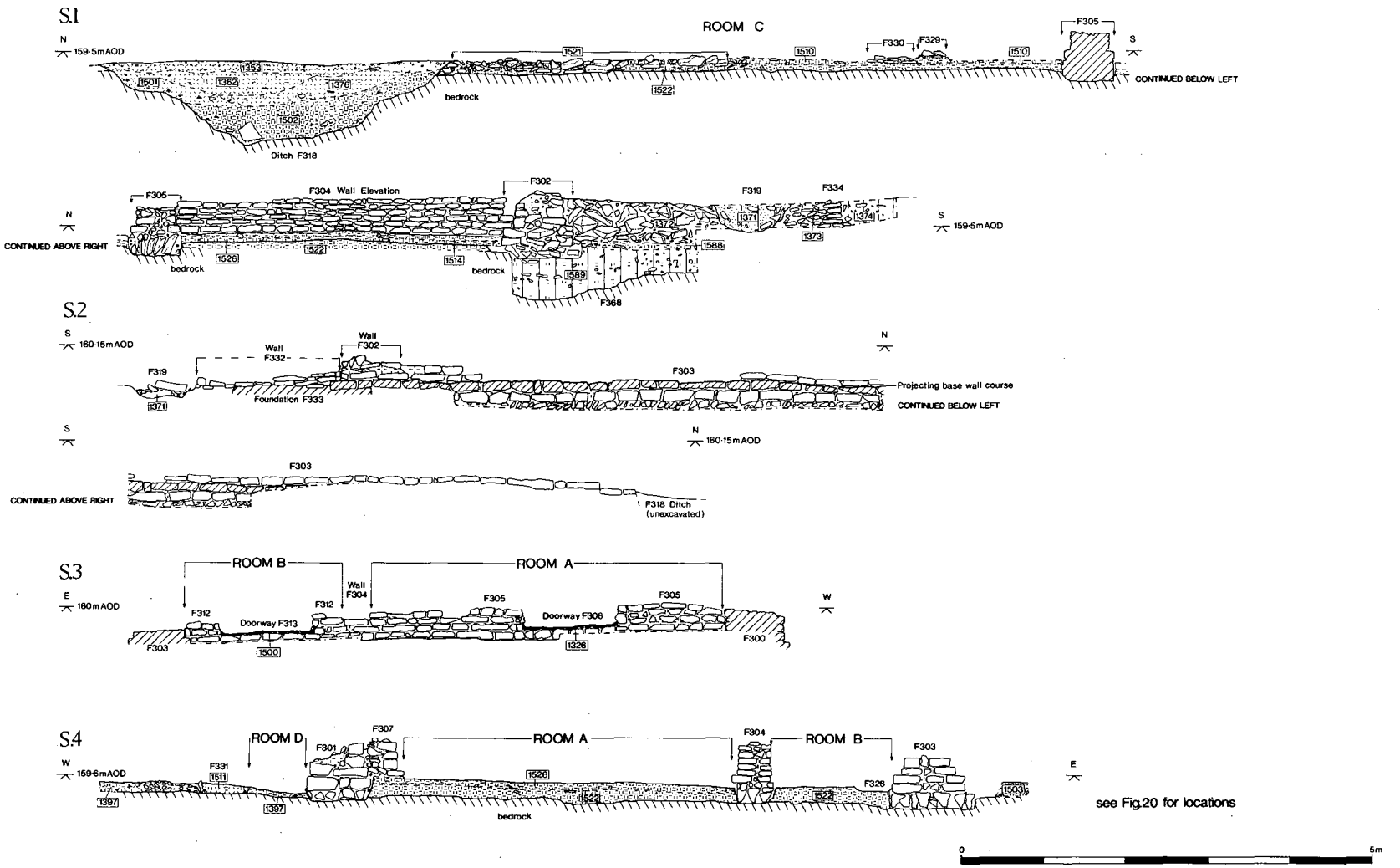


FIG. 21 Building VII, sections and wall elevations

Beyond Room D to the west, and parallel with it, lay a shallow ditch (F328). The only direct association between this ditch and the room was their burial beneath rubble from the destruction of Building VII, although possible fourth-century pottery from the ditch fills would suggest that it belongs to a later period. To the south-west of Room D was an area of stone and rubble fill (1524), apparently within a large, unexcavated pit or ditch terminal.

At the south-east corner of the building the base course of a roughly mortared north–south wall alignment (F332) was butted against the end of wall F302. This wall segment extended south to be cut through and terminated by a later ditch (F319), but may originally have butted against the earlier boundary wall F334, blocking off a potential passage between that boundary and the south wall of Building VII. There was no evidence for a corresponding wall segment to the west, or for a contemporary floor level to suggest another annex or corridor along this side of the building. East of the wall F332 was a small rectangular platform of unmortared, horizontally laid stone blocks (F333), butted against the south-east corner of the building. This feature seemed to be contemporary with a larger rectangular area of stone rubble paving or foundation (1367). A separate room or annex to Building VII may have been sited here, although only its west wall (F332) and a south wall utilising the boundary F334 can be suggested with any confidence. Beyond the boundary wall F334, and overlapping its base to the south, was a soil/silt deposit (1374) which may belong partly to this phase. Pottery and finds associated with all these exterior deposits and structures were relatively sparse and abraded, but generally of second- or third-century type where datable.

PERIOD 2: BUILDING VII, PHASE iii — DEMOLITION

The end of Building VII was evidently a sudden event; in all probability the outcome of a major fire. The clearest evidence for this was in Rooms A and B, and in the southern half of Room C. Destruction by fire of these rooms and their contents brought about either a collapse of the building or its deliberate demolition, resulting in the relatively deep burial and enhanced preservation of the lower parts of the structure and its rooms.

In Room A there was evidence of burning on the floor (1509), and in the charred timbers marking two floor planks of a door sill (1326) in the opening (F306) between Rooms A and C. Burnt stone, ash and charcoal debris (1314) lay directly upon the floor, and there were signs of scorching on the bottom surviving stone courses of the inner wall faces. No datable finds were associated with this destruction. In Room C, equivalent deposits (1312 and 1336) lay at the base of the more extensive rubble infill sealing this room (see below); a coin of A.D. 365–372 had found its way into this deposit. Evidence of the destruction in Room B comprised quantities of smashed and burnt second-century pottery with charcoal, ash, etc. (1334), and the remains of storage vessels and perhaps other materials kept in this room and destroyed at the time of the fire. Similar debris had also filled the two small pits (F326 and F327) here. The doorway between Rooms B and C (F313) again preserved *in situ* the charred timbers of the sill planks and the lower door frame (1500) (PL. XV).

The interiors of all three rooms were deeply buried beneath a tumble of large and medium limestone rubble, some burnt, which in places even concealed the levelled tops of both the outer and the partition walls. Although there was clear evidence of burning upon many stones throughout these rubble deposits, as well as charcoal, mortar and other building debris mixed among them, no roofing material was recognised. This suggests that either a roof of stone or clay roof tiles had been removed prior to the demolition, or more likely, the roof had been made of combustible and less durable thatch or wooden shingles. Beyond the confines of the building further extensive rubble deposits spread out in all directions, effectively identical in character and contiguous with the internal building debris. Finds throughout these deposits were sparse, but some identifiable later second-century pottery was recovered.

PL. XV Building VII, Room B with burnt door sill and pottery dump *in situ*, view south. (J. Sterenberg)

PL. XVI Building VIII, general view looking east. (J. Sterenberg)

PERIODS 3–4: POST-BUILDING VII

The earliest, clearly identifiable event to follow the destruction of Building VII was the cutting of a large, east–west-aligned ditch (F318). This was cut up to 1 m deep and *c.* 4 m wide through overburden and into solid limestone bedrock, removing in the process the end and entire north wall of Building VII. This ditch continued east beneath Building VIII (F351), though not emptied, and provides an important stratigraphic link between the two buildings (FIGS 18 and 20). It also continued west across the site, possibly as far as the Fosse Way, but no further excavation or precise definition of its course in Area VI was undertaken. Within the only excavated transect of F318 next to Building VII, a fairly rapidly deposited sequence of silts (1502, 1501, 1376, 1362 and 1353) contained few finds, but suggests that it had a relatively short life, possibly as a drain taking water away from the main road frontage during the third century (FIG. 21).

At the other end of Building VII, beyond and parallel with its south wall, a narrower and shallower ditch (F319/F322) was cut through the building demolition rubble here. Aligned approximately east–west, this ditch followed closely the foundations of the former drystone boundary wall (F334) thought to have been contemporary with both phases of Building VII. The close correspondence of these two boundaries indicates a direct replacement of the wall by the ditch (and perhaps a hedge or fence) while the wall was still visible. The ditch may have originated in Period 3, although its fills, of predominantly dark loamy soil (1371, 1383 and 1507), contained much domestic rubbish including fourth-century pottery and a series of mid- to later fourth-century coins (A.D. 330–375). Although cut by this ditch, demolition rubble from Building VII was effectively limited to the south, suggesting that the wall still stood in Period 2 Phase iii. The contents of the ditch suggest that the boundary was maintained throughout Period 4 and into Period 5, and that continuity of its line can be demonstrated from at least the early second century to the later fourth (FIG. 18).

There was no clear structural evidence for a reuse of the site of Building VII in Periods 3, 4 or 5, although a concentration of finds here from those periods suggested otherwise. A considerable assemblage of fourth-century coins, including Theodosian issues, was recovered in first-definition cleaning, some of which may relate to the use of Building VIII. Of more significance may be areas of wear and cobbling (1385 and 1389) on the surfaces of the demolition rubble to the south-east of the Building VII site, suggesting a track or activity area here. At a later stage, a small pit (F321) was cut through this worn surface, but there was no clear evidence of structures such as the timber-framed buildings postulated elsewhere on the site.

2.8: AREA/BUILDING VIII AND ENVIRONS

PERIOD 1

The earliest features in this area were two drystone wall boundaries partly exposed beneath the southern edge of Building VIII. One, an east–west alignment of two or three courses of Lias limestone blocks and rubble (F363), was linked to a second, shorter segment (F364) of similar construction which extended for an unknown distance to the south at an acute angle. The wall, F363, continued the alignment of a similar boundary to the west (F325) which was cut by Building VII. Although a link was not exposed beneath intervening later rubble, the two wall segments within 10 m of each other were almost certainly the same boundary. Immediately to the north of F363, a spread of large, irregular limestone slabs and smaller fragments (1582) from the base of the wall suggested debris from its collapse or levelling. This sealed an unexcavated horizon of stony clay and both deposits were cut away to the north by the southern lip of a later ditch F351 (FIGS 18 and 22).

PERIOD 2

The only elements of Period 2 in the vicinity of Building VIII derived from the demolition of the adjacent Building VII. Debris (1366) around the east exterior of that building equated with an unexcavated continuation (1593) north towards Building VIII. Further east, around the south side of the latter, these deposits continued as 1381. Their removal in the south-east excavated quadrant of Building VIII revealed the Period 1 boundary wall foundations, beneath large and medium-sized, angular, tumbled blocks of stone and smaller rubble with a little clay and gravel, and some abraded second-century pottery. Wear on the upper surfaces of this rubble suggested extensive later use as a yard or thoroughfare (Period 4, below). These rubble deposits were cut by the Period 3 ditch (F351) to the north-east, but their extent to the east was not defined. The north side of this ditch cut through a dark-brown stony clay soil (1592) which may be a ground level, or other deposit, of Period 2.

PERIODS 3–4

A continuation eastwards of the ditch, F318, which cut the north end and demolition layers of Building VII, was identified beneath the site of Building VIII as F351 (FIG. 18), although no full excavation sample of its fills was undertaken. The upper ditch fills which were sampled comprised spreads of clay silts with scatters of small stone (1344/1345/1355 above 1356/1357/1581, and 1579). These were associated with moderately abraded late third- and fourth-century sherds of pottery, two coins of A.D. 313– 317 from the upper deposit, and scatters of charcoal, burnt clay, mortar and iron nails. Though incompletely excavated, all these contexts are interpreted as deliberate infilling in preparation for Building VIII, and thus of Period 4. No earlier ditch silts were seen here or in excavation immediately outside the confines of the building, but the ditch line could be traced in this locality by the slight depression and sinkage of overlying deposits into it.

PERIOD 4: BUILDING VIII, PHASE i

Following a levelling-up of the underlying Period 3 ditch fills (above), the first phase of Building VIII was well defined to the north and west as stone foundations (FIG. 22 and PL. XVI). At the south-west corner was a small setting of pitched, angular limestone rubble (F353), with one or two larger, horizontally laid blocks (1583) surviving above. There was no sign of foundations or a partition continuing east from here to mark a south wall, but northwards the corner was butted onto the west wall foundations (F309). The latter was defined in three sections, of which the central portion was an entrance threshold. The main flanking wall segments comprised two surviving paired courses of large, mortared Lias limestone blocks, *c.* 0.6 m wide, dressed on their outer faces and separated by a core of angular stone rubble (1318). These sections were separated by a slightly wider setting of closely packed, pitched, angular limestone footings (F311), representing an entrance into the building from the west. The upper course of footings (1325) was integral with foundations for the wall courses (1318) of F309 on either side, but the latter were not excavated further. A lower setting of pitched foundations (1348) was exposed but not excavated beneath 1325, and may well have been continued to the full depth (*c.* 1 m) of the underlying ditch, F351, at this point, to ensure the stability of the west wall of Building VIII above.

The relationship between the west wall (F309) and the south-west corner foundations (F353) was not investigated further, but northwards the wall merged into a larger, sub-rectangular area of pitched stone foundations (F358) marking the north-west corner of the building. Only the top course (1319) of this setting was seen and recorded, from which the north wall F308 extended eastwards. Integral with the corner, this wall survived as one

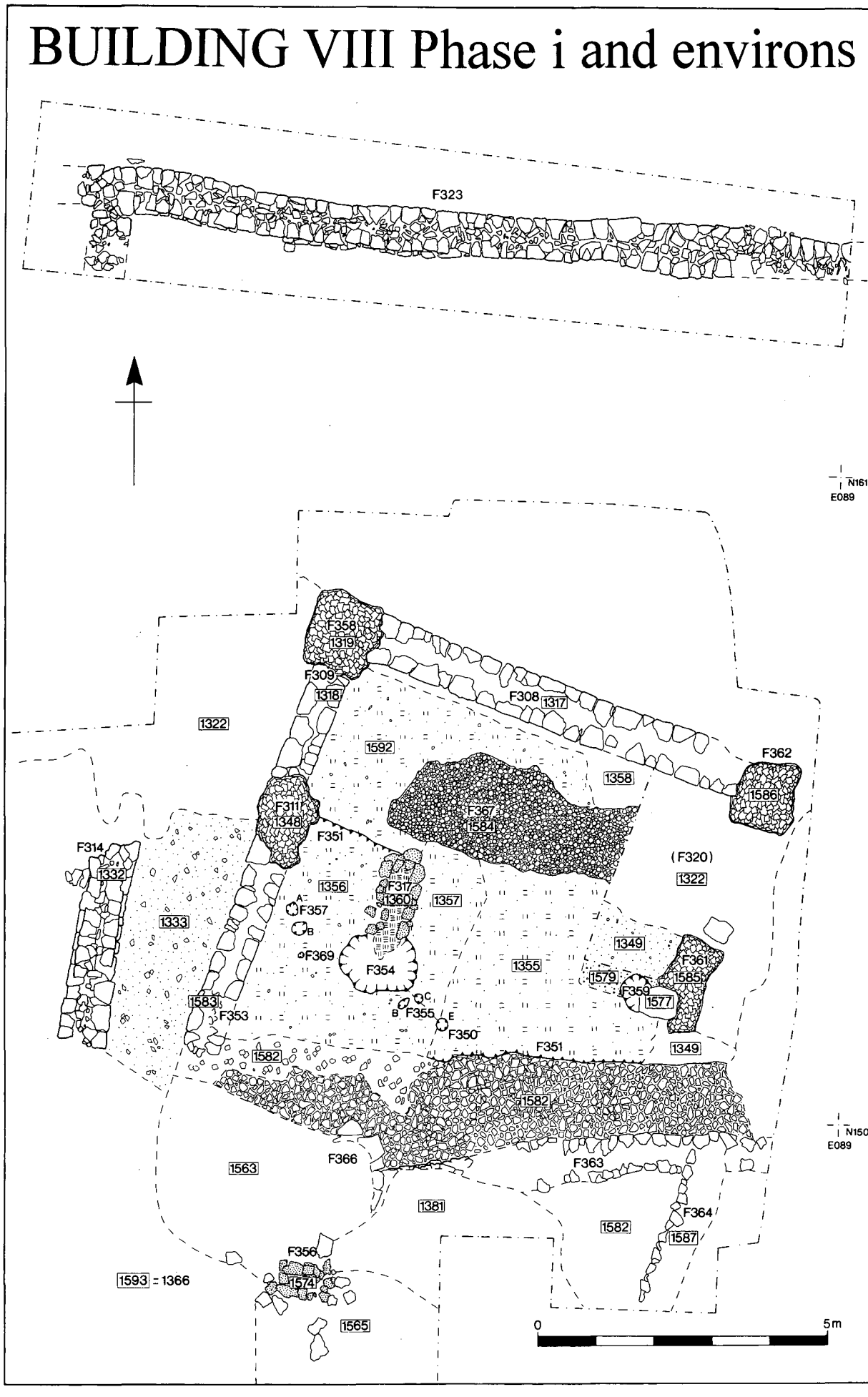


FIG. 22 Building VIII, Phase i and environs plan

paired, mortared, horizontal course of large Lias limestone blocks, dressed on their outer faces and separated by small and medium angular stone rubble (1317). This foundation course, *c.* 0.8 m wide, rested upon a slightly wider plinth of at least one course of pitched drystone footings. The north wall terminated 7.5 m to the east in another sub-rectangular setting of pitched, angular limestone (1586), marking the north-east corner (F362) of the building. From this point the evidence for an east wall was unclear, although a small, sub-rectangular segment of pitched stone rubble footings (F361/1585) marked a mid-point *c.* 3 m to the south along its postulated east side. No further evidence of an east wall was recognised, but against the west side of F361 a small pit (F359) contained the remains of an infant aged approximately 39 weeks within its fill. Although much disturbed by a later post-pit (F360), this could be interpreted as a foundation burial contemporary with the erection of Building VIII, possibly marking another entrance from the east.

Although evidence for the east and south walls of this building was sparse, a structure *c.* 7 m^2 internally is suggested. Only the west and north walls were of substantial mortared construction, while the south side could have been open, although there was no clear evidence of a south-east corner foundation. Alternatively, the south wall was of timber or wattle and daub construction, and may even represent the site of a partition separating what would then have been a north room to a longer and mainly timber-framed building extending further south. The erection of Building VIII can only be dated with reference to deposits associated with the levelling-up of the underlying ditch (F351). These indicate an early fourth-century origin, though possibly not before *c.* A.D. 320.

Not directly linked with the remains of Building VIII, an isolated segment of wall (F314) lay immediately to the west within rubble above the Period 3 ditch. Only two horizontal, paired courses of large Lias limestone blocks, dressed on their exterior faces and separated by some small angular stone rubble (1332), were exposed. This segment, a little over 3.5 m long and *c.* 0.8 m wide, was on a slightly different axis from Building VIII. To the north it terminated abruptly, possibly destroyed by a post-Roman trackway (F320), and it could not be traced further south among the rubble from Building VII. A possible context for this otherwise isolated wall lay more than 6 m to the north of Building VIII, where over 12 m of an east–west-aligned drystone boundary wall of similar construction (F323) was exposed in first-definition cleaning. This extended west from the east baulk of the excavation site to a corner which lined up approximately with the wall F314 to the south (FIGS 5 and 22).

Within Building VIII a group of deposits appear to have been laid as floor footings and make-up over the site of the Period 3 ditch. A deposit of stony clay soil containing late third- and fourth-century pottery (1359) lay against the base of the north and west walls. This layer thickened to the north and east where it also filled a shallow construction trench (1358) for the foundations of the north wall (F308). In the southern half of the building was a stony clay soil (1570/1571) with further pottery and a coin of A.D. 337–341. Beneath this layer and filled by it were three small post- or stake-holes (F355 b, c, d), *c.* 0.2 m in diameter and cut up to 0.2 m deep into the underlying ditch fills. These may either be connected with the primary phase of Building VIII or belong to an earlier structure (possibly a boundary fence) on the site of the ditch F351. Similar post/stake-holes (F357 a and b) further west were sealed by another stony clay soil deposit (1575) containing an unidentified fourth-century coin. Abutting layer 1575 to the south was a series of thin, interleaved clay soil and stony rubble spreads (1573), containing some late third-century and later pottery and a series of six coins spanning A.D. 341–360. These deposits occupied a narrow strip along the south edge of the building in line with its south-west corner (F353), and where its southern margin should lie. Although not otherwise recognised, they may mark a threshold and probably accumulated during its life in Phase i.

A further group of shallow stake/post-holes and other disturbances (F350 a–e) was also cut into the latest fill (1355) of the underlying ditch, and may relate to F355 and F357 just to the west. There was some confusion here, due in part to disturbance and deposition connected with the use of the adjacent oven (F317). The deposit, 1581, interpreted as a final fill

or levelling above the silted-up ditch, seemed in fact to be a disturbed conflation of more than one layer. Its lower part probably equated with the adjacent fill or ditch levelling (1355) recorded in a small sondage to the east, and perhaps also with the fill (1551) of the post/stake-hole group F350 a–e. The upper part of 1581 may equate with 1349, a deposit which should be a later floor or levelling within the building (below).

The primary function of Building VIII in Phase i appears to have been to house a large hearth or oven in its western half (FIG. 22 and PL. XVI). The oven structure itself (F317) was a shallow, elongated trough, *c.* 0.65 m wide by 1.7 m long and cut up to 0.25 m deep. The flue and chamber were lined with a single surviving course of large limestone blocks (1341), some quite severely burnt and fragmented, and the remains of a well-baked clay packing. The inner edge of the stones overlapped the original edge to the cut into underlying deposits (1356), which were themselves heavily baked and powdered. To the south, the flue opened out into a shallow, sub-oval pit (F354), *c.* 1 x 1.5 m and up to 0.15 m deep — the oven stoke-hole.

Within the oven chamber, the original lining was a well-baked and burnt deposit of clay (1360). Some of the oven lining stones (1341) had tumbled in and become incorporated in this deposit. The lining extended south for a short distance as a lens of more ashy clay out into the stoke-hole. The remaining fills of the latter comprised a lower layer of clay with some burnt flecks and charcoal (1572), sealed by further deposits of burnt clay with charcoal and dark ashy soil lenses (1566 and 1569). Less than one metre west of the stoke-hole was a small stake-hole (F369), *c.* 0.12 m diameter and 0.11 m deep, cut from the same horizon and possibly associated. A few sherds of weathered, later Roman pottery was the only dating evidence associated with these structures and deposits.

At the same horizon and situated just north-east of the oven was an area of compacted stone cobbling with some larger limestone blocks (F367/1584), many pitched, some with burnt upper surfaces, and packed around with crushed mortar and stony clay/gravel. This area may be the western part of a more extensive platform occupying the northern half of the building. The component stones were not heavily worn, though some were disturbed, but the platform was not fully exposed to the east nor any of it removed. A functional link between this platform and the adjacent oven is suspected, though not proven. Sealing it, and corresponding approximately with its exposed area, was a deposit of stony clay soil mixed with some charcoal and stone dust (1377), and an adjacent spread of grey/green clay (1378). Above these deposits was a more extensive layer of dark-brown clay soil (1364) mixed with burnt stones, charcoal and patches of fired clay. This layer, and the deposits beneath, may have been associated with the use of the oven or debris from it.

A well-compacted clay soil deposit (1346/1347 and 1339) with scattered pebbles had been laid around the oven to the north and west, while to the south this layer may be confused with the floor/surface 1575 (above). An equivalent continuation to the east (1349) sealed several shallow, sub-circular dumps of ash (1580), also partly overlain by a lens of clean sandy clay (1576). These deposits were probably associated with use of the oven, although there was also some confusion here with deposits in the top of the Period 3 ditch. The latest sealing layer (1349) contained fourth-century pottery and a coin of A.D. 367–375, and, with the similar deposits to the north and west, suggests a final floor or levelling-up prior to the remodelling of Building VIII in Period 5. Also preceding this event, the oven F317 and perhaps part of the original building structure were dismantled. This was represented by a spread of large and medium limestone blocks (some burnt), rubble and some soil (1568), lying mainly to the west of the oven and within its chamber, and a similar deposit (1338) to the north.

Possibly also of this phase, a small hearth or oven (F356) south of Building VIII was located within the rubble horizon 1593 to the east of Building VII. Although incompletely investigated and poorly dated, this comprised a small, rectangular setting of burnt limestone blocks, *c.* 0.7 x 0.6 x 0.2 m high around a rough and irregularly pitched stone floor which extended

out *c.* 0.4 m east from its opening. Within was burnt clay packed between the base and lining stones, and a fill of loamy soil with some burnt clay, charcoal and burnt pebbles (1574), but no other finds. Apart from the worn surfaces of stone rubble (1593) in the vicinity, there was no evidence of an enclosing structure for this feature, although an original open location seems unlikely.

PERIOD 5: BUILDING VIII, PHASE ii

In Period 5, evidence for a fairly radical remodelling and change of use defined a second phase of Building VIII (FIG. 23). The principal evidence for the Phase ii structure was worn stone surfaces and areas of paving. Over much of the north side was a hard-packed matrix of stony clay and worn angular cobbles (1340) incorporating some third- and fourth-century pottery, whose surface probably equates with wear on the surface of the oven destruction debris (1338). Above this were two small areas of pitched stone blocks (1342), perhaps packing for two post-holes (F315 and F316), but more likely a disturbed remnant of the more extensive cobbles and paving to the south. The compacted matrix of cobbles continued east, incorporating more fourth-century pottery and a coin of A.D. 330–337, but was also confused with compression from a post-Roman track (F320) above, which crossed this area and may have disturbed or destroyed an earlier paved or cobbled surface in the northern part of the building. This surface was marked by an area of pitched and horizontally laid stone blocks, within which was set a complete, inverted lower millstone (F310) (PL. XVII).

Remnants of paving recorded in the northern half of Building VIII ii were much better represented in its southern half. This comprised an extensive setting of roughly laid stone paving slabs, some up to 0.5 m across, with other large blocks and some smaller stone and soil packing (1343). This horizon, with worn upper surfaces, was laid as a single course of material above a thin deposit of stony soil (1365). Its southern limit was marked by an area of more closely set flags (F366), which was butted against the top surviving course of the Period 1 boundary wall (F363) embedded in the overlying rubble 1381. Surrounding the paving here were smaller cobbles and worn stone blocks, which gave way further west to less closely set stone rubble in a clay soil matrix (1562). This level sealed a layer of larger stone blocks and flagstones in a stony soil with patches of burning (1567), which overlay the ruined oven F317 and its remains of the previous phase. To the south the paving and the worn horizon thinned out as a layer of worn rubble and stony soil (1559), merging into the worn surface of the earlier rubble (1593) derived originally from the destruction of Building VII. Many of these contexts were associated with small groups of fourth-century pottery and coins, the latter ranging between issues of A.D. 313–317 and 350–360, although at least one coin of A.D. 367–375 was sealed below this horizon.

There was no evidence for a major destruction of the original Building VIII i, and the surfaces and paving associated with its Phase ii use respect the north, west and south perimeters of the structure. The north and west walls were probably retained, or at least their foundations reused on those sides. The southern perimeter of the building may also have conformed with its predecessor, although wear and finds from surfaces to the south and west suggest a wider area of use contemporary with both phases. To the east, evidence for reconstruction comprised a large post-hole (F360) which contained a dump of late fourth-century pottery (1577), and was cut into the earlier east wall platform foundation (F361). The Phase ii reconstruction probably dates from the A.D. 370s or 380s, after which the building may have continued in use into the fifth century.

PERIOD 6: POST-ROMAN

The clearest feature was a trackway (F320) which crossed the northern half of the site of

FIG. 23 Building VIII, Phase ii and later elements plan

Building VIII on an east–west alignment (FIG. 23). This comprised a *c.* 3 m-wide zone of well-worn, small and medium stone cobbles (1322) incorporating a few sherds of medieval pottery, some residual fourth-century pottery and late fourth-century coins. Beneath the track were compacted deposits of stony soils (1327, 1328, etc.) with further late fourth-century pottery and coins. Beyond the track to the south were less-compacted deposits of stony soil and rubble, some perhaps derived from the abandonment and demolition of Building VIII. These contained some late fourth-century pottery and coins, including Theodosian issues. Further south, beyond the site of the building, deposits above the earlier rubble, 1593, produced further late Roman pottery and coinage, some of which could have accumulated during the second-phase use of the building.

Deposits of loose soil and stone (1321) over the site of the post-Roman track continued further west (1382) beyond the site of Building VIII, and contained a few sherds of medieval pottery. A more extensive clearance to the south (1333) revealed the rubble deposits separating Buildings VII and VIII, the boundary wall F314, and the slight depression marking the site of the underlying ditch F318/F351. Late fourth-century coins and pottery were recovered from these deposits. Around the north side of Building VIII, a narrow strip was cleaned down to a horizon of coarser stony rubble (1337), but excavation proceeded no further. Finally, over the southern half of the building deposits containing further fourth-century pottery and coins (including Theodosian issues) were removed during the first-definition clearance.

2.9: AREAS/BUILDINGS IX AND X AND ENVIRONS

INTRODUCTION

Areas IX and X were defined as part of a compound in the north-eastern corner of the main excavation site, which contained remains subsequently identified as Buildings IX and X and their environs (FIGS 5 and 24; PL. XVIII). A requirement for drainage works as part of the future development provided the opportunity for a transect to be excavated across the northern ends of both buildings. This involved a 2 m wide strip (identified as Trench A) concentrating upon the affected portions of Buildings IX and X and their immediate surroundings. Elsewhere, information relating to this area is dependent upon the first-definition cleaning and recording process.

PERIOD 1

Evidence of primary activity here was restricted to remains within the bounds of Trench A (FIG. 24). Beneath Room F, Building IX, deposits of loamy clay soil (6053 to the west, 6056 to the north) sealed weathered bedrock or natural clay. These were lightly flecked with charcoal, burnt clay and a little pottery, including Flavian samian, and may represent an early Roman soil or subsoil horizon of the later first century. To the east, an apparently equivalent continuation of 6056 (incorrectly identified as 6027 during excavation, see Period 3) was excavated to natural.

Beneath Building X (FIG. 25) was a segment of pitched, drystone wall footing (6051), overlapped from the north by a thin layer of green clay (6050). Just to the south was a small post-hole (F633) *c.* 0.2 m in diameter and up to 0.25 m deep, lined with small packing stones and filled with clay loam. Both of these features were cut into the clay soil horizon (6056) but were sealed by floor deposits of the later building. It is unclear whether these features represent part of a structure or belong to an early boundary, and there were no well-dated artifacts associated with them. Further to the east a depth of up to 0.30 m of a loamy clay

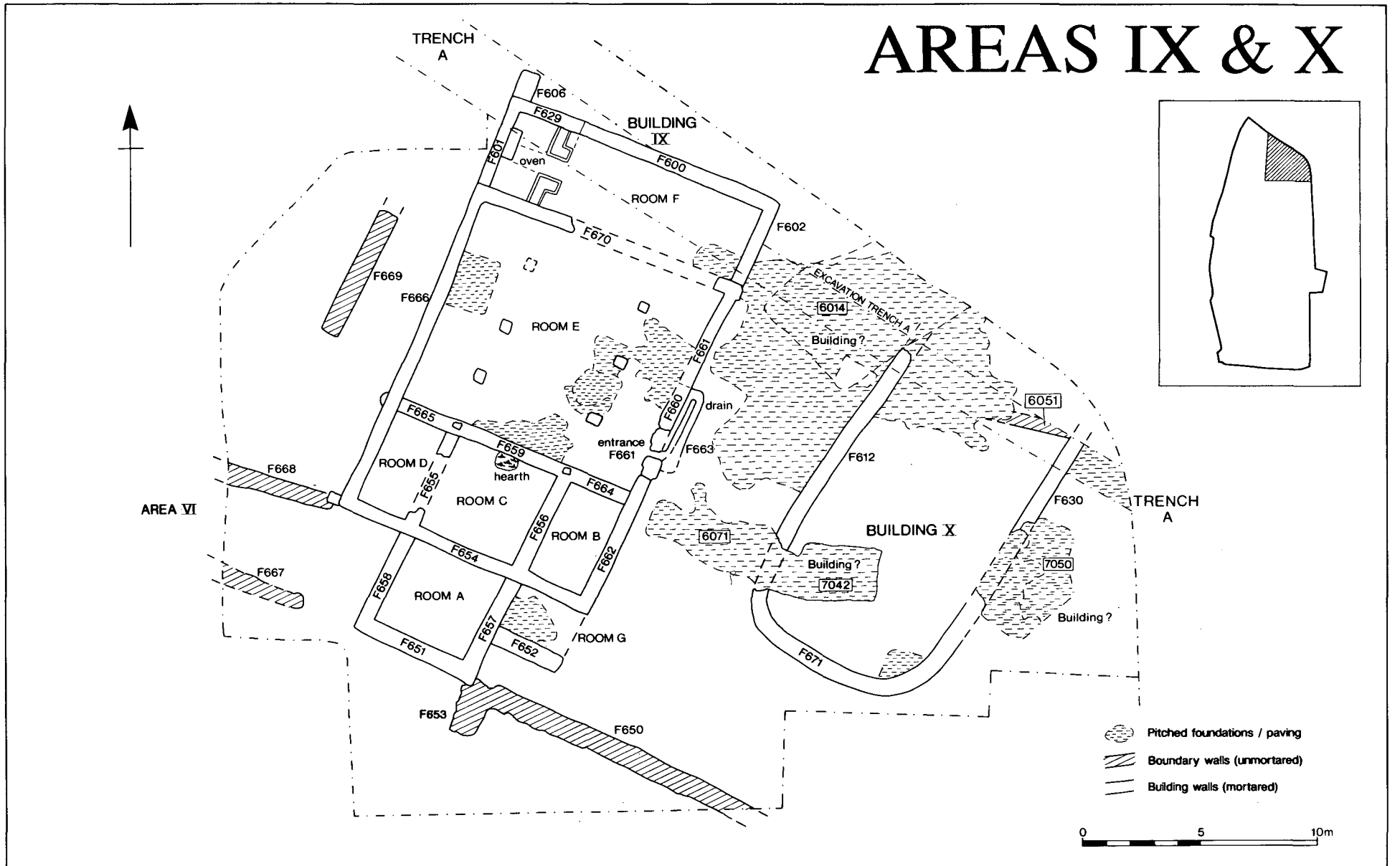
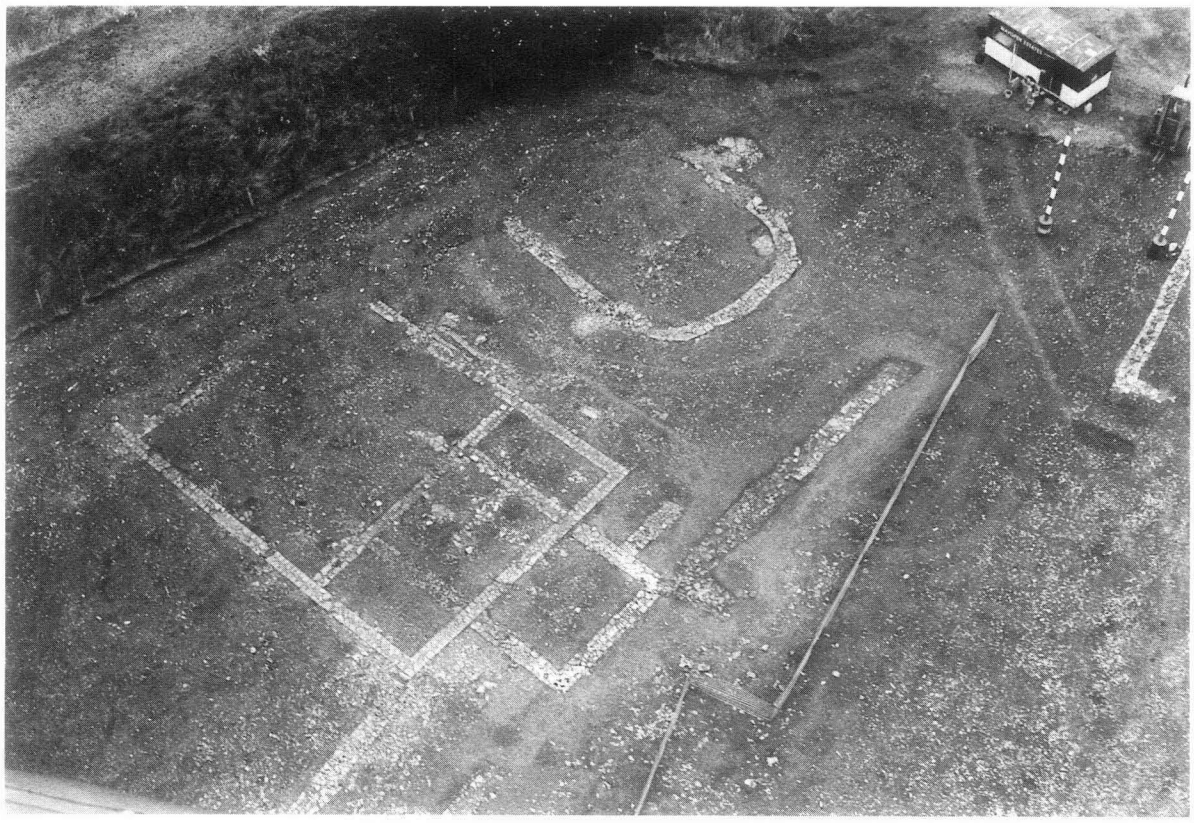


FIG. 24 Areas/Buildings IX and X, plan of principal features

PL. XVII Lower millstone (F310) *in situ*, Building VIII. (J. Sterenberg)



PL. XVIII Buildings IX and X, aerial view looking north-east. (P. Leach)

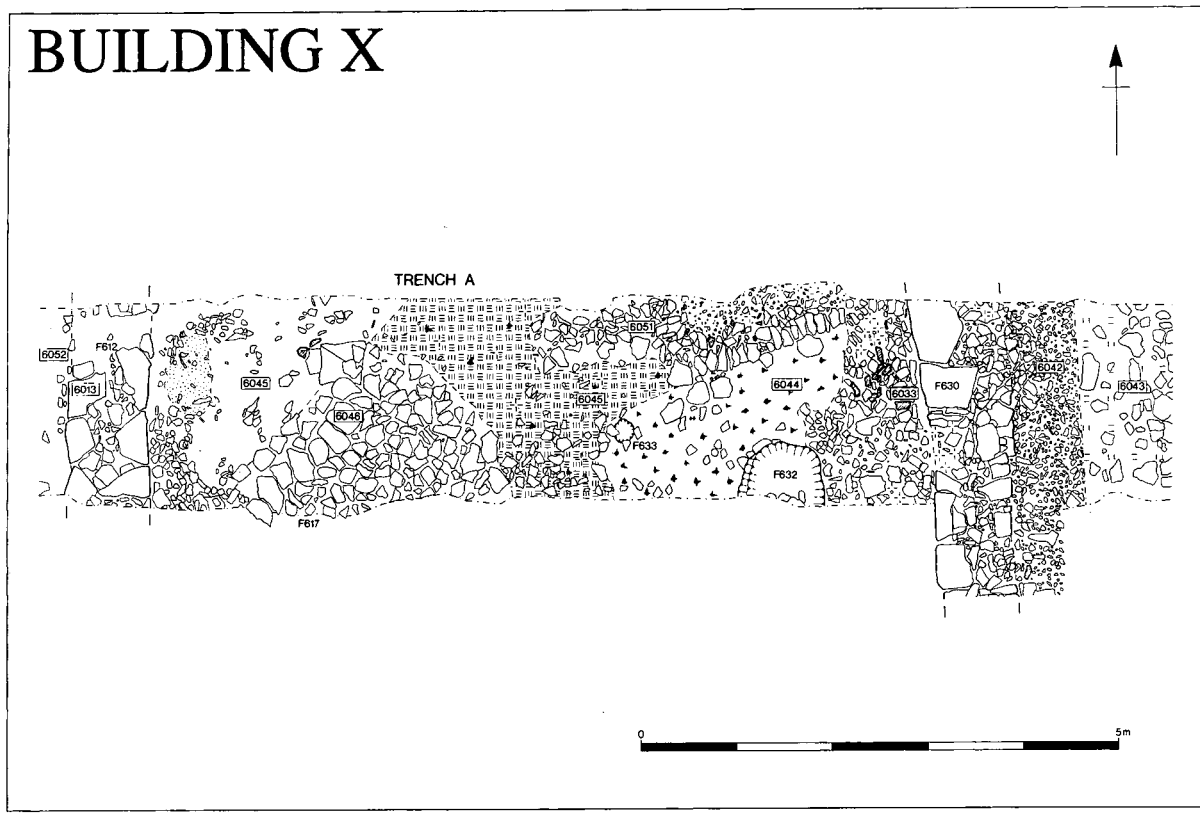


FIG. 25 Building X, Trench A detail plan

deposit (6056) sealed the natural clay (6048). No datable finds were recovered, but the loamy clay was sealed here by exterior levels associated with Building X.

PERIOD 2: BUILDING X

The outline of a substantial, stone-founded structure, identified as Building X, was incompletely revealed by first-definition cleaning in the north-eastern corner of the area (FIG. 24). Only the evidence from transect Trench A established clearly its context within Period 2, where partly robbed outer wall foundations were exposed but not fully excavated towards its northern end. These comprised paired, dressed, stone blocks, horizontally laid and infilled with gravel and small stones with mortar traces, resting upon at least one course of pitched, drystone foundations. The west wall, F612, and the east wall, F630, were both *c.* 0.8 m wide. To the south, much of the upper surviving courses of these walls was exposed in first-definition cleaning. Thus, Building X was defined as a rectangular structure, *c.* 8 m wide internally and at least 16 m long, with a flattened apsidal end to the south; its full extent and termination northwards lying beyond the bounds of excavation (FIG. 27).

Details of its internal arrangements, function and sequence were restricted almost entirely to the evidence from Trench A (FIG. 25). Sealing the clay soil (6056) of Period 1 was a thin layer of wood charcoal (6049), sealed in turn beneath a compacted and mottled deposit of burnt clay with some charcoal, pottery and mortar (6045). Above this level was a partly exposed deposit of loose, carbonised wheat grain (6044). This sequence suggests the destruction of Building X by fire; the earliest charcoal deposit representing burnt roof, or internal structural, timbers, the burnt clay deriving from collapsed cob walls, while the grain was presumably stored within the building and destroyed at the time of the fire. Antonine samian (itself burnt) and other pottery, and an absence of coins, suggest that the building was destroyed before the middle of the third century A.D. The only other internal feature

exposed was a small area of Lias flagstone paving at the south-east corner (7045), presumably part of a floor at this end. No original entrances or internal wall divisions were recognised, and a lack of clay or stone roof-tile debris and relatively modest amounts of stone rubble could signify a half-timbered or cob-walled building on low, mortared stone wall supports and roofed with thatch or wooden shingles. A multi-functional barn in combination with a domestic dwelling, is a likely interpretation for the remains of Building X.

Immediately east of the building, compacted limestone rubble (6043) was butted against the bottom exterior foundation course of its east wall, and sealed the clay soil of Period 1. This rubble provided the base for an upper level of closely set and well-worn cobbling (6042). Above, and pressed into these cobbles, were burnt clay and pottery, almost certainly deriving from the destruction of the adjacent building, and contemporary with material from the interior. A yard or track along the east side of Building X is likely here. To the west, what may have been a similar and contemporary surface of compacted stone and soil (6052) was seen adjacent to the exterior of the west wall, also sealing the Period 1 clay soil.

Further west were remains indicative of another Period 2 structure (FIG. 26). These comprised part of a shallow, rock-cut ditch aligned north–south (F634), and, nearby, the remnant of a shallow, rectangular foundation cut (F631) containing clay silt and rubble; both cut by the north wall of Building IX. The ditch was cut through a clay soil (6055) lying above the Period 1 deposit 6056, and distinguished from it by a greater proportion of occupation material. Similar deposits (6032 and 6039) just to the west were deeper and contained higher concentrations of pottery, charcoal, animal bone, burnt clay, etc., in a shallow depression. These overlay a compacted limestone rubble surface (6031), thinning out against it further to the west. Pottery from these deposits suggests their accumulation in the later second- to early third-century A.D. The quantity of domestic debris and the hint of structural remains suggest another building or activity here, contemporary with Building X and pre-dating Building IX. All this evidence was confined to Trench A, limiting fuller interpretation, while the subsequent erection of Building IX would have destroyed further remains.

Boundary features in the south and east of Areas IX and X were not investigated beyond the first-definition cleaning, but could originate in Period 2 or before (FIG. 27). To the south of Building X over 12 m of a drystone wall foundation (F650) was exposed, its continuation eastwards obscured beneath deeper clay soil deposits. The wall survived as a somewhat irregular and disturbed paired line of dressed stone blocks alternating with rubble, in a zone *c.* 0.8 m wide. To the west these foundations merged with a broader spur of rubble footings (F653) extending up to 2 m at a right angle to the south, and possibly further beneath uncleared clay silt deposits. At the junction between both wall foundations and encroaching upon them was a corner of the later Building IX.

To the west were more fragmentary remains of a similar wall foundation (F667), while parallel and almost 4 m to the north were more substantial drystone wall foundations (F668), both apparently interrupted by later building foundations. The parallel footings defined a roughly cobbled strip extending for at least 20 m further to the west across the site (FIG. 5). This was probably a side street or alley extending from the Fosse Way, with somewhat irregular boundary walls, separating two compounds defined in Area VI (above). The direction of the street suggests that it gave access to Building X and was thus contemporary. North of the street, but separated from it, was a substantial segment of drystone walling (F669), up to 7 m long and a little over 1 m wide. Although apparently terminating to the south well before reaching the wall F668, and with no sign of a continuation northwards across Trench A, this segment may have sub-divided a larger, rectilinear compound extending east from the Fosse Way and containing Building X.

PERIOD 3: BUILDING IX, PHASE i

A full ground plan of Building IX was exposed in first-definition cleaning, revealing a series

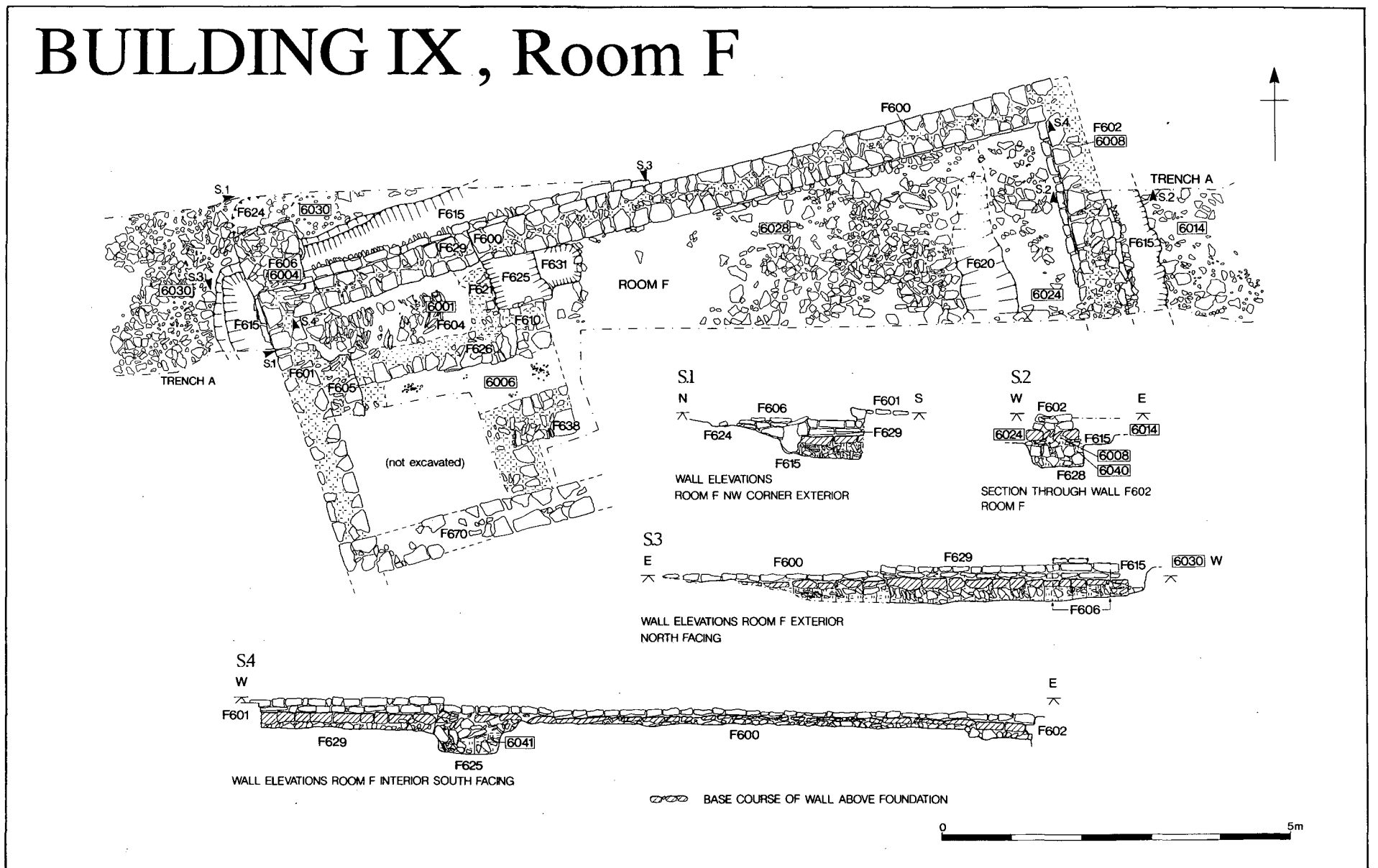


FIG. 26 Building IX, Trench A detail plan and sections

of rooms (A–F) defined by stone walls, along with some contemporary internal and external detail (FIGS 24 and 27; PLS XVIII-XXI). The primary core of this building appears to have been a rectangular, mortared stone-walled structure measuring *c.* 15 m by 10.5 m, its north wall identified as F670, its west wall as F666, its south wall as F654, and its east wall as F661 and F662. Without further excavation inside these walls a detailed interpretation of the internal sequence or arrangements is impossible. However, a series of three pairs of evenly spaced pad-stones and a fourth within the later cross-wall separating Room E from Rooms B, C and D to the south, suggest supports for aisles east and west along the axis of the building. In Phase i, therefore, Building IX may have been an aisled house or barn, built, to two storeys, of mortared Lias limestone, with its entrance centrally placed to the north. Somewhat later, its extension north by the addition of Room F(i) effectively created a porch or vestibule at this end of the building, although the evidence for a north entrance via Room F was not seen. The relationship between the Phase i walls of Room F and the north wall (F670) of the main building was not determined. However, since Room F(i) was not positioned symmetrically to the main structure, it appears to have been secondary to it, though perhaps still of Phase i. Being essentially an annex or ante-room at the north end of the building, Room F may have served originally as a hall or corridor from an entrance at its west end, giving access to the main aisled room later in Phase i.

The most complete structural sequence for Building IX was obtained by the excavation of Trench A across Room F, which can to some extent be extrapolated for the whole building (FIG. 26). Not all archaeological contexts within the room were examined, due to the angle of its intersection by Trench A. Originally, Room F enclosed an area *c.* 7 m long by 3.5 m wide. Its north wall (F600) survived as two paired, horizontal mortared Lias limestone courses, with dressed outer faces and rubble and gravel infill, resting upon a single course of unmortared, pitched stone foundations set into a shallow foundation trench. To the west, this section of wall terminated at a robbed wall-foundation trench (F625) extending away at right-angles to the south beneath later features. This marks the original west wall of Room F. To the east, a much shallower gully (F620) probably represents an internal partition or other feature in the room. Only parts of the upper surviving course of the south wall (F670) were seen, a considerable central portion having been disturbed or robbed away. The remains of the east wall of Room F (F602) were bonded at a right-angle with the north wall (F600), but its junction with the south wall was not visible (see Phase ii).

The primary floors or other make-up levels may have been removed or much disturbed in Phase ii. Only thin layers of stony clay (6024 and 6028) represent the Phase i floor or its foundation within the confines of Room F. To the west, another stony clay horizon (6038) may have been a contemporary exterior, subsequently incorporated within the room's Phase ii extension. A dump of stony clay (6054) above and just west of the robbed wall trench F625 was either upcast from its excavation or debris from the subsequent wall robbing.

BUILDING IX, PHASE ii

In Phase ii the principal change in Room F was its enlargement west to the full width of the main building (FIG. 26). This involved demolition of the original west wall (F625) and the extension westwards of the north wall (F600) as F629. This addition was butted against F600 and bonded with the new Phase ii west wall (F601). The latter was butted against the north-west corner of the main building (Room E), but the relationship between the east wall (F602) and the north-east corner was not revealed.

Segments of both the east and west walls of Room F(ii) were excavated, and details of their construction recorded. The Phase i east wall (F602) survived as three or four paired, horizontal, mortared Lias limestone courses, with dressed outer faces and a central core of gravel, stone rubble and mortar. The upper courses were *c.* 0.5 m wide, the bottom course slightly

wider and resting upon two courses of unmortared, clay-bonded, pitched stone footings (6040). These were set into a foundation trench (F628) cut through natural stony clay to a bedrock surface, and backfilled with stony clay rubble (6037). To the west, the Phase ii wall F601 was of identical construction and was bonded into the new continuation of the north wall (F629) at the north-west corner of Room F(ii). There were no datable finds from any of these wall components or their backfills.

In the western extension of Room F, the earliest level was a mixed deposit of loamy soil with some mortar, charcoal, late second- to early third-century pottery and stone roof-tile fragments (6036). This was possibly a building level contemporary with the extension, and was sealed by a mixed, stony clay soil make-up (6035) containing later third- and early fourth-century pottery. Within the remainder of Room F a spread of stony clay and mortar (6020) contained earlier third-century pottery, and was sealed by loamy soil with second-century pottery (6025) close to the junction with walls F600 and the robbed F625. Most of these deposits were probably sub-floor make-up, possibly underlying a timber-planked floor.

In addition to the extension of Room F, the remainder of Building IX may now have been sub-divided internally (FIG. 27). This involved the insertion of a crosswall (F659) towards the south end, bonded at right-angles with walls F656 and F655, whose south ends were butted against the main south wall of the building (F654). These three, mortared Lias limestone wall bases, *c.* 0.5 m wide, defined Room C, with an area of approximately 22 m^2. Flanking this were the two smaller and equal-sized Rooms B and D, both with areas of approximately 11.5 m^2. Walls F664 and F665 separated these rooms from Room E to the north; both were bonded to and continuous with the north wall of Room C (F659), and butted against the outer walls of the building (F662 and F666).

It was unclear whether doorways existed between these three rooms, or between them and the main room E to the north. A substantial break in the dividing wall F655 between Rooms D and C appears to be a later disturbance. Internal features or floors remained incompletely visible beneath debris from the decay and levelling of the building, which included large quantities of shattered Lias stone roof tile. The base of a small hearth (7000) against the north wall of Room C was one possible exception. The creation of three internal rooms to the south left one larger space to the north (Room E), approximately 10 m^2. The post-pads for the aisle timbers probably retained their function in Phase ii, the southern pair now incorporated into the north corners of Room C. Within Room E, the outlines of several internal features were defined as platforms of pitched stone settings or cobbling beneath the debris of building collapse. An entrance in the east wall (F661) of Room E also marked the point of exit for a stone-lined drain (F663), which then ran north for a short distance and parallel with the exterior wall of the building. North of the entrance a partial later blocking (F660) was of an original wider entrance which could have originated in Phase i.

EXTERIORS

The exteriors to Building IX were only examined in detail in Trench A, adjacent to Room F, where the evidence was not always securely phased (FIGS 24 and 27). North and west of Room F an extensive spread of worn cobbling (6030) may have originated in Phase i, but probably continued in use throughout the life of Building IX. With the Phase ii restructuring of Room F, a deep drainage ditch (F615) was dug around the exterior walls of that room, separating them from the surrounding cobbled yard (FIG. 26). The ditch may originally have held a wooden or lead pipe, but was eventually infilled with a series of loam and stony soil deposits (6034, 6027 and 6017) containing coins and pottery of primarily late third-century date, and accumulating during Phase ii at least.

East of Room F a more extensive area of moderately worn and closely set pitched stone cobbling (6014) extended partly over the site of Building X to seal a levelling horizon representing

AREAS IX & X

FIG. 27 Areas/Buildings IX and X, first-definition detail plan

its demolition (6033). The arrangement of these settings suggests that 6014 represented a floor rather than an exterior yard, presumably associated with a timber-framed structure. Within, or cut into, the cobbling were several small post-holes (F609, F613, F614 and F619 and possibly others). No very coherent plan can be reconstructed from this evidence, but it may represent one or more timber-framed buildings, subsidiary to or later than Building IX.

Where excavated in Trench A (FIG. 25), the platform 6014 was associated with third- and fourth-century pottery, and two mid-fourth-century coins from the deposit (6033) beneath could have derived from it. Also within 6014 were the remains of pitched and horizontally laid worn paving (6046), representing an earlier path or track (F617). Alongside was a pit (F632) cut down to the level of bedrock and infilled with packed stone rubble (6047). Both of these features may be contemporary with Phase i of Building IX, the path heading towards the eastern entrance into Room E. This sequence and the few finds associated with the platform suggest that it originated in Phase ii, if not later, and that the inferred structure belongs to Phase iii (Period 4) or even Period 5.

To the south of 6014 were further areas of worn cobbled surfaces and stone rubble spreads (FIG. 27). Many of these appear to be contemporary exteriors east of Building IX, and within them may be other features. One notably worn strip (6071) of pitched stone settings extended east from a point opposite the internal division between Rooms B and E, across the demolished west wall (F612) of Building X. From here, a further platform of pitched stone footings (7043) extended partly across the former interior of Building X as a rectangular area (*c.* 4 x 2.5 m) terminating at an edging of large stone blocks. This appeared to define the floor of another rectilinear, timber-framed structure, approached from the west and either associated with Building IX or post-dating it.

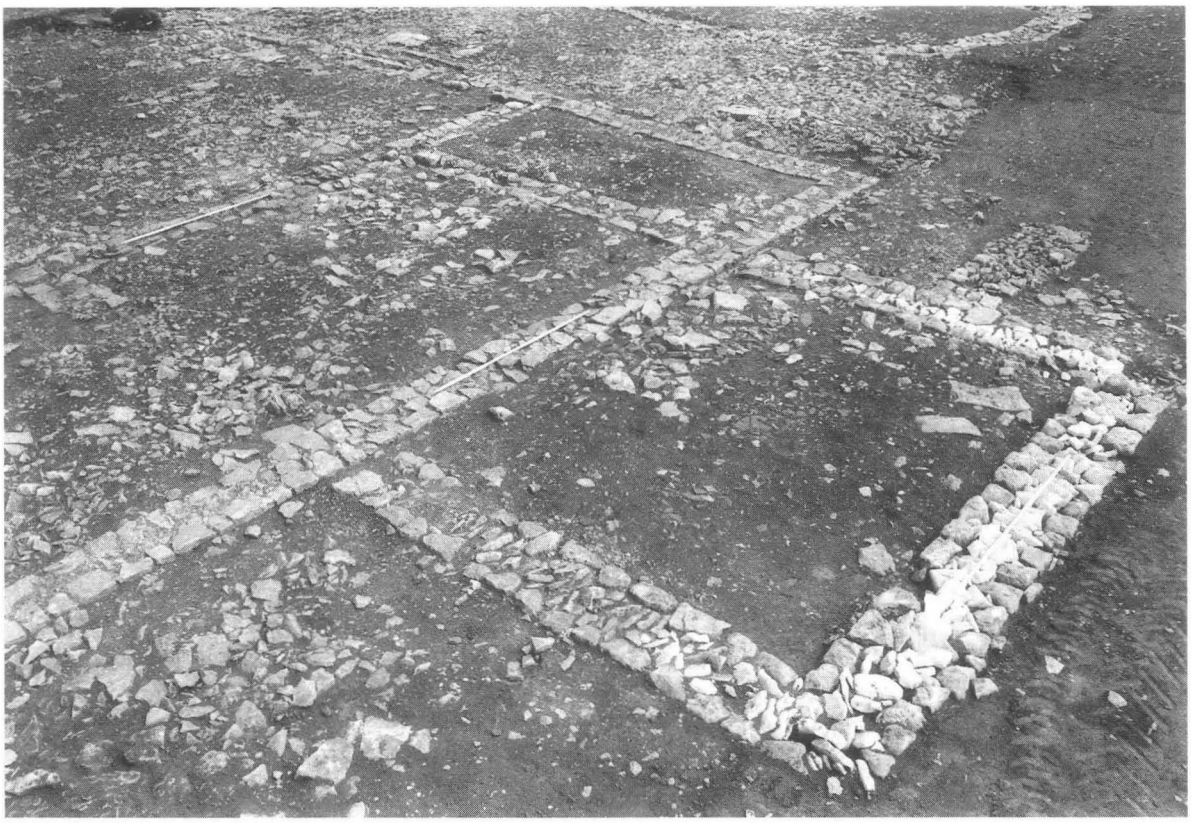
A considerable accumulation of loamy clay soil (7044) masked the eastern extremity of the excavation site, concealing both the earlier remains of Building X and some evidence for later activity. Along the east side of Building X, however, were the partly exposed remains of a later structure. Only its western edge was seen, overlying the footings of the east wall of Building X, comprising compacted deposits of crushed stone and cobbling (7052 and 7051), and part of a worn surface of very large Lias limestone paving slabs (7050). The site of yet another Period 3 or later building can be postulated, potentially of timber-frame construction and likely to be contemporary with Building IX.

Relatively abundant scatters of later third- and fourth-century pottery and coins were recorded across the southern part of Building X and in the area between the two buildings, as well as further north above the cobbled settings 6014. This evidence supports the hypothesis for structures and activities in these areas in Periods 3 and 4, contemporary with Building IX.

PERIOD 4: BUILDING IX, PHASE iii

Evidence for the latest phase of Building IX was recorded principally in and around Room F, supported by fourth-century coins and pottery recovered more widely from first-definition cleaning of the whole building area. Within Room F, its west end had been infilled by the remains of a kiln or oven, only part of which (intersected by Trench A) could be excavated (FIG. 26; PL. XX). Its mouth, opening east into the room, was flanked north and south by roughly mortared stone-built pillars, 0.6 m apart. The northern pillar (F610) was butted against a short segment of roughly mortared wall foundation (F621), which was itself butted against the inside of the north wall (F629) of Room F. To the south the opposing pillar (F638) stood in a similar relationship via another segment of walling, to the south wall (F670), though only revealed in the cleaning of its upper surface.

Only the north side of the oven chamber was exposed as a drystone wall (F626) butted east against the pillar (F610) and west against a short segment of mortar-bonded walling (F605),



PL. XIX Building IX south rooms (A–D), view north-east. (J. Sterenberg)

PL. XX Partly exposed oven, north-west corner of Room F, Building IX. (J. Sterenberg)

parallel to and butted against the west wall (F601) of Room F. The oven chamber lining apparently continued south before returning east along the south side of the oven to the pillar F638. All of these components were recorded only in plan, the oven fills remaining unexcavated, but a rectangular or L-shaped chamber *c.* 3 x 0.6 m is presumed. Between the oven structure and the north-west corner of Room F, the space had been infilled by pitched drystone foundations (F604). These sealed a stony soil and rubble deposit (6026) which may be disturbed floor levels of the previous phase. The infill (F604) probably supported an oven super-structure, as well as providing insulation and stability between it and the outer walls of Room F.

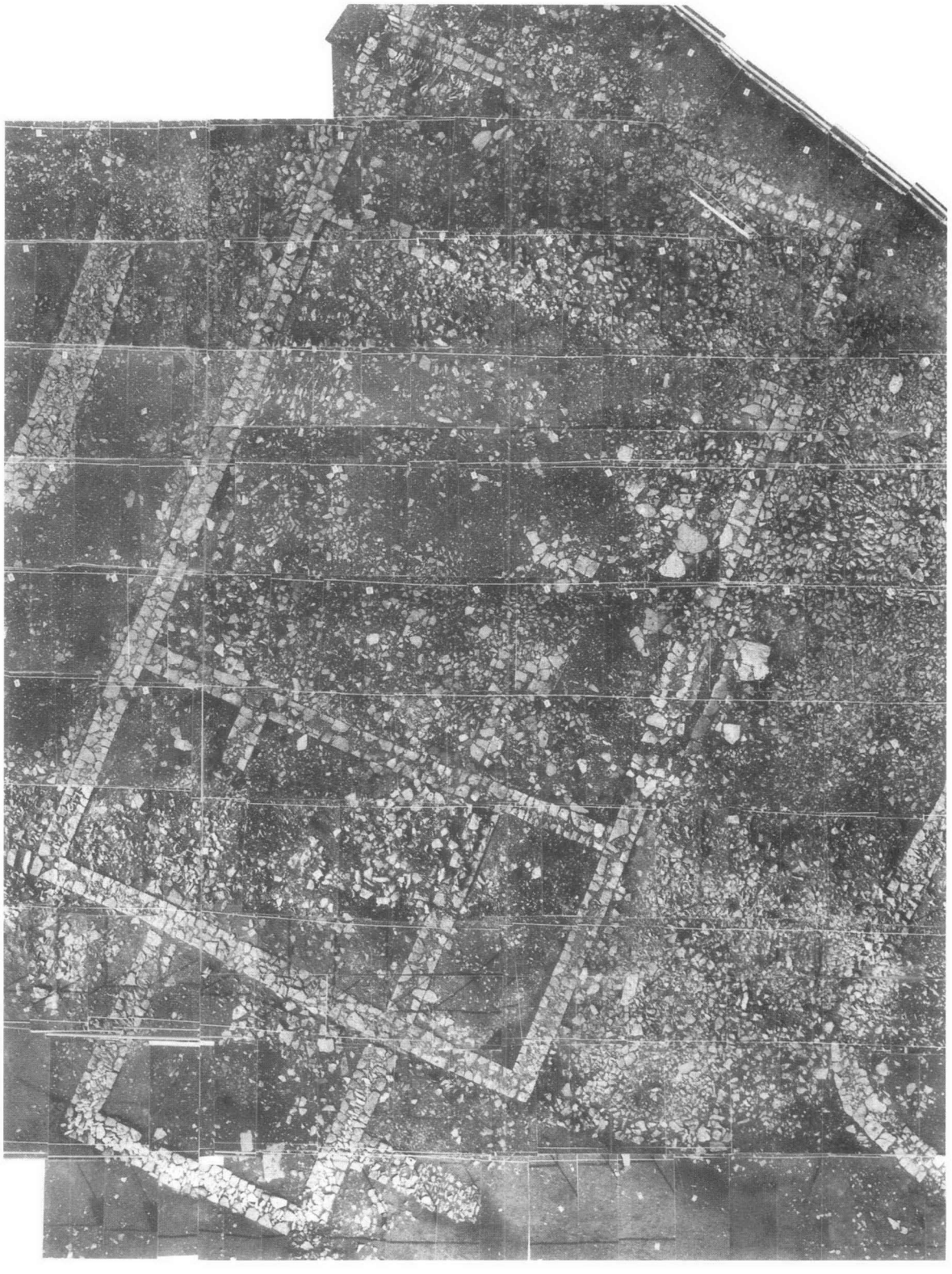
The insertion of this oven may have prompted some strengthening of the north-west exterior corner. This took the form of a rectangular, mortared buttress (F606), which abutted the corner of walls F601 and F629. This bridged the still partly open exterior drain (F615) northwards, to rest upon pitched drystone footings in a shallow foundation pit (F624).

Further modifications to the remainder of Building IX are presumed only from surface-exposed evidence (FIGS 24 and 27; PL. XXI). The Phase ii sub-division of rooms was probably retained in Phase iii, but two new rooms were added at the south end of the building. Placed centrally, Room A defined an area of *c.* 18 m^2 internally; its outer walls (F651, F657 and F658) at ground level comprised double courses of mortared Doulting or Downside stone blocks, dressed on their exterior faces and with cores of Lias limestone rubble, *c.* 0.7 m wide. The east and west walls were butted against the original south wall of Building IX (F654), but there was no sign of an entrance through from Room C or from the outside. Quantities of red sandstone roof-tile fragments here suggest that this material rather than Lias slate was used to roof this room, but no other evidence of its internal arrangement was revealed.

Abutting centrally the exterior of the east wall of Room A, a short section of wall foundation (F652) extended *c.* 3 m east and parallel with the south wall (F654) of Room B. This foundation comprised at least one course of pitched, unmortared Lias limestone footings (6064), supporting a single bottom course of horizontally laid, mortared Lias and Doulting or Downside dressed stone blocks. Between this wall and the south end wall of Room B was a floor of compacted gravel and crushed limestone (6062), but no clear evidence of a wall closing off this area to the east. The remains suggest the addition of a small rectangular room, Room G, *c.* 3 x 2 m, in the south-east angle of the building. Its size and position indicate a porch, which might explain the apparent absence of a wall to the east, although there was no clear evidence for an entry from thence into either Room A or B. Alternatively, Room G functioned as part of a stair-well, giving access to a second storey of rooms above A, B, C and D, although this could as easily have been provided from Rooms B or D.

PERIOD 5

The clearest evidence for the fate of Building IX was from Trench A in Room F (FIG. 27). Filling that part of the room not occupied by the Phase iii oven was an extensive deposit of shattered and closely packed Lias limestone roof-tile fragments (6006, 6015 and 6019), with some late third- and fourth-century pottery. Contained largely by the wall foundations and the oven to the west, this appeared to be a deliberate infilling. One section of the north wall foundations (F600) was partly destroyed by a linear robber-trench (F622), into which some of the tile debris had spread; the remaining fills comprised mortar and much building stone debris. Elsewhere, above and around Room F, were more extensive spreads of building stone, mortar and tile debris representing the dereliction of Building IX. These included 6000/6022 and 7040 further north, partly sealing another horizon of stony soil and cobbles (7039). To the south 7025 overlay much of the south wall (F670) of Room F, while a more compacted continuation (7026) sealed the southern half of the east wall (F602), extending for some distance east above the cobbles 6014.



PL. XXI Building IX recorded at first definition, quadrupod photographs. (BUFAU)

Without a full excavation the precise sequence of events marking the end of Building IX cannot be resolved. The partial removal of foundations for walls defining Room F and their sealing by later demolition deposits suggest an episode of deliberate dismantling. There is inconclusive evidence of some later surface or structure over Room F, possibly linked with the evidence for a building associated with the adjacent platform 6014. Debris over the remainder of Building IX was not of the character of that which signified the collapse and

desertion of Building VII, for example. Equally, however, there was no indication of a subsequent structural phase comparable with the reuse of Buildings I or VIII in Period 5. Only a handful of coins from the deposits overlying or adjacent to the building were post-A.D. 360–380. This contrasts with the coin representation of these periods associated with the sites of other late structures, and it is suggested that Building IX may have been deliberately dismantled early in the period A.D. 360–380. Nevertheless, the few coins and evidence for timber-framed structures or other activity, mainly between Buildings IX and X, raise the possibility for continuing use of this locality through Period 5 (PL. XXI).

PERIOD 6

Apart from the topsoil overburden (1000), a few other features and deposits can be identified as post-Roman. The most significant was a low bank of stony soil and rubble (6007) which sealed the deposits overlying Room F (FIG. 27). Continuing east as 7041 and west as 7038, this represents the base of a degraded field bank or collapsed drystone wall. It is almost certainly a post-medieval field boundary, visible on the Shepton Mallet Tithe Map of 1840, which became redundant with the building of the later nineteenth-century railway embankment just to the north. Two shallow disturbances excavated within it (F603 and F607) were conceivably the locations of trees or bushes removed at the time of its levelling. One other unexcavated feature was visible as a sub-rectangular area of relatively recent disturbed fill (7021) within the deposits overlying the north end of Room E. This may mark the site of a post-medieval pit, which from its fill probably penetrates the underlying natural bedrock. The nineteenth-century railway embankment crosses immediately north of Buildings IX and X, defining the limits of excavation and of the subsequent development site.

2.10: SUMMARY AND INTERPRETATION

PERIOD 0: PRE-ROMAN ACTIVITY

The character, history and development of an extensive Romano-British roadside settlement is the central theme of evidence recovered and recorded through the excavations at Fosse Lane. Its material remains dominate the archaeological record, but among this data are hints of pre-Roman activity which set the scene for its appearance and primary development. Prehistoric flint artifacts are testimony to several preceding millennia of human settlement and exploitation in this locality, as are field monuments of the Neolithic and Bronze Ages on the adjacent Mendip Hills and their environs. The earliest evidence of a human presence at Fosse Lane was the largely residual assemblage of worked flint (Bevan, 3.2), among which were recognised implements characteristic of later Neolithic, Early Bronze Age and possibly Mesolithic industries. Lacking contemporary structural associations, or any apparent distributional significance, this material may best be interpreted as evidence for nearby off-site activity, or as intermittent transient occupation and use of the locality in these periods.

The light and well-drained soils of limestone uplands, typified by the Mendip Hills, were a favoured locality for occupation and settlement in the Neolithic and earlier Bronze Age periods. This use is evidenced most dramatically in the funerary and ritual monuments which are concentrated upon these hills and neighbouring upland to the north. Their local representatives include a scatter of round barrows around Shepton Mallet and cemetery groups on Beacon Hill and Small Down Knoll. Such monuments, and the more widespread, though lower profile, flint artifact scatters in the locality (of which Fosse Lane is one), are testimony to extensive, if non-intensive, human settlement and land use during these periods.

During the first millennium B.C. the scale of settlement and land use intensified throughout much of Britain, although detailed evidence in this region is still sparse. At Fosse Lane, the

evidence for later prehistoric activity is equally hard to come by. Only a handful of pre-Roman Iron Age pottery sherds was present, and once again, none was recognisably in context (Evans, 3.2). The only suspected pre-Roman feature found during the excavations was a north–south ditch (F43) crossing Areas II, III and V (Section 2.3). This may have been the remains of an Iron Age boundary earthwork, although no pottery was found within its fill. The final phase of the pre-Roman Iron Age is represented by one Durotrigan-issue silver coin, and a group of bronze and iron brooches manufactured early in the first century A.D. (Haselgrove, 3.5; Mackreth, 3.4). None of this material needs signify pre-Roman settlement, since items like these might remain in circulation long after their period of manufacture, but their presence may imply an earlier origin for Period 1.

For a better understanding of the potential for pre-Roman settlement in this locality, reference should be made to more specific evidence recorded in the subsequent evaluation of sites beyond that excavated in 1990. Iron Age structures were found at Cannards Grave (Leach 1990) and Field Farm (Leach and Dingwall 1991), and Iron Age pottery was found during work in the Persimmon Homes and Mendip Business Park developments to the north (FIG. 3). These discoveries require more extensive investigation for a full assessment of their significance, and some opportunities for this have arisen more recently at both Cannards Grave (Birbeck 1997) and Field Farm. The evidence suggests a scatter of Iron Age occupation sites in the locality. These were perhaps individual homesteads and farm units, within a territory whose immediate identity and focus was probably the hillfort at Maesbury, some 5 km to the north (FIG. 2; PL. XXIII). The sparse remains from the Fosse Lane excavations are probably for the most part off-site evidence of such activity, either the Cannards Grave site or another focus in the locality. It is, perhaps, from this indigenous background that many of the future inhabitants of the succeeding Romano-British settlement were to come.

PERIOD 1: THE ROMANO-BRITISH SETTLEMENT — ORIGINS

Recognition and interpretation of evidence for the origins of Romano-British settlement at Fosse Lane were hampered by the restricted scope of full stratigraphic excavation, and lack of access to the Fosse Way road frontage where relevant remains are likely to be concentrated. Artifacts with more or less secure structural/depositional associations are the best indicators of Period 1 and its chronology (Class 1 evidence), although residual material provides an im- portant supplement (Class 2 evidence). These limitations hardly permit a coherent recon- struction of the initial phase of settlement from surviving recognisable remains, a problem compounded by difficulties in separating potential elements of a Period 2 layout from those of Period 1 (FIG. 28).

Class 1 evidence was only obtained where detailed excavation of stratified sequences was undertaken. Relevant remains were identified beneath Buildings VII, IX, X and possibly XI. The most coherent were boundary wall alignments and a pit containing some South Gaulish Flavian samian which preceded Building VII (Section 2.7). Elsewhere, the evidence of deposits above natural subsoil/bedrock, and occasional features (gullies, post-holes or boundary wall footings) from more limited excavation beneath the other buildings, is too limited for much interpretative development. One major feature which may originate in this period is the side street (F440/F138) crossing the southern half of the site, and considered further in the discussion of Period 2. A very limited assemblage of datable finds associated with some of these remains indicates their formation in the last quarter of the first century A.D.

Artifactual evidence (termed Class 2), obtained more widely from secondary contexts across the excavation site, extends the scope of Period 1 evidence and its implications. The most reliably dated material comprises a handful of first-century coins (Haselgrove and Esmonde Cleary, 3.5), some Neronian and Flavian samian pottery (Dickinson, 3.3), fragments of first-century glass vessels (Price and Cottam, 3.3), and a group of first-century brooches,

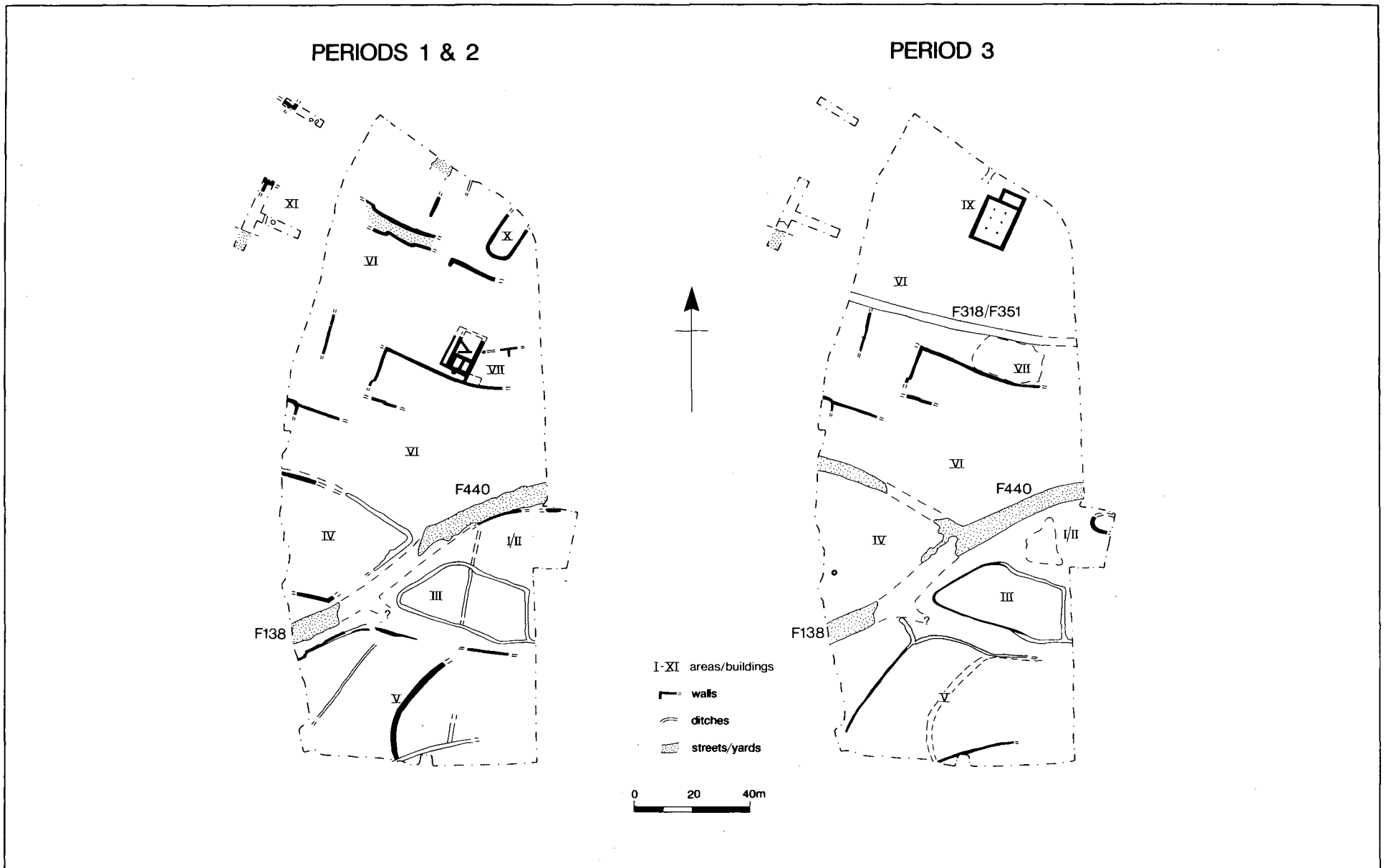


FIG. 28 Phase plans, Periods 1 and 2, and Period 3

including a few of pre-Conquest origin (Mackreth, 3.4). The bulk of these will, in many instances, have been deposited considerably later than their date or period of origin. Even allowing for the, proportionally, limited exposure of the earliest stratigraphic horizons relative to those of later periods, there is a sparsity of material that can be assigned exclusively to the first century A.D. Nevertheless, while all of this Class 2 material is, strictly speaking, residual, it does widen the pattern of distribution across the site and hint at the possibility of some order within it.

In practice, only brooches and samian pottery are present in sufficient quantity to suggest significant distributional patterns. In particular there are small clusters of pre-A.D.75 brooches and South Gaulish samian in the western half of Area IV. The remaining occurrences of such material, and the few pieces of first-century A.D. glass, are too sparse and widely scattered to suggest other meaningful patterns, although one other small spread of South Gaulish samian occurs towards the south-west corner of Area V. A hypothesis that the Fosse Way played a central role in stimulating, as well as providing the focus of, primary settlement may explain these apparent concentrations of early material towards the western margins of the site (FIG. 50). Such as it is, Period 1 evidence from the remaining areas of the excavation suggests no very intensive use of locations away from the road frontage before the second century A.D. There are hints of timber structures, a side street and the layout of some compounds, but the evidence is insufficient to postulate any more detailed characterisation of the primary settlement, in this zone or elsewhere.

PERIOD 2: DEVELOPMENT OF THE SETTLEMENT

A significant expansion and reorganisation of the settlement, revealed in the excavated areas, appears to date from the mid-second century, Period 2 (FIG. 28), though possibly based upon a scheme of property division with an earlier origin. Although the layout was not fully exposed and detailed examination was restricted to a few localities, the overall picture is one of a series of elongated rectilinear plots laid out at approximately 90° to the Fosse Way road frontage. To the south, the main side street (F138/F440) was the most obvious distorting factor; thought to pre-date the scheme and evidently separating compounds to the north-west and south-east of it. To what extent the plots were sub-divided into smaller compounds at this stage is unclear, but most, if not all, were defined by drystone wall boundaries. Only the very limited exposures of building remains in, and close to, the evaluation Trenches B–E (Building XI etc.) suggest that major stone buildings were present on the main road frontage by this period. How closely the layout of plots relates directly to road frontage premises and their property could not be explored (a process which probably began in Period 1), but substantial, mortared, stone-founded buildings also appeared in the back areas. This expansion is also apparent from an increase in the quantity and distribution of residual finds attributable in origin to this period. Datable second-century pottery, glassware and metalwork, for example, were recovered from first-definition horizons throughout; almost certainly reflecting the intensification of on-site activity and occupation. Compounds and identified buildings apart, however, it is less easy to perceive slighter structures or the nature of many of the activities associated with this zone of settlement in Period 2.

The key localities for defining Period 2 sequences and chronology were Buildings VII and X, the former and its environs being the most thoroughly excavated on the site (FIGS 18 and 28). Two phases of building were demonstrable here: a rectangular, mortared, stone-walled structure, probably of two storeys, developing as three ground-floor rooms (A, B and C) with a corridor (D) to the west and a possible annex to the south-east in Phase ii (Section 2.7). This building, primarily a domestic dwelling, apparently lay towards the east end of an elongated, stone-walled compound, aligned north-west–south-east, whose northern boundary was uncertain. Building VII can be dated with reference to Period 1 features beneath it,

and to material incorporated into deposits originating at the time of its destruction. The latter included some pottery, glass and metalwork (but no coins), broadly datable to the second or early third century. This, and evidence from other associated deposits, indicates a lifespan of perhaps a century, from the early/mid-second to the early/mid-third century A.D.

Building X to the north was far less thoroughly explored, and its complete plan not revealed (FIGS 24 and 28). Little information was gained of its internal arrangement, although its shape and a substantial deposit of charred spelt wheat grain suggested one function as being a large barn. This deposit, and other evidence of burning, marked the end of Building X, possibly an early third-century event paralleling the destruction of Building VII, though a connection could not be proved. Once again, this structure was situated towards the eastern extremity of an elongated compound aligned north-west–south-east and defined by stone walls. Only the southern boundary was seen, which was possibly also the division between Buildings VII and X and their compounds. A street or alley on the same alignment also approached Building X from the north-west, presumably a link to the Fosse Way. It has been suggested that this building combined storage with residential functions, and there are hints that another contemporary stone-founded structure lay beneath the largely unexcavated Building IX, just to the west (Section 2.9).

It appears that both Buildings VII and X lay within elongated rectangular compounds, elements of the larger contemporary scheme of plots incompletely revealed in Area VI. Building remains (including XI) and part of a side street (F7), which could have given access to Building VII, in the evaluation trenches B–E closest to that frontage, also seem to fit with this scheme (Section 2.6). The picture is somewhat clearer over the southern half of the excavation site, where boundaries and associated features were more fully exposed. Distortion of the basic north-west–south-east pattern by the street (F138/F440) cutting diagonally from north-east to south-west across the plot alignments, resulted in several triangular compound terminations in Areas II, III, IV and V, suggesting that the thoroughfare pre-dated, and had to be accommodated by, them.

In their primary form most of the Period 2 boundaries appear to have been drystone walls, although many had survived only in fragmented segments, and some appear to have originated as ditches in Period 1. Only short sections of wall foundation defined parts of the north and south sides of the Area IV compound, and what may be the termination of a second compound was just visible to the south-west beside the street. To the east, Areas I, II and III may originally have been contained within one large compound, the only surviving bounds of which would be the drystone wall foundation (F122) north of Areas I and II, and, less certainly, Boundary D separating Areas III and V (Section 2.5). The subsequent subdivision of this large compound by the creation of Area III could have occurred later in Period 2. Between Areas III and V another side street or alley (F37) branched off eastwards from the street F138. Bounding both streets to the south and defining the northern margin of Area V was another drystone wall (F16). Although apparently the primary boundary here, its setting within an earlier road-drainage ditch (F15) to the west supports the hypothesis that the street was earlier and thus likely to be of Period 1. Area V to the south was subdivided into several compounds by further ditches and boundary walls, some of which also originated in Period 2.

No contemporary buildings or coherent structures were recognised within any of these original southern compounds; however, the eastern portions of Areas I, III and V were obscured by later deposits of some complexity. These could not be sampled by stratigraphic excavation, although surface-recorded finds suggest that sequences commencing in Period 2 may well be present. This complex continued east beyond the excavation limits, and contemporary buildings similar to Buildings VII and X may have stood here. A similar increase in deposit complexity along the western margins of Areas IV and V represents the same phenomenon, implying similar structural sequences and their westward continuation, probably up to the Fosse Way road frontage. Had more extensive exposure and stratigraphic

excavation been possible, the remains of stone buildings and other structures would almost certainly have been revealed there as indicated by residual finds (above), part of a sequence which began in Period 1.

PERIOD 3: SETTLEMENT CONTINUITY AND CHANGE

Overall, evidence assigned to Period 3 indicates occupation and structural continuity in the settlement from Period 2. Datable residual finds (notably pottery and coins) support this continuity and the indications of more widespread activity throughout the zone investigated, a pattern which persisted with some adaptations through to the end of the fourth century. Nevertheless, there are perhaps hints of some check or disruption to so smooth an evolution early in this period, when at least two major stone buildings were destroyed and not directly replaced, and a large ditch cut across the site without much regard for the pre-existing layout of compounds. The much greater abundance of coinage in the second half of the century helps to sharpen definitions, and the pattern of its occurrence here conforms well with other small urban sites where second-century occupation continued and flourished with no appreciable check through into the fourth century (Esmonde Cleary, 3.5). A similar intensification of activity on the road frontage might also be inferred from an increase in the occurrence of finds and deposits along the western margins of the excavation. By this time, if not before, some or all of the compounds defined in this rear zone of settlement, particularly those with substantial buildings, may have evolved as establishments independent of properties fronting the Fosse Way.

Excavation in the northern half of the site provided the clearest picture of developments in this period, focusing upon the remains of Buildings VII/VIII and IX/X (FIG. 28). At the end of Period 2, both Buildings VII and X were destroyed by fire and then abandoned. These events were possibly, though not necessarily, related, and seem to have occurred in the first half of the third century. The abandonment and obliteration of Building VII was further emphasised by the cutting of a large ditch (F318/F351) across the site, destroying its northern end. Drainage from the Fosse Way is the likeliest explanation for this intrusive feature, which seems to have all but silted up by the end of the third century.

There were no direct replacements for either Building VII or X in Period 3, but a new stone building was erected just west of the latter, possibly replacing an earlier structure. Building IX probably began as an aisled hall with a vestibule to the north, later sub-divided internally and extended to the south in Period 4. Since only part of the northern room (F) was excavated in any detail, the full sequence of development cannot be reconstructed. A main east entrance to the building gave access to cobbled yards and possible timber-framed buildings which partly overlay the site of Building X, although some of these remains are probably of later periods. Building IX probably combined residential with storage or processing functions, but specific evidence is sparse, particularly for this period (Section 2.9).

The extent of any changes to the northern area of rectilinear compounds in Area VI is impossible to assess in this period. The side street and boundaries approaching Building X were eventually disrupted by Building IX and became redundant, although this may not have happened until Period 4. Towards the road frontage there is a hint that Building XI also became redundant, possibly at the end of Period 2, although other deposits suggest that activity and occupation were continuing without much diminution in that locality.

In the southern half of the site developments of this period are not always easy to distinguish from either their predecessors or successors (FIG. 28). Immediately east of the later Building I, part of an apsidal-ended building presumably continued further beyond the excavation. This is assigned to Period 3 by virtue of its relationship with the adjacent Building I of Period 4, and may signify a more extensive group of contemporary structures located mainly further east. A shallow area of stone quarrying west of Building I may be contemp-

orary, although this could equally have occurred in Period 2, perhaps to provide stone for the boundary walls of the original Area II compound (Section 2.2). The Area III compound may already have been created in Period 2, but seems to have been redefined by a drystone wall foundation within the ditch in Period 3.

The Area IV compound might have been redefined in a similar manner, although the order here is unclear and the surviving ditch around the north and south-east sides could be of Period 3. More likely is the creation of another side street (F137) along the north side, presumably a secondary link from the street F138/F440 westwards to the Fosse Way. Within the compound, occupation and use presumably continued with an emphasis towards the west and ultimately the road frontage, but, with the possible exception of the well, no specific structures were identified (Section 2.4). In Area V, the compounds laid out in Period 2 continued with redefinitions or modifications by ditches or drystone walls, the latter sometimes set within earlier ditches. The most westerly subdivision contained the margins of another concentration of occupation which began in Period 2 and may ultimately have extended to the Fosse Way. The north-east corner of Area V, containing further stratified structural sequences, probably continued as another focus of more intensive activity in Period 3, but no excavated sequences were obtained to demonstrate this (Section 2.5).

PERIOD 4: MATURITY AND PROSPERITY; THE FOURTH-CENTURY SETTLEMENT

The evidence and remains of this period were the most prominent and widespread on the site. This was in part due to their stratigraphic position at or close to the latest and thus most extensively exposed horizon of archaeological definition, but seems also to reflect a very real *floruit* in development of the Fosse Lane settlement. This aspect may also have been reflected in developments on the road frontage, which presumably remained the principal focus of occupation and activity. All the areas investigated in this part of the rear zone show some evidence of activity, centred perhaps on small groups of stone and timber-framed buildings in certain compounds within the more extensive layout of properties; a pattern which, as subsequent site evaluations to the north and east indicate (Leach 1991b; 1992a; 1992b; 1994b; Leach *et al.* 1990), characterises much of the settlement away from the eastern road frontage. Within the excavation site the remains of several new structures were identified and partly excavated, among which suspected timber-framed buildings were prominent; while the appearance of hearths or ovens within several was noteworthy (FIG. 29).

One of these new structures was Building I within the Area I/II compound. This stone building lay alongside the street F440, though not aligned with it, and resembled Building IX in plan and area, although evidence for an aisled interior was not recovered. In a later phase, the building was subdivided internally, and a porch, which encroached upon the street, was added to the north-west corner. A series of hearths or ovens occupied the north end of the building, but the nature of the processes which they represent is unclear, and excavation of the full sequence was not completed. The southern half of the building was set upon a higher shelf of bedrock and its remains had suffered more severe erosion (Section 2.2). Neither coins nor pottery were plentiful from primary excavated contexts belonging to the building, but their evidence, along with that from first-definition cleaning, suggests an early fourth-century origin, and continuity with modifications of the structure through into the third quarter of that century at least.

Building I may have succeeded the apsidal structure of Period 3 immediately to the east, although on a different alignment and possibly belonging to a more extensive complex of structures beyond the bounds of the site. Although its construction date is uncertain, Building I functioned throughout Period 4, probably as a multi-functional industrial and domestic premises on two storeys. Alongside it to the west lay a small cemetery of five inhumations and one cremation burial in Area II. The inhumations were aligned generally

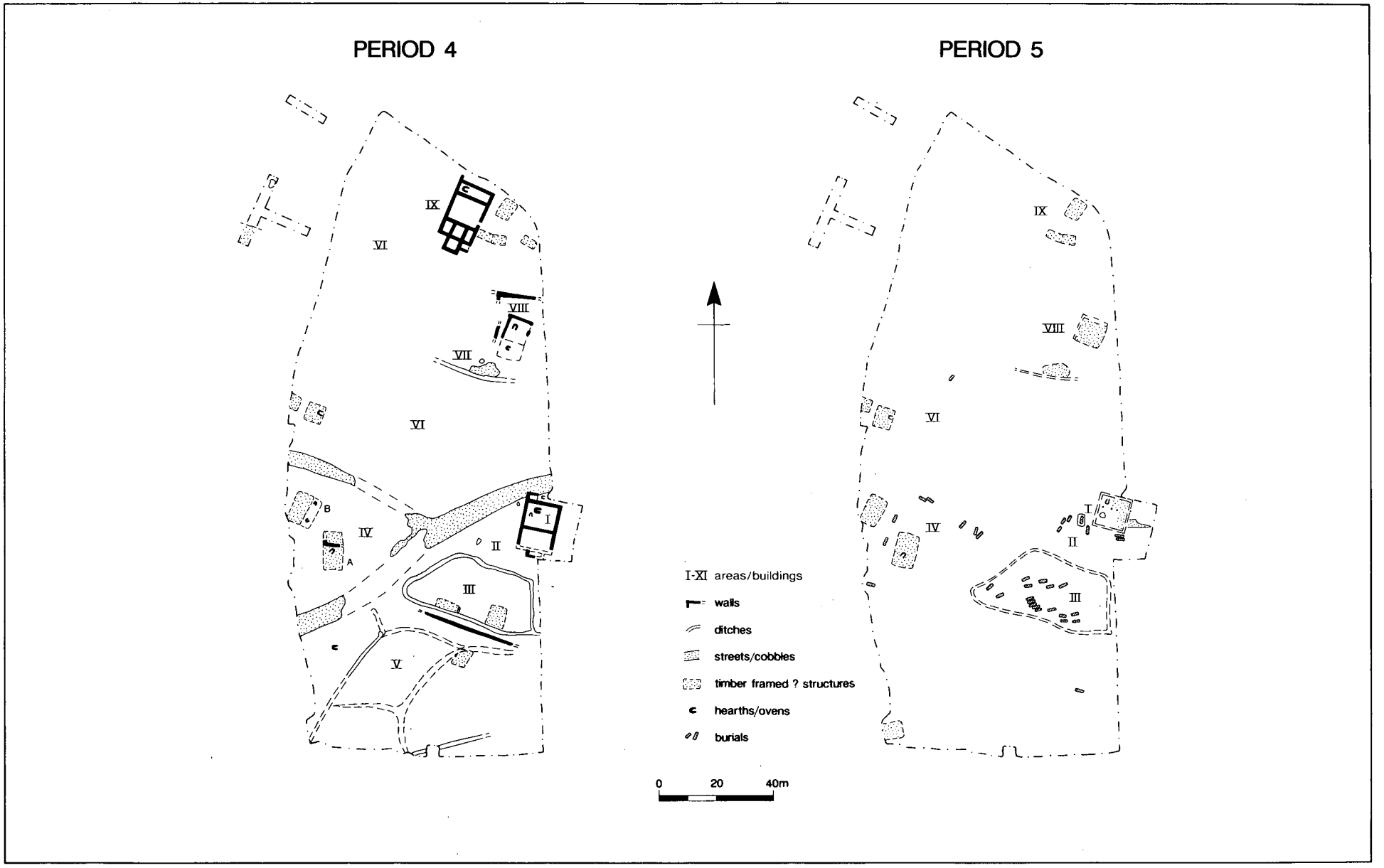


FIG. 29 Phase plans, Period 4 and Period 5

north–south; one within a stone sarcophagus surrounded by a mausoleum foundation, one in a lead coffin, and the others probably in wooden coffins. Dating evidence, other than some fourth-century finds from grave fills and one radiocarbon determination (GU-5294; cal A.D. 420–767), is sparse, but their orientation and proximity to Building I suggest some relationship, more probably in Period 5. The presence of a stone and a lead coffin may denote individuals of some status within the Fosse Lane community, although whether as inhabitants of Building I cannot be determined. The presence of a cremation could signify an earlier origin for this cemetery, although this rite persisted into the fourth century.

Further north, a second new stone-built structure, Building VIII, was set partly into the infilled ditch F351 of Period 3. This small, square building, apparently of only one room, was well defined by stone walls only to the north and west, and contained another kiln or oven with associated deposits and working surfaces. A smaller hearth to the south may have been contemporary, finds and worn surfaces of stone rubble around it raising the possibility of another structure housing it, or more likely an additional room or annex south of the main room. Segments of boundary walls in the vicinity may belong to a contemporary compound (Section 2.8). Further areas of wear on the surface of rubble derived from the collapse of the earlier Building VII nearby, a small pit, and associated fourth-century finds could mark the site of another contemporary structure or activity area, perhaps a timber-framed building, though no other features survived. This was associated with a redefinition of the boundary (F334) immediately south of Building VII as a ditch. While not completely excavated, Building VIII appears to have been primarily industrial, although the analysis of hearth residues provided no more specific information. Finds (notably coins) from a final levelling-up of the underlying ditch (F351) suggest that Building VIII originated *c.* A.D. 320, continuing, with modifications, into Period 5.

Founded in Period 3, Building IX continued with some adaptations through Period 4 and possibly into Period 5. Full details are unknown, since the only extensively excavated areas were the north room (F) and where a large oven was inserted into the west end. The main room probably continued as an aisled hall, with a suite of rooms added to the south (FIG. 30).

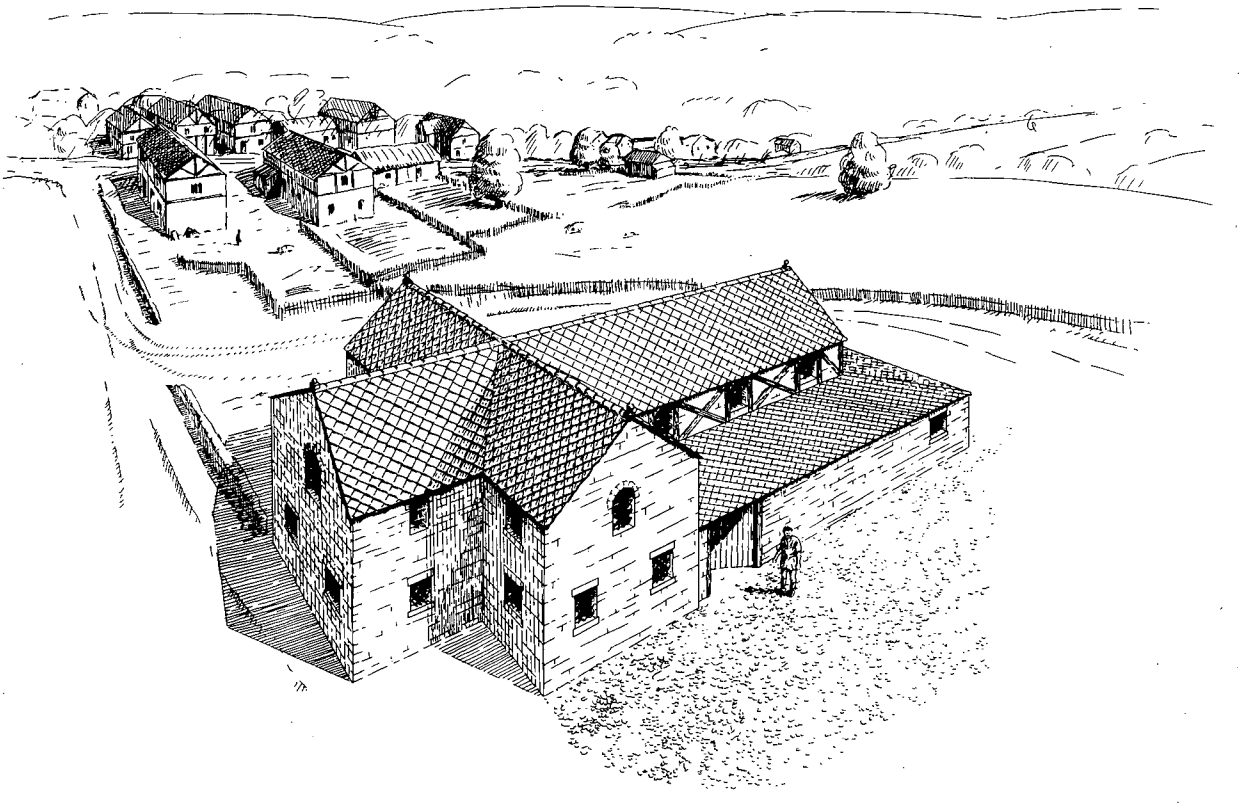


FIG. 30 Building IX, a perspective reconstruction

The latest of these (Room A) blocked the lane of Period 2 which had originally approached Building X from the west. This, and its associated boundary walls, must by now have been redundant, but it was not clear whether a new Period 4 compound contained Building IX and its environs. To the east, those environs included several extensive areas of pitched and worn stone cobbling thought to denote the sites of timber-framed structures partly overlying the site of Building X. One of these (the most easterly) could have originated in Period 3, but finds above the areas closer to Building IX suggest that at least two buildings existed here during the fourth century, quite possibly continuing in use into Period 5. Easy access to these more ephemeral buildings was provided by the main eastern entry into Building IX, but no other structural evidence of their existence was recognised (Section 2.9).

Away from these three main structures (Buildings I, VIII and IX) detailed excavation was more limited or restricted to first-definition clearance and recording (FIG. 29). In the evaluation trenches closest to the Fosse Way, deposits of this period are difficult to interpret, beyond indicating that occupation was still continuing. In Area VI to the rear, the evidence is even more restricted away from Areas VII/VIII and IX/X. To what extent the original boundary scheme of Period 2 had been modified by the fourth century is not known, although those boundaries adjacent to Buildings IX and X were certainly redundant, while the drystone wall bounding Building VII had been replaced by a ditch (F319/F322). This style of replacement might reflect an increase in soil and debris overlying the site, particularly in this area, and a decrease in the ready availability of stone for boundary walls. A little more detail was available in the south-west corner of Area VI where first-definition cleaning revealed the sites of two more probable timber-framed buildings. These lay within one of the earlier Period 2 compounds and on the margins of another zone of more complex stratigraphy thought to extend westwards from here to the Fosse Way road frontage. Pitched stone settings and cobbles were their only surviving markers, but one building contained a hearth or oven apparently associated with the lead pig (FIG. 73, no. 1), although there was no other evidence available to identify metalworking here. Further east, in a partly cleared area south of Building VII, concentrations of finds which included hearth/furnace lining and iron slag (Starley, 3.8) were associated with remains of at least one other oven or hearth (Section 2.6).

In the southern half of the site, despite greater clarity and exposure of first-definition archaeology, the arrangement of Period 4 boundaries was less certain. The best defined was that around the Area III compound (F30 and F129), recut as a shallow ditch. The unexcavated sequence of deposits along its south and south-east margins represents activities, structures and occupation within this area which probably began in Period 2. This complex extended into Area V and east beyond the bounds of excavation. No stone-founded buildings were seen, but areas of pitched stone settings and cobbles probably represent the sites of timber-framed structures among other remains principally of Periods 4 or 5. To the south-west in Area V, the continuity of some boundaries was maintained principally by ditch recuts, although, despite a moderate distribution of fourth-century finds across the area, little else of structural significance could be discerned. The edge of a zone of occupation deposits along the extreme western margin of the site here is equivalent to similar remains in Areas IV and VI to the north (Sections 2.3 and 2.5).

The bounds of Area IV, as seen, appeared to be defined only by the streets F137 and F138 in this period. At their convergence east with F440 they sealed part of the early ditched boundary (F34), probably as a later phase of metalling, but there was no sign of any subsequent boundary wall or ditch. Investigation of features or deposits within Area IV was only very selective, but revealed the upper horizons of a zone of stratified features and deposits thought to be continuous westwards as far as the Fosse Way. Much of what was visible probably originated in the fourth century, among which the remains of two suspected similar-sized, rectangular, timber-framed buildings (Structures A and B) were prominent. Neither was orientated with each other or with what could be seen of the compound, and they were defined only by areas of pitched stone settings, cobbles and some larger plinth

stones. Both contained the remains of hearths or ovens of undetermined function, and were the focus for finds which suggested continuing use into Period 5. The only other potentially contemporary feature identified in Area IV was a well (F118), although this was thought to have originated earlier and may even have become redundant during the fourth century (Section 2.4).

PERIOD 5: DECLINE AND ABANDONMENT, THE LATE FOURTH CENTURY AND BEYOND

In the final decades of the fourth century the pattern and intensity of settlement in this zone appears initially to have continued much as in Period 4. There was no new building in mortared stone, however, and the trend towards timber-framed structures seems to have intensified. Several of those identified in Period 4 could equally have originated in Period 5, while the earlier stone buildings either fell into disuse or were modified. Perhaps the most dramatic change, however, was the use of certain areas for human burial, evidence for which barely exists before this period. Many of these appear to respect pre-existing compounds, whose eventual fate is otherwise less clear. The cemetery of Area III conforms to this pattern (FIG. 29); a group whose common general east–west orientation, grouping together in a compound, and the presence of a Christian symbol in one grave may identify them as late Roman Christians. The appearance of burials is perhaps the strongest indication of a breakdown in the pattern and social structure of the Fosse Lane settlement, established here from at least the early second century. It is notoriously difficult to estimate the chronology or continuity of late and post-Roman settlement on British sites after *c.* A.D. 400, but the burials may very well mark the last act in the use of this site, which, on the basis of the small sample of radiocarbon determinations, need not have ceased before the sixth century and perhaps even later.

In the northern half of the site, Building IX may have become redundant by *c.* A.D. 380 and there is some evidence for deliberate dismantling, at least of Room F to the north. The focus of occupation and other activity in this locality apparently shifted to the adjacent timber-framed buildings of Period 4. These persisted to the end of the century and quite likely into the early decades of the next, and may, indeed, have only originated following the abandonment of Building IX. They do, however, respect the site of the latter, and there appeared to be no structural evidence for a reuse of its site. There was no sign of burials in this locality, although areas to the south and west were not thoroughly cleaned, while to the north further evidence of contemporary structures and activity could be sealed beneath the nineteenth-century railway embankment (Section 2.9).

Further south, in some contrast, Building VIII was remodelled in Period 5, sometime around A.D. 370. The main oven or furnace (F317) was levelled and much of the northern room paved with reused building stone and flagstones. The north and west walls seem to have been retained, but the building was now perhaps primarily of timber-framed construction, with or without a southern extension. Coins and pottery from in and around this building suggest that it continued in use beyond the end of the fourth century. Finds associated with the less-coherent remains (pitched and worn cobble settings) of another building adjacent to the site of Building VII to the south also suggest continuity of use from Period 4 through into the fifth century. Contemporary occupation material in this locality found its way into the boundary ditch (F319/F322) here, which was infilled during Period 5. Once again, no burials were encountered in the vicinity of Buildings VII and VIII, although little of the adjacent parts of Area VI was thoroughly cleared to first-definition level (Sections 2.7 and 2.8).

In the south-west corner of Area VI, where first-definition clearance did reveal the sites of two suspected timber-framed buildings, finds once again indicate that occupation, which may have begun in Period 4, probably persisted into the earlier fifth century. Between this area and Building VII one grave (F134) was encountered cut into an earlier drystone

boundary wall. Aligned north-east–south-west, and containing a decapitated adult female accompanied by an infant, this may represent another small cemetery of burials (not otherwise located) reusing an earlier compound rather in the manner of that in Area IV. The character and final occupation of the settlement along the main road frontage is quite unknown, although considerable accumulations of stone building debris marking the latest phase in the evaluation trenches west of Area VI suggest the eventual abandonment and dereliction of stone buildings there in Period 5 (Section 2.6).

Like Building VIII, Building I was remodelled in Period 5, although in this case most of the earlier stone building seems to have been demolished and only the northern room (B) was certainly reused. Some demolition debris was still present, but it appears that the walls may have been lowered for reuse as bases for a timber-framed structure based on Room B. Other elements were defined as timber post-holes or as areas of reused paving stone and pitched cobbles. At least one hearth or oven replaced the larger oven structure of Period 4, and an entrance threshold to the east was defined by reused stone door frames. Associated finds from the locality suggest occupation and use continuing into the fifth century (Section 2.2).

The adjacent burials of the Area II cemetery have been assigned to Period 4, but, apart from the radiocarbon determination noted above, their dating is imprecise and all could equally be of the later period. More certainly later are the two shallow east–west burials cut into the former Room C of Building I. A radiocarbon determination on one suggested a date in the eighth, ninth or tenth century (GU 5297; 1160±50 BP; cal A.D. 722–990 at 95% confidence), which, if accurate, would separate these burials from the other groups at Fosse Lane. Anglo-Saxon reuse of derelict Roman structures for burial is not unknown, although no other activity or finds of that period are recorded on this site or its near vicinity.

South of Building I, the redefined Area III compound of Period 4 was subsequently utilised for burial, within which identification and excavation of all the graves was probably achieved. This small cemetery was distinguished by its location here and the similar orientation of its sixteen burials, generally north-east–south-west. A good mixture of age and sex (excluding babies) suggests family groups, notably one group of five buried close together, although this cannot be proven from distinctive skeletal traits or pathology (Pinter-Bellows, 3.10). Apart from orientation, the burials were all within nailed wooden coffins packed around with stone slabs, and with one exception did not include durable grave goods. No evidence of grave markers survived, but two burials in the deepest grave cuts were distinguished, the most westerly (F29) by an inner lead coffin, and a central burial (F50) by a silver amulet decorated with a 'chi-cross' monogram (Johns, 3.9). The latter, apparently unique in Britain as a personal object with such overt Christian associations placed within a grave, is surely the strongest possible indicator that this is a Christian burial as perhaps may be all of the burials in this cemetery. Two prone burials (HB 16 and HB 28) do not necessarily detract from this identification, which is otherwise supported by the lack of burial accompaniments and general similarity of orientation. Apart from one close-set group of five, the burials are sparsely distributed, but all were contained within, though not necessarily aligned with, the Area III compound (Section 2.3).

The date of this cemetery is closely bound up with that of the compound and its abandonment for other purposes. Finds from the locality, notably coins, may signify that the occupation or use of structures along the southern and eastern sides of Area III had ceased by *c.* A.D. 380 and that the boundary ditch was largely infilled. Several of the graves were cut into these structural remains and deposits, though not the ditch, implying that they were redundant by the time burial commenced, but that the compound survived to be re-utilised as a cemetery. Assuming that there was little or no overlap between the two functions, the cemetery should not have originated much before the last decades of the fourth century and may well belong primarily to the fifth. This attribution is supported by the silver amulet, which on stylistic grounds should post-date A.D. 350 and perhaps have a rather later deposition date, although a radiocarbon determination from the accompanying burial could

favour a slightly earlier date (HB 22, GU-5296; 1790±70 BP cal A.D. 70–410 at 95% confidence). A determination from another burial in this cemetery (HB 21, GU–5295; 1610±60 BP; cal A.D. 260–593 at 95% confidence) is more in conformity with the expected date of the group as a whole.

In the adjacent compound of Area IV to the west were the remains of a smaller and more disparate cemetery, comprising a sparse scatter of eight variably orientated graves. This may not have been a complete group and the pattern as perceived suggests rather intermittent burial, with orientations determined more by existing boundaries or structures than by ritual. They did however share features which distinguish this cemetery from those of Areas II and III. This included instances of decapitation, prone burial, the remains of hobnail boots, and the possibility of burial accompaniments including pottery (two instances of face-decorated sherds) and animal bone. Such phenomena are familiar elements of non-Christian burial ritual in later Roman Britain.

Once again, internal evidence from grave fills or stratigraphic relationships gives only an imprecise fourth-century or later date for the burials. Finds, and in particular coins, from the sites and environs of Structures A and B here suggest that at least the western part of the Area IV enclosure was still occupied by the living up to the end of the fourth century, and possibly beyond. Although this does not necessarily exclude the possibility of burials occurring here before other activity ceased, it strengthens the probability of their attribution to the fifth century or later. This hypothesis seems also to be supported by a radiocarbon determination from the remains of HB 9 (GU-5293; 1450±70 BP; cal A.D. 430–680 at 95% confidence) among the building remains. By Period 5 the two streets flanking Area IV north and south effectively demarcated the compound and cemetery. How long these streets continued to function is unclear, but Theodosian coins from the silt which accumulated immediately above the southern road cobbles (F138) suggest its use to at least the end of the fourth century (Section 2.4).

South of this street, in Area V, finds from the surface of stratified deposits just visible along its western edge suggest occupation continuing into the fifth century, although no burials were encountered in the area exposed. The enclosures further east were all but devoid of evidence for structures or other activity in this period, and the continued demarcation of the boundaries themselves is in some doubt. Only towards the north-east corner, in the complex of deposits and structural remains which merge with that in the southern part of Area III, do finds indicative of more intensive use become more common again. Given the limitations of first-definition cleaning or excavation here, the character and scope of any occupation is difficult to assess but probably included timber-framed structures comparable to those in Area IV, for example. Surface finds suggest activity continuing to the end of the fourth century at least, and thus perhaps for slightly longer than in Area III. The end of this activity may be signified by a single burial (F126) on the southern margin of occupation deposits. Although isolated and undated, its similarity to those excavated elsewhere on the site suggests a Period 5 attribution and the possibility of another small inhumation cemetery in its locality. By analogy elsewhere, the appearance of such burials seems to coincide with a change of use and most probably the cessation of occupation or other activity in a particular area.

PERIOD 6: MEDIEVAL AND MODERN LAND USE

By the end of the seventh century all occupation by the living, or burial of the dead, had probably ceased, and thereafter what remained upstanding on the site will have gradually slid into ruin or been plundered for building materials. The evidence for early medieval or later phases of activity at Fosse Lane was very minor, except in terms of their effect on the survival and preservation of the earlier remains. As previously mentioned, the suspected

Anglo-Saxon burials cut into the site of Building I are somewhat unexpected, although perhaps an indication that both the settlement remains and their significance persisted at least into the early medieval period.

Above all, Period 6 is characterised by the evidence of successive regimes of agricultural land use. Of this, the earliest detected was the remains of a metalled track incorporating a few sherds of medieval pottery, which crossed the site of Building VIII. This may have been a link between the Fosse Way and Frog Lane, where finds demonstrate some settlement from at least the thirteenth century as part of the hamlet of Charlton (Leach 1995). There is little else to indicate the nature of medieval land use in this locality, although the apparent absence of any pottery from surface manuring and a thin topsoil above the ruins of the Roman settlement should favour pasture over arable. Of much later date were two field boundaries crossing the site, both of drystone wall construction, and probably originating as eighteenth- or early nineteenth-century Enclosure fields. The northern boundary, detected above the remains of Building IX, was undoubtedly made redundant by construction of the railway here in the 1850s, though still visible as a low-spread bank on the surface of the field before excavation commenced. The second boundary, further south, still separated a small rectangular pasture field to the north from a much larger arable field, prior to the excavation and subsequent development of the site. The influence of the different recent agricultural regimes separated by this boundary upon preservation and visibility of the surviving archaeological remains has already been noted (Section 1). Agriculture apart, only the courses of two later nineteenth-century railway lines had disturbed parts of the Romano-British township, heralding its rediscovery and recognition in 1990.

3.0: THE FINDS

3.1: INTRODUCTION

by Jane Evans and Peter Leach

During fieldwork the finds were identified either according to excavated contexts, the location of which may be referenced by one or more sets of site co-ordinates, or by a plot number allocated as material was located and collected during first-definition clearance. The latter, located by EDM, can apply to a single object or to a small group found at one location and which may sometimes be of diverse material. Thus, one finds number may represent a single coin or brooch, while another may apply to a small collection of pottery, nails, animal bone, etc., or to several classes of material bagged together. These groups of finds were normally collected from within an area not exceeding 1 m^2, although occasionally more than one group would be collected per square where there was a high density or range of finds. Ideally, each individual item would have had its own number, or at least have been collected in single material or category groups, but in the context of fieldwork conditions at the time this was not always possible.

Conditions for the preservation of the most durable finds on site were relatively good, although no environments which preserved the more vulnerable classes of organic material were encountered. Bone was relatively well preserved in a neutral or slightly calcareous soil environment. The thin stony soils and many other contexts with a high stone content, were probably responsible for the heavily abraded character of most pottery and the poor condition of some metalwork.

Following removal from the site, all portable finds were processed initially — cleaned, marked and recorded in a basic inventory — before selection into categories (e.g. coins, glass, samian pottery, brooches, etc.). The finds were then assessed by Margaret Brooks of the Salisbury Conservation Laboratory. A number of objects were selected for conservation or x-ray examination; notably most of the copper-alloy objects, iron (excluding nails), and shale. Some objects were also selected for investigative cleaning if, following consultation with the appropriate specialist, this was considered necessary for their identification or description.

Groups of finds were then studied as functional types within material categories. Where possible finds were to be recorded using a single system, so good communication between specialists was particularly important. In this respect holding full project team meetings in the early stages of the post-excavation project proved invaluable. Catalogues from individual specialists were entered onto a single finds database, with the exception of pottery which required a separate recording system. Finds were described using a number of increasingly specific fields; material, functional class (industrial tool, personal ornament, etc.), category (awl, brooch, etc.), and finally precise type, usually related to a published *corpus*. Other fields included quantity, date, site context or plot number. The finds database could be linked to a structural database, which contained details such as area, feature, feature type, and co-ordinates for the plotted finds. The finds database was also linked to the AutoCAD programme devised for recording site geometry. In this way it was possible to plot and analyse a range of distributional data, from a specific object type to a broad functional class.

Specialists were provided with computer-generated plots of all finds categories that they required in support of their analyses. These, as noted earlier, form the basis of certain published figures. Copies of all plots are deposited with the archive. Although many of the surfaces exposed and recorded at the first-definition horizon effectively comprised a multiperiod palimpsest of remains, their association through these database programmes with located finds has enhanced and complemented both sets of data. The results of this linkage are reflected in many of the individual finds reports, but its main value is where all finds data are brought together, as in specific structural and functional interpretations and for the site as a whole.

In the following finds catalogues, site locations are presented at the end of each entry as follows: EDM plot numbers (four figures) are followed by the Area and six figure site grid reference (in brackets). Contexts (prefixed C) and features (prefixed F) are followed by Building number and period. Entries end with the individual Museum Accession Number (Acc. No.). This is a suffix to the overall accession number (TTNCM 70/1990) allocated by Somerset County Museum, Taunton, where the finds are now deposited.

3.2: PREHISTORIC MATERIAL

THE FLINT

by Lynne Bevan

Introduction

The flint assemblage comprises 303 struck flakes and 72 artifacts, all of which were obtained from topsoil or Roman features. There is a high incidence of breakage resulting from post-depositional processes, particularly plough damage, especially among the flakes and less durable artifacts, such as blades and arrowheads. Whilst some of the larger pieces, for example scrapers, have sustained damage, others have survived intact and appear in a very 'fresh' condition. Although often present, edge damage and abrasion seldom inhibit the recognition of utilisation and retouch. A full catalogue of the material and a table of the artifacts is in the archive.

Raw material

The raw material is a chalk flint, ranging from beige through light grey to dark grey in colour, with a few examples of translucent golden brown and opaque near-black flint. Much of the flint used is light grey with darker speckled areas. There is a high incidence of partial and total white patination, some evidence of iron-staining and the occasional crystalline inclusion in this otherwise good quality flint. When visible, cortical remains are generally thin, but many examples have retained the whiteness usually associated with chalk flint. The nearest possible origin for this material is Wiltshire, a source which has been proposed for assemblages from Chew Valley Lake (ApSimon 1977, 178), some ten miles to the north-west, and also for the assemblage from Norton Fitzwarren (Saville 1989, 18) which lies 28 miles to the south-west.

The artifacts

Cores

Of the ten cores in the collection, only the two blade cores have survived intact. The first, a

dark-grey, pyramidal single-platform core with remnant cortex at one side (FIG. 31.1) was used for the production of narrow blades with, from measurement of the blade detachments, a maximum width of 5 mm and a maximum length of 30 mm. The second blade core, also with two platforms, was light grey in colour and partially burnt. This core (Acc. no. 602, not illustrated) was used for the production of blades with a maximum width of 7 mm and maximum length of 20 mm (FIG. 31.1), and is very similar to a common Later Mesolithic form (Wymer 1977, fig. 2.21). The second blade core may date to the same or to a later period. The eight remaining cores from which broad flakes had been detached from two to three platforms are all certainly post-Mesolithic in origin, although closer chronological definition is not possible from such abraded fragments. The random distribution of these undiagnostic flake cores across the site, none of which has been illustrated, is not spatially useful in terms of identifying areas of tool production.

Blades

There is a small collection of blades comprising 21 items, only three of which are complete. Maximum blade widths range from 7–20 mm with the majority clustering between 8–15 mm and a further six examples between 17–20 mm. The three complete examples fall into the wider category with widths of 17, 18 and 20 mm and lengths of 44–6 mm. The possibly earliest pieces are three narrow, backed blades, at least one of which, retouched at either side (FIG. 31.2), could have a Mesolithic origin (Lawrence Barfield, pers. comm.). Also illustrated is a totally patinated mid-shaft fragment with a surviving width of 12 mm and thickness of 6 mm (FIG. 31.3). It had been deliberately notched at both sides in the manner of a similar and complete example from Fideoak Park, Bishop's Hull, Taunton (Seaby 1951, no. 31) which occurs in a predominantly Mesolithic collection. Other pieces include a bifacially worked blade mid-section, possibly from a reaping knife, with evidence of repeated re-sharpening and wear episodes on each side (FIG. 31.4), a complete blade with traces of utilisation (FIG. 31.5), the rounded end of a broad blade (FIG. 31.6), and two serrated blades one of which is complete and has traces of cortex at the base of the shaft (FIG. 31.7). Also present in the collection is a blade shaft with evidence of heavy wear and re-sharpening on each side, shattered across the tip (FIG. 31.8). These pieces are less chronologically diagnostic than the backed blades, but may date to later periods.

Flint axe

An axe butt of light-grey polished flint (FIG. 31.9) was recovered. Flint axes are less common in this area than those of other stone. Two fragments of polished flint axes were recorded in a chronologically mixed collection of flint and chert artifacts from the excavations at St Cross Nunnery on the site of Chew Valley Lake (ApSimon 1977, 192–3, fig. 92.11 and 14). However, both had been re-worked into 'rough choppers' and lacked the smooth surface shown in FIG. 31.7.

Arrowheads

Of the seven arrowheads in the collection, three were complete, two were broken, and two were unfinished. Even the fragmentary examples have retained sufficient diagnostic elements to allow identification to type. When possible, examples have been referred to S. Green's arrowhead typology (1984). Four of the arrowheads are small leaf-shaped forms (FIG. 31.10–13). The first, a type 2c, is totally white patinated with some damage to the tips and had been pressure-flaked over its entire surface (FIG. 31.10). Another example, a type 3b, beige in colour, is unfinished with a row of retouching on one side (FIG. 31.11). The third leaf-shaped form, a type 4b, light grey and partially patinated, has sustained damage at one tip (FIG. 31.12). The final example, of which only half has survived, is translucent beige in colour, and has been pressure-flaked over its entire surface (FIG. 31.13).

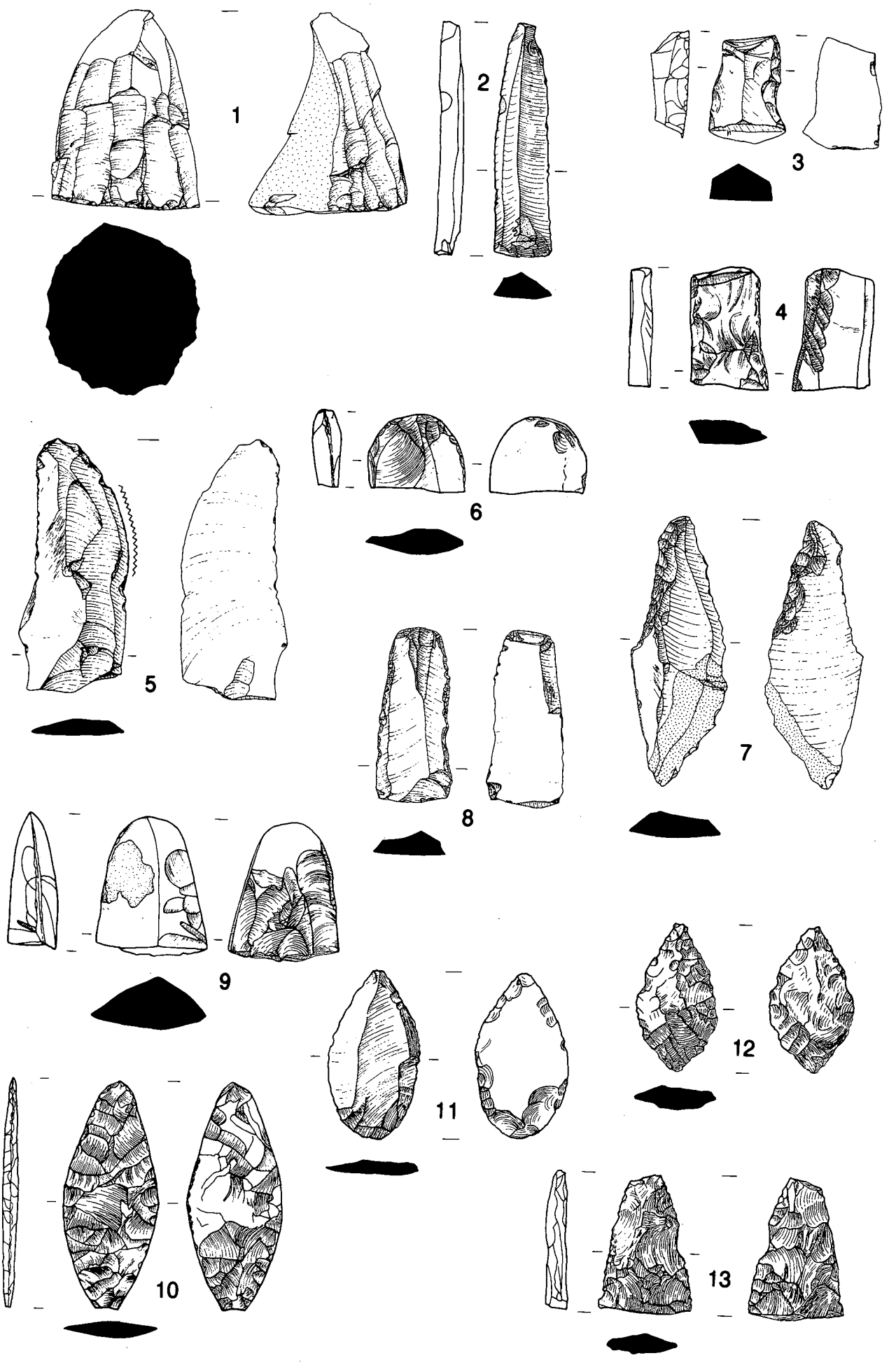


FIG. 31 Worked flint, nos 1–13; scale 1:1

Two of the other arrowheads are light-grey barbed-and-tanged forms. One is unfinished (Acc. no. 603, not illustrated), and the second, possibly a Sutton B type, is bifacially worked on opposing sides and broken at the shoulder (FIG. 32.14). The final arrowhead is an oblique form, an aborted blank made from translucent golden-brown flint. Worked only on its dorsal face, it had been abandoned before completion, probably due to a fault in the flint. Heavy wear traces and a series of fractures at its base suggest its subsequent re-use as a scraper (FIG. 32.15).

Miscellaneous tools

This group comprises a fabricator or 'slug knife' (Lawrence Barfield, pers. comm.) with heavily denticulated sides in a dark- to medium-grey speckled flint (FIG. 32.16) and two piercers (FIG. 32.17 and 18), the first of light-grey and the second of dark-grey, near-black, flint. Fabricators and piercers occur in both Neolithic and Bronze Age assemblages. A later date is more likely for the dark-grey piercer with a distinctive notch (FIG. 32.18) which has a close parallel in a Beaker assemblage from a pit at Dean Bottom on the Marlborough Downs (Harding 1992, 130, fig. 93.1).

Scrapers

The scrapers, 30 in total (excluding the possible re-used arrowhead above), have been separated into four main morphological groups with the exception of two possible Mesolithic forms and a scraper on a primary flake with 90% remnant cortex. The two possibly Mesolithic scrapers are very small in size and heavily patinated. One is an end scraper on a blade, broken across the shaft with a breadth of 18 mm (Acc. no. 604, not illustrated). This form is very similar to scrapers catalogued by Wymer (1977, fig. 2.18 and 19). A similarly early date is also proposed for the second scraper — a curved end/side scraper on a flake, the smallest in the collection with dimensions of 29 x 18 mm (FIG. 32.19).

The third scraper not related to the main groups is a shallow-flaked example on a primary flake (Acc. no. 605, not illustrated). Roughly circular in shape with some damage, it is covered in cortex; the underlying flint has only been revealed at the curved working edge. In common with the rest of the collection, this scraper is considered post-Mesolithic in date.

The four scraper groups comprise:

1. 'Thumbnail' scraper — a small discoidal form generally worked around 80% of its circumference. There are three examples in the collection, none of which is complete, but an average circumference of 25 mm can be reconstructed from surviving measurements. The smallest example of this form is shown in FIG. 32.20. This form is a recognised Beaker type (Healy 1984, 15).
2. Large side scrapers are often formed from primary flakes between 30–50 mm in length, the majority of which have retained substantial cortical traces. Eight scrapers fall into this group, one of which has been illustrated (FIG. 32.21).
3. Round to ovoid scrapers. Larger than the 'thumbnail' form with an average length of 29 mm, an average width of 25 mm, and maximum thickness of 10 mm, and characterised by an absence of cortex. Up to 70% of the curving edge has been shallow-flaked. In six of the nine examples the slightly raised dorsal is formed by the intersection of two flake removals (FIG. 32.22). Of the remaining three, two have concave dorsals formed by a single flake scar, and the last, a burnt example, has a dorsal formed by several flake scars.
4. Steeply flaked scrapers. Although of comparable length and breadth to the generally ovoid category above, this type can measure up to 12–15 mm in thickness. Cortical survivals occur in three of the seven examples of this type. The illustrated example (FIG. 32.23) is steeply retouched from a deep dorsal and has been worked around 70% of its curving edge from a spatulate base.

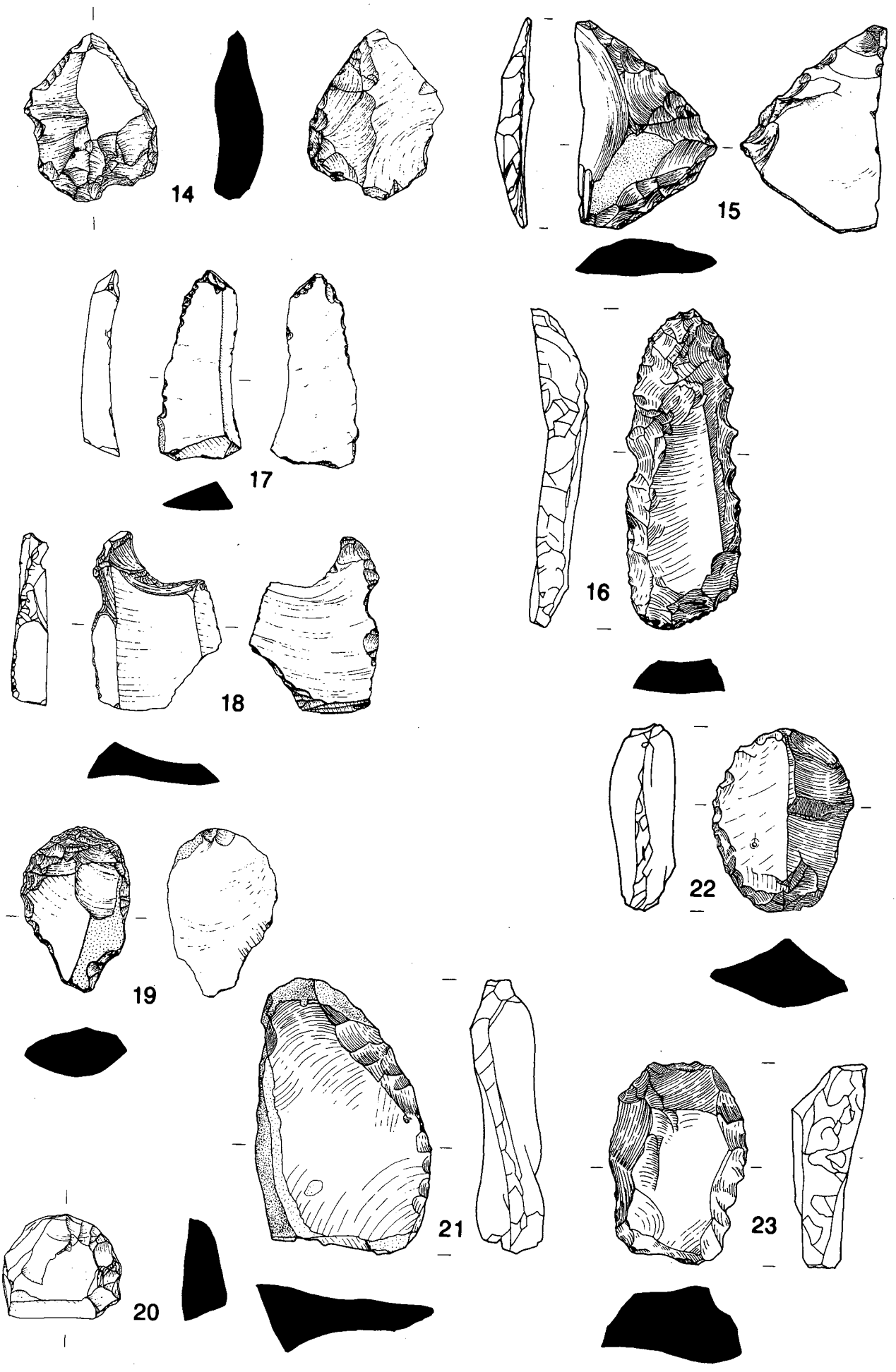


FIG. 32 Worked flint, nos 14–23; scale 1:1

Although this type of tool is not easily datable, close parallels for most of the above forms have been found in Beaker contexts at Chew Valley Lake which lies some ten miles to the north-west. A Beaker 'grave' context at Chew Park has provided a parallel for Group 1 'thumbnail' scrapers (ApSimon 1977, fig. 85.2 and 4) as well as for the larger Group 2 scrapers (ibid., fig. 85.3, 5, 6 and 7). The Ben Bridge assemblage excavated from a pit with known Beaker material (including ceramics) provides the closest parallels to Group 3 scrapers, both the examples with dorsals formed by flake intersections (ibid., fig. 90.1–3, 6) and the examples with concave dorsals (ibid., fig. 90.4). The single unclassified example of a round scraper made on a cortical flake is also paralleled at Ben Bridge where it has been described as of Beaker type (ibid., 187, fig. 90.5). Thicker, more steeply flaked forms also occur in a Beaker grave which are comparable to the Group 4 scrapers above (ibid., fig. 85.3, 8 and 10). A steeply flaked scraper was recovered from a Neolithic house at Chew Valley Lake in a small assemblage including a leaf-shaped arrowhead, a hammerstone and some ceramics. This form, at 63 mm by 34 mm, was considerably larger than the examples in Group 4 above, and was not a Beaker type (ibid., 173, fig. 84.7). Despite the influence of other factors, for example availability of raw material or morphological differences related to function, the general preference for smaller scrapers in Beaker assemblages in contrast to the larger scrapers used during the Neolithic is supported by a number of examples from eastern England (Healy 1984, 15).

Flakes

Of 303 flakes and struck pieces, only 48 (under 16%) were complete. These were measured according to criteria established by Saville (1980) in order to determine whether the collection was weighted in favour of narrow blade-like flakes suggestive of a Mesolithic/Early Neolithic origin or broad flakes suggestive of a Later Neolithic/Bronze Age origin. Relative flake lengths are listed below:

Length in mm	number	%
10–19	9	19
20–29	25	52
30–39	9	19
40–49	5	10

In addition to the length measurements given above, breadth measurements were taken. Apart from a few exceptionally broad examples of 35 mm and 45 mm, most flakes measured between 5–25 mm, with the majority (31) measuring under 15 mm. Of the largest group shown above with lengths in the range of 20–9 mm, seventeen flakes measured under 15 mm in breadth. In this instance the sample appears to relate to activity during earlier rather than later periods. However, the small size of the sample suitable for measurement inhibits further research. A low incidence of retouch was noted in only eighteen of the flakes, none of which was complete. Four flakes, including one retouched flake, were found in a grave fill (F132/HB 29), and single flakes were found in the fills of three other graves (110, 112 and 131). A fragment from a large ammonite was also found in F110/HB 15. Philpott has commented upon the possible 'amuletic significance' of flint tools and fossils in Roman burials (1991, 163–4), but in this instance such items are more likely to have been present in the soil before the graves were cut, rather than being deliberately deposited in the burials.

Discussion

A small Mesolithic element in the Fosse Lane collection, comprising one blade core, three backed blade fragments and possibly one or two scrapers, has been identified, representing remnants of transient occupation episodes which pre-date the main phases of Neolithic and

Bronze Age activity represented on the site. These later periods of prehistory are less easily separated on the basis of chronologically diagnostic tool types. The presence of leaf-shaped and oblique, as well as barbed and tanged, arrowhead forms suggests successive phases of activity during the Neolithic and Bronze Ages. The arrowheads may not represent occupation foci, but provide evidence of off-site activities, for example chance losses whilst hunting. Other tool types such as scrapers are less reliable in chronological terms although they are more useful as occupation indicators, being traditionally associated with home-based tasks such as hide preparation and food-processing.

Spatial analysis

The flint collection above must be regarded as only a sample of a collection severely depleted by pre-excavation topsoil stripping. For this reason, the flint, divorced from any prehistoric features, is here considered as a ploughsoil rather than an 'excavated' collection. Spatial plotting of the remaining flint tools and waste across the site gives the impression of clusters of flint in certain areas. These clusters are themselves subject to bias, being less likely to have resulted from prehistoric activities on the site than from post-depositional processes, especially subsequent farming practices, in addition to the biases generated by the circumstances of recovery. A concentration from the deep foundations of Buildings IX and X at the northern end of the site is an example of this. A similarly high incidence of flint is visible in the vicinity of the other buildings which might reflect excavation methodology rather than prehistoric activities. However, a high concentration of flint including artifacts has been noted at the southern end of the site which might be more reliable and bear some resemblance to the original deposition of the flint, since closer to the centre of the site flint density falls off despite similar circumstances of recovery. It may be significant that all three of the Group 1 Beaker scrapers were found in this area, although earlier diagnostics were also recorded here. Whilst the presence of apparent flint concentrations must be regarded with caution, it is unlikely that any of the flint has travelled far from its original place of manufacture or use. Whilst the spatial plotting of this small assemblage has failed to provide any insights into the relative locations of separate activity episodes during prehistory, it demonstrates the effects of post-depositional processes, often separated by thousands of years, upon prehistoric remains and the biases generated by such processes.

Catalogue of illustrated examples (FIGS 31–2)

1. Dark-grey pyramidal blade core, single platform, cortex at one side. Longest blade removal 30 mm; average flake width 5 mm; circumference 27 mm. *u/s, topsoil* (Acc. no. 521)
2. Light grey backed blade, tip missing. *3145, Area VI (017 106)* (Acc. no. 522)
3. White patinated blade shaft fragment, retouched. *2279, Area V (024 034)* (Acc. no. 523)
4. White patinated blade shaft fragment, utilised. *2616, Area V (039 027)* (Acc. no. 524)
5. Light grey blade knife, utilised. *2508, Area V (041 011)* (Acc. no. 525)
6. Beige blade, tip missing, utilised. *2750, Area V (051 021)* (Acc. no. 526)
7. Light grey serrated blade. *4581, Area III (073 050)* (Acc. no. 527)
8. Light grey/white patinated blade shaft, retouched one side, other side utilised. *476, Area III (079 048)* (Acc. no. 528)
9. Light grey axe butt, polished. *505, Area III (074 045)* (Acc. no. 529)
10. White patinated leaf arrowhead, tip missing. S. Green 1980, type 3C:X. *171, Area III (081 059)* (Acc. no. 530)
11. Beige leaf arrowhead, unfinished. S. Green 1980, type 3B:O. *5046, Area X (080 186)* (Acc. no. 531)
12. Light grey/white patinated leaf arrowhead, tip missing. S. Green 1980, type 4B:L. *1378, Area IV (015 078)* (Acc. no. 532)
13. Golden brown leaf arrowhead, incomplete. *4865, Area IX (060 193)* (Acc. no. 533)
14. Light grey barbed and tang arrowhead, unfinished. *3700, Area VI (021 161)* (Acc. no. 534)
15. Beige transverse arrowhead, unfinished. *924, Area IV (019 072)* (Acc. no. 535)
16. Light grey fabricator/knife, heavily denticulated sides. *4824, Area VII (062 147)* (Acc. no. 536)
17. Light grey/white patinated piercer/point, complete. *704, Area I (090 071)* (Acc. no. 537)
18. Dark-grey point, retouched from two directions, projection broken. *4742, Area VII (072 135)* (Acc. no. 538)

19. Light grey/white patinated side scraper, cortex on right side, 40% worked, ?Mesolithic. *5045, Area X (078 184)* (Acc. no. 539)
20. Light grey/white patinated 'thumbnail' scraper, worked around surviving circumference and worn. Broken. Beaker type. *1952, Area V (019 038)* (Acc. no. 540)
21. Light grey/white patinated side scraper, cortex at left side, 35% worked, use wear, ?Neolithic/Bronze Age. *2990, Area II (053 087)* (Acc. no. 541)
22. Light grey/white patinated scraper, dorsal formed by flake intersection, 60% worked, worn edges. *3138, Area VI (020 111)* (Acc. no. 542)
23. Light grey scraper, ovoid, steeply retouched from deep dorsal. Worked around circumference except for spatulate base. *2335, Area V (023 025)* (Acc. no. 543)

THE POTTERY

by Jane Evans

Only 34 sherds of prehistoric pottery were recovered (390 g) of which eleven came from stratified deposits, all dating to the Roman period. The pottery was studied by Dr Ann Woodward who classified it by period and fabric, although the assemblage was too small for any meaningful conclusions to be drawn. The earlier material may derive from the adjacent prehistoric settlement site at Cannards Grave, where both Bronze Age and Middle Iron Age ceramics are reported (Birbeck 1997).

The earliest piece, probably dating to the Early to Middle Bronze Age, was an unstratified body sherd in a vesicular fabric with grog. Five sherds of probable Early Iron Age date were identified, one tempered with quartz and iron oxide, one in a shelly limestone fabric, and one tempered with sand. A body sherd with sparse quartz temper came from Building VIII (C1322) and a base sherd sparsely tempered with shell from Building IX (C5047). Two sherds of Middle Iron Age pottery, a body and a rim in a sand-tempered fabric, were found in Building VIII (C1327). The rim, which is similar to South Cadbury form JC2 (A. Woodward forthcoming), was the only diagnostic sherd recovered from an excavated context. A third, unstratified, Middle Iron Age sherd was in a coarse sand-tempered fabric. The remainder of the assemblage, 25 sherds, dated to the Late Iron Age and included two further diagnostic sherds, both unstratified; a sand-tempered rim similar to South Cadbury form JC3 (A. Woodward forthcoming), and a rim in a sand and limestone-tempered fabric paralleled by South Cadbury type JE4.2. The latest identifiable pieces were two body sherds tempered with grog, sand and quartz which were thought to be Late Iron Age/Romano-British.

3.3: VESSELS

THE ROMAN POTTERY

by Jane Evans with contributions by Brenda Dickinson (Samian), *Kay Hartley* (Mortaria Stamps), *Roger Tomlin* (Graffiti) *and David Williams* (Amphorae)

Introduction

Pottery at Fosse Lane provided an important element in dating and assessing the function of the site, and played a key part in spatial analysis based on finds distributions. Comparison with data collected from other sites in the South West allowed regional characteristics such as the degree of Romanization and the nature of distribution networks to be assessed.

Pottery was recovered from two distinct contexts. The majority came from first-definition levels directly below plough-soil, the finds from which were well located spatially, but were effectively unstratified. The second group was recovered from stratified deposits. Most of the pottery had suffered heavy surface damage, presumably as a result of the soil conditions. This

affected the survival of surface decoration, and the 'softness' of some fabrics may reflect post-depositional circumstances as much as firing. The stratified assemblage included more smaller and broken sherds than the plotted group, reflecting a higher level of recovery by this method.

Methodology

The pottery was recorded by context and/or plotted find number. No fabric series previously existed for the Shepton Mallet area so a series was devised providing a basis for further study. This was completed before the establishment of the National Roman Fabric Reference Collection and is, therefore, not cross-referenced. The majority of the assemblage comprised an overlapping range of sandy grey wares which often proved difficult to categorise.

Forms were recorded firstly by vessel class: flagons (F), beakers (BK), jars (J), cups (C), bowls (B), dishes (D), platters (P), mortaria (M), tankards (T), lids (L), and miscellaneous forms (MS) such as *patera* handles and spouts. An 'uncertain' group was also used. Jars represented a particularly broad category. The function of some could be relatively closely defined, for example large storage jars (JLS) or handmade cooking pots (JC). The majority, however, were only broadly classified as jars (J) or wide-mouthed jars (JW). Fragmentary rims were often given joint classifications such as jar/beaker or dish/bowl. Form type was recorded for rims, handles, bases and, where appropriate, body sherds. Other information recorded included decoration and comments relating to production (e.g. wasters, string marks on the base, or potters' stamps), use (e.g. sooting or residues), and re-use or repair (e.g. repair holes, lead rivets and counters). Cross-joins were noted where possible.

The assemblage was quantified by sherd count and weight, and by rim EVE, an estimated vessel equivalence based on totalling the percentage extant of rims (TABLE 1). The same data (diameters and percentages extant) were recorded for bases, but are not quantified in the tables. Pottery was selected for illustration as a form type series, presented below in broad fabric groups. Only the best example of each form is illustrated, but the catalogue lists other fabrics in which similar forms exist. Each catalogue description is followed by the fabric code, context, site location, and the Museum Accession number.

TABLE 1. ROMAN POTTERY: SUMMARY BY RECOVERY METHOD

Recovery Method	Qty	% Qty	Wt (g)	% Wt	Average wt (g)	Total rim %	% By rim EVE
EXCAVATED	11053	40	118425	35	10.7	13180	39
PLOTTED	16063	58	216137	63	13.4	20216	59
EXCAV. & PLOT	450	1	4961	1	11.0	469	1
UNSTRAT.	116	<1	1213	<1	10.5	298	1
TOTAL	***27682***		***340736***			***34163***	

The post-excavation research aims were:

- to establish a fabric and form-based typology for Roman pottery in use at the Fosse Lane settlement, with the potential for wider local application,
- to provide dating evidence for the excavated strata and for finds associated with first-definition horizons,
- to analyse information in the ceramic collection relevant to the function and status of individual structures, areas and the site as a whole,
- to illuminate patterns of rubbish disposal across the site and processes of site formation,
- to produce a database that could contribute towards the study of cultural and economic relations between sites in the region; in particular to compare and contrast the assemblage with BB1-dominated assemblages from sites to the south, and Severn Valley ware-dominated assemblages from sites to the north,
- to assess methods of recovery, recording and plotting, and their potential for future research.

TABLE 2 ROMAN POTTERY: SUMMARY BY AREA/BUILDING AND PERIOD

	Period	Qty	% Qty	Wt (g)	% Wt	Average wt (g)	Total rim %	% By rim EVE
AREA I	2	8	<0.1	83	<0.1	10	0	0
BUILDING I	4	86	0.7	1257	1.0	15	117	0.9
AREA I	5	4	<0.1	10	<0.1	2.5	6	<0.1
BUILDING I	5	406	3.6	5796	4.8	14	624	4.7
AREA I	6	7	<0.1	67	<0.1	10	4	<0.1
TOTAL A/BI		*511*	*4.6*	*7213*	*6.0*	*14*	*751*	*5.6*
AREA II	4	115	1	703	0.6	6	72	0.5
TOTAL AII		*115*	*1*	*703*	*0.6*	*6*	*72*	*0.5*
AREA III	1	5	<0.1	102	<0.1	20	7	<0.1
AREA III	2	75	0.7	1456	1.2	19	259	1.9
AREA III	3	1	<0.1	4	<0.1	4	0	0
AREA III	4	70	0.6	1106	0.9	16	148	1.1
AREA III	5	636	5.7	5387	4.4	8	587	4.4
TOTAL AIII		*787*	*7.0*	*8055*	*6.7*	*10*	*1001*	*7.5*
AREA IV	4	287	2.6	3571	2.9	12	466	3.5
AREA IV	5	324	2.9	4013	3.3	12	438	3.3
TOTAL AIV		*611*	*5.4*	*7584*	*6.3*	*12*	*904*	*6.8*
AREA V	0	51	0.5	870	0.7	17	93	0.7
AREA V	2	173	1.5	1660	1.4	10	257	1.9
AREA V	3	214	1.9	1895	1.6	9	246	1.8
AREA V	4	152	1.4	1402	1.2	9	135	1.0
AREA V	5	13	0.1	40	<0.1	3	0	0
TOTAL AV		*603*	*5.4*	*5867*	*4.9*	*10*	*731*	*5.5*
AREA VI	0	108	1.0	1212	1.0	11	140	1.0
AREA VI	1	11	<0.1	85	<0.1	8	34	0.3
AREA VI	2	12	0.1	121	0.1	10	13	<0.1
AREA VI	3	47	0.4	512	0.4	11	68	0.5
AREA VI	4	133	1.2	1694	1.4	13	275	2.0
AREA VI	5	10	<0.1	70	<0.1	7	8	<0.1
TOTAL AVI		*321*	*2.9*	*3694*	*3.0*	*11*	*538*	*4.0*
AREA VII	0	24	0.2	220	0.2	9	26	0.2
AREA VII	1	395	3.5	5131	4.2	13	481	3.6
AREA VII	2	28	0.2	199	0.2	7	37	0.3
BUILDING VII	2	1835	16.4	25712	21.3	14	1922	14.4
AREA VII	3	253	2.3	3103	2.6	12	348	2.6
AREA VII	4	498	4.4	5426	<0.1	11	789	5.9
TOTAL A/BVII		*3033*	*27.0*	*39791*	*32.9*	*13*	*3603*	*27.0*
AREA VIII	2	41	0.4	280	0.2	7	30	0.2
AREA VIII	3	129	1.2	846	0.7	7	110	0.8
BUILDINGVIII	4	846	7.5	9279	7.7	11	845	6.3
BUILDINGVIII	5	383	3.4	4058	3.4	11	381	2.9
AREA VIII	6	710	6.3	7139	5.9	10	722	5.4
TOTAL A/BVIII		*2109*	*18.8*	*21602*	*17.9*	*10*	*2088*	*15.6*
AREA IX	1	10	<0.1	81	<0.1	8	18	0.1
AREA IX	2	870	7.8	6274	5.2	7	894	6.7
AREA IX	3	42	0.4	471	0.4	11	95	0.7
BUILDING IX	3	1420	12.7	12424	10.3	9	1890	14.1
BUILDING IX	4	67	0.6	1169	1.0	17	133	1.0
AREA IX	5	282	2.5	1877	1.6	7	302	2.2
AREA IX	6	208	1.8	2500	2.1	12	147	1.1
TOTAL A/BIX		*2899*	*25.9*	*24796*	*20.5*	*9*	*3479*	*26.0*
BUILDING X	2	225	2.0	1622	1.3	7	198	1.5
TOTAL BX	*2*	*225*	*2.0*	*1622*	*1.3*	*7*	*198*	*1.5*
TOTAL POTTERY		**11214**		**120927**		**10.8**	**13365**	

A full description of the methods used and a copy of the pottery database are with the site archive.

Sources of pottery

The fabrics were grouped by source as follows:

Local/regional wares — wares most probably produced locally at Shepton Mallet, but not easily distinguished petrologically from wares produced elsewhere in the region (SANDRF, SANDBRF, SANDRM, SANDMC, SANDRC, BBC, SANDRL, SANDRGC, SVOXGR, SVOXG,

SVOXGL, SVOXGRL, SVOXORG, SVOXGM, SANDOXF, SANDOX, SANDOXCCW, SAND-OXC, SANDOXG, MISCCR)

Traded wares — non-local British wares produced by major industries and widely traded (BB1, SAVNAK, NFE, NFO, NFM, OXFW, OXFCC, OXFCCR, OXFCCW, MANCH, VERM, CAERLM)

Imported wares — wares produced outside Britain (RHEN, SAMSG, SAMCG, SAMEG, DR20, GAUL4, S/SPAN, MORTC1/2)

Wares of uncertain source — usually pottery too fragmentary for detailed classification, but occasionally more distinctive wares from as yet unidentified sources (MISCRF, MISCRM, MISCRC, CREAMF, CREAM, CREAMC, SANDBL, OOLIM).

Local/regional wares

Grey wares

SANDRF Fine micaceous sandy ware, reduced
Soft to medium, generally light brownish grey (Munsell 2.5Y 6/2 to 10YR 5/1) with a light-grey core (Munsell 10YR 6/1). Inclusions of fine silver mica, and, in varying quantities, fine black sand <*c.* 0.1 mm and fine white sand *c.* 0.05 mm. May include two fabrics, one predominantly with abundant black sand similar to Worberry Gate fabric R11 (J. Evans forthcoming) and Bath fabric 10.12 (Green and Young 1985); and one with predominantly white sand. Less common are burnt organic inclusions and sparse fragments of ironstone

SANDBRF Fine sandy ware, reduced black
Similar to SANDRF with predominantly white sand, distinguished by the colour which is very dark greyish brown throughout (Munsell 2.5Y 3/2) with black surfaces (Munsell 10YR 3/1 to 5Y2.5/1)

SANDRM Medium sandy ware, reduced blue grey
Soft to medium with a more abrasive feel than SANDRF, characteristically grey throughout (Munsell 2.5Y N5/0 to 5Y 6/1) varying to light olive grey (Munsell 5Y 6/2). Micaceous with moderate to abundant inclusions of sub-angular white/clear and black quartz <*c.* 0.2 mm and occasionally limestone <*c.* 0.5 mm and red/brown ironstone

SANDMC Medium to coarse 'pimply' micaceous ware, brown/buff to grey
Soft to medium micaceous fabric. Colour varies greatly, far more so than for other grey-ware fabrics, ranging from grey (Munsell 10YR 5/1) to, more commonly, pale brown (Munsell 10YR 6/3), sometimes with dark-grey surfaces (Munsell 10YR 4/1) or a grey core. Ill-sorted inclusions giving the characteristically 'pimply' surface; abundant sub-angular clear/white and black sand <*c.* 0.5 mm, and sparse to moderate sub-angular clear/white sand <*c.* 2 mm. Similar to Worberry Gate fabric R5 (J. Evans forthcoming) and Bath fabric 10.13 (Green and Young 1985)

SANDRC Coarse sandy ware, reduced
Soft to medium, characteristically with a lighter grey core (Munsell 7.5YR N6/0), surfaces vary from grey (Munsell 5Y 5/1) to pale brown (Munsell 10YR 7/3). Micaceous with abundant inclusions of clear/white and black sand <*c.* 1 mm

BBC Coarse sandy ware imitating BB1, reduced
Generally very hard, characteristically with dark-grey surfaces (Munsell 2.5Y N3/0), brown margins (Munsell 7.5YR 5/4) and a greyish-brown core (Munsell 2.5Y 4/2). Unlike BB1, vessels in this ware appear to be wheelmade. Includes abundant sub-angular white/clear sand <*c.* 0.2 mm, with less common fragments up to 1 mm; and occasionally limestone <*c.* 1 mm. Similar to Worberry Gate fabric R4 (J. Evans forthcoming)

SANDRL Limestone-tempered sandy ware, reduced
Hard, grey (Munsell 2.5Y 5/0) with moderate inclusions of sub-angular clear/white sand and occasional black sand, both <0.1 mm, and sparse ironstone

SANDRGC reduced sandy ware with grog
Very hard, reduced throughout (Munsell 10YR 5/1). For inclusions see SANDOXG below

Discussion

The grey wares, which accounted for 42% of the assemblage by count and 37% by weight (TABLE 3), were classified, by the coarseness and frequency of inclusions, into the fabrics defined above. Although characteristic examples can be described, the fabrics in fact overlapped considerably and inevitably some sherds will have been misclassified. More detailed analysis might have resulted in further sub-division, but would not have been worthwhile. Analysis of forms by fabric indicated that similar forms were sometimes produced in quite distinct fabrics, for example the Severn Valley ware tankard form was also produced in grey ware. Some obvious functional relationships can be seen between fabric and form; the coarser sandy fabrics tended to be used either for bulky vessels requiring coarser temper to assist with firing, or for vessels intended for use over a direct heat, as with jars/cook pots copying BB1.

The problems of identifying sources for grey wares have been discussed elsewhere (Fulford 1975; Young 1977). A local source is most likely, however, for the Fosse Lane collection. Romano-British kilns are known at Shepton Mallet (Scarth 1865–6), and a few seconds or wasters in late forms were noted at Fosse Lane (FIG. 34, JC4.22, J4.31 and J5.41).

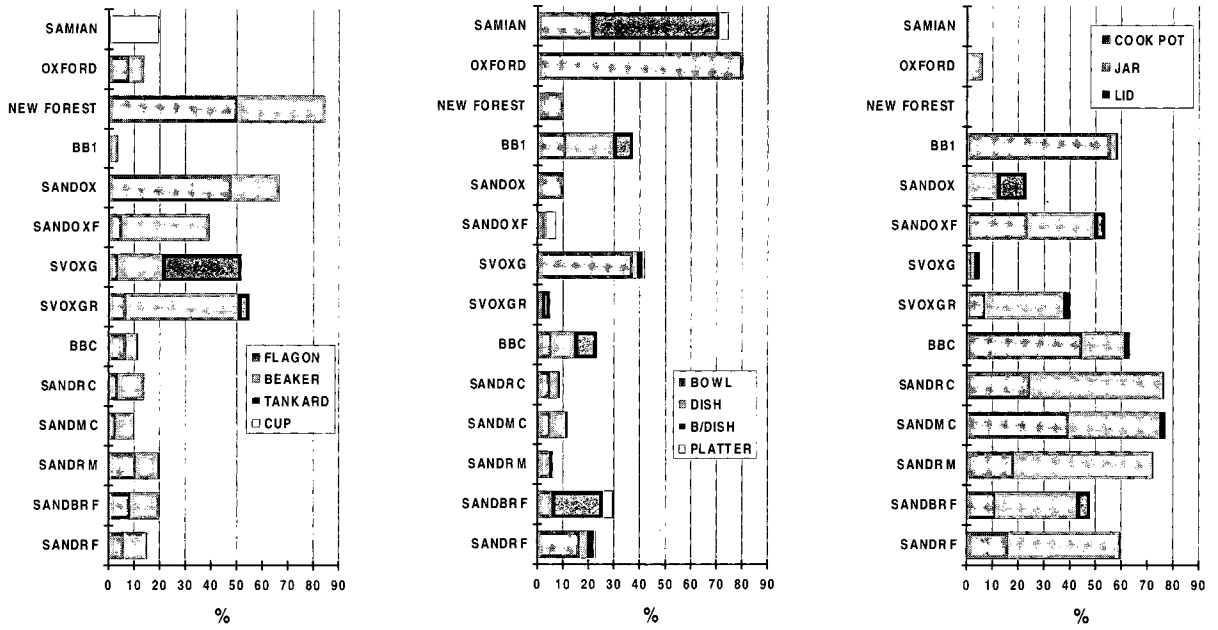


FIG. 33a Roman pottery: occurrence of vessel classes by fabric (% rim EVE); excluding mortaria

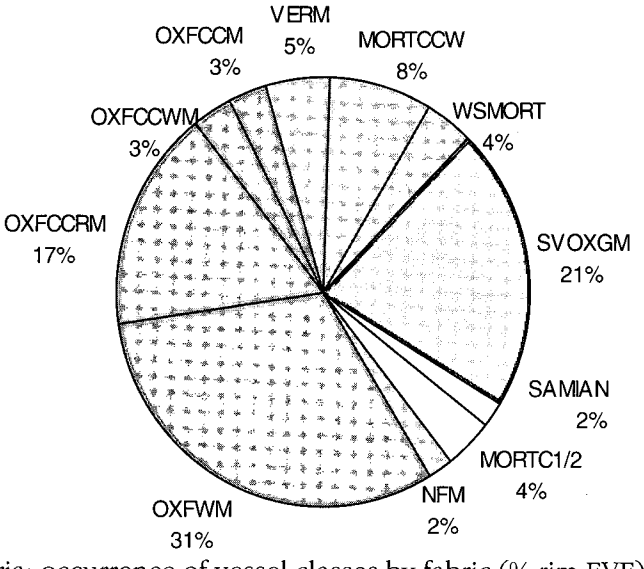


FIG. 33b Roman mortaria: occurrence of vessel classes by fabric (% rim EVE); total rims extant 547

TABLE 3 ROMAN POTTERY: SUMMARY BY FABRIC/SOURCE

Fabric name	Qty	% Qty	Wt (g)	% Wt	Rim EVE	% By rim EVE	Average wt (g)
SANDRF	2975	11	25062	7	4085	12	8
SANDBRF	121	<1	1020	<1	265	<1	8
SANDRM	2842	10	33418	10	2692	8	12
SANDMC	1268	5	13906	4	1227	4	11
SANDRC	1772	6	24534	7	1962	6	14
BBC	2420	9	27571	8	3827	11	11
SVOXGR	179	<1	1385	<1	329	1	8
SANDRL	45	<1	477	<1	48	<1	11
SANDRGC	8	<1	157	<1	15	<1	20
TOTAL REDUCED WARES	*11630*	*42*	*127530*	*37*	*14450*	*42*	*11*
SVOXG	1104	4	7838	2	1621	5	7
SVOXORG	2	<1	72	<1	13	<1	36
SVOXGM	81	<1	1897	<1	118	<1	23
TOTAL S.V.WARE	*1187*	*4*	*9807*	*3*	*1752*	*5*	*8*
SANDOXF	342	1	3510	1	349	1	10
SANDOX	57	<1	316	<1	69	<1	6
SANDOXCCW	95	<1	765	<1	51	<1	8
SANDOXC	110	<1	1643	<1	54	<1	15
SANDOXG	83	<1	1737	<1	34	<1	21
MISCCR	268	1	1910	<1	653	2	7
TOTAL OXIDISED WARES	*955*	*4*	*9881*	*3*	*1210*	*4*	*10*
TOTAL REGIONAL WARES	**13772**	**50**	**147218**	**43**	**17412**	**51**	**11**
BB1	10262	37	106208	30	12721	37	10
SAVNAK	295	1	9003	3	91	<1	31
NFE	398	1	3986	1	796	2	10
NFO	41	<1	339	<1	55	<1	8
NFM	2	<1	42	<1	10	<1	21
TOTAL NEW FOREST WARE	*441*	*2*	*4367*	*1*	*861*	*3*	*10*
OXFW	48	<1	1581	<1	174	<1	33
OXFCC	227	1	1675	<1	146	<1	7
OXFCCR	308	1	3501	1	504	1	11
OXFCCW	32	<1	690	<1	23	<1	22
TOTAL OXFORD WARE	*615*	*2*	*7447*	*2*	*847*	*2*	*12*
SHELL	1	<1	25	<1	8.0	<1	25
MANCH	1	<1	48	<1	0	<1	48
VERM	11	<1	351	<1	27	<1	32
CAERLM	6	<1	249	<1	0	<1	41
MORTCCW	13	<1	493	<1	45	<1	38
WSMORT	7	<1	209	<1	20	<1	30
TOTAL TRADED WARES	**11652**	**42**	**128400**	**36**	**14620**	**43**	**11**
MISCRF	118	<1	801	<1	39	<1	7
MISCRM	102	<1	522	<1	79	<1	5
MISCRC	40	<1	226	<1	0	<1	5
CREAMF	1	<1	3	<1	13	<1	3
CREAM	32	<1	202	<1	37	<1	6
CREAMC	6	<1	30	<1	0	<1	5
SANDBL	35	<1	279	1	56	<1	8
OOLIM	9	<1	60	<1	12	<1	7
TOTAL UNKNOWN SOURCE	**343**	**1**	**2123**	**1**	**236**	**1**	**6**
RHEN	15	<1	8	<1	0	<1	<1
SAMSG	80	<1	569	<1	155	<1	7
SAMCG	693	3	6164	2	1464	4	9
SAMEG	88	<1	1081	<1	144	<1	12
SAM	13	<1	147	<1	24	<1	11
TOTAL SAMIAN	*874*	*3*	*7961*	*2*	*1787*	*5*	*9*
DR20	1029	4	58408	17	0	0.00	55
GAUL4	12	<1	567	<1	0	0.00	55
S/SPAN	30	<1	717	<1	0	0.00	20
MISC.AMPH.	46	<1	2180	<1	0	0.00	46
TOTAL AMPH.	*1117*	*4*	*61872*	*18*	*0*	*0*	*55*
MORTC1/2	4	<1	533	<1	108	<1	133
TOTAL IMPORTED WARES	**2010**	**7**	**70374**	**20**	**1895**	**5**	*35*
TOTAL ROMAN POTTERY	**27777**	**100**	**348115**	**100**	**34163**	**100**	*13*

The two fine, micaceous grey wares shared a number of the same forms and were distinguished only by firing. The standard fabric (SANDRF) was the most common grey ware represented (TABLE 3) occurring in a wide range of forms, while the blacker variant (SANDBRF) occurred in very small quantities and a much narrower range of forms. Both are more common in early periods (TABLE 4, FIG. 45). The forms represented, particularly in SANDBRF, are also characteristically early, a number being derived from Gallo-Belgic types. Tablewares were the main product (FIG. 33a), although liquid containers such as flagons and beakers were poorly represented. The most common class comprised wide-mouthed jars, particularly types JW2.22 and JW2.23 (FIG. 35) the former occurring in both fabrics and the latter being more common in SANDBRF. A variety of shallow bowls or platters was also produced (FIG. 36, B14.11, B18.11; FIG. 37, D7.13, D7.21, D9.11, D9.22 and P1.11), the latter together with B1.31 (FIG. 36) being two of the most common forms produced in SANDBRF. Other forms included: lid-seated jars (FIG. 36, J16.21) and bowls (FIG. 36, B1.21, B2.11, B2.21 and B16.41); bowls similar to Exeter military types (FIG. 36, B22.11); and London ware-type bowls (FIG. 36, B20.11 and B21.11).

The SANDRF assemblage also included a number of London ware decorative motifs, combining inscribed arcs, straight and wavy lines. BB1 copies in SANDBRF included early jar types similar to JC3.11 (FIG. 41) and, surprisingly, a much later type similar to JC4.11 (FIG. 41), beakers similar to second-century type BK3.91 (FIG. 41) but no bowls or dishes. One sherd had acute cross-hatch burnish. Early jar types were the most common BB1 copies in SANDRF (FIG. 34, JC3.42; *cf.* FIG. 41, JC3.22), although more upright and later splayed types were also noted (FIG. 41, JC2.11 and JC4.11 respectively). A number of sherds had acute cross-hatch burnish and a few right-angle cross hatch, but none of the later obtuse cross hatch. BB1-type bowls and dishes were also produced, some with incipient flanges (FIG. 41, B23.11) but mainly with flat rims (FIG. 36, B22.2; FIG. 37, D1.1). The only rusticated sherd recovered was in this ware. Rusticated wares are not generally common in assemblages in south-western Britain, none for example was noted at Ilchester (Leach 1982).

Like the fine micaceous fabric, the 'pimply' variant (SANDMC) was most common in Period 2 (TABLE 4; FIG. 45). The forms were generally grey-ware types although the firing was variable and sherds could be partly oxidised. Jars were by far the main vessel class (FIG. 33a). Copies of BB1 cook pots were far more common than storage jars, the latter having rims designed for tie-on covers (FIG. 35, J14.13). Amongst the cook pots early types prevailed, in particular type JC3.2 (FIG. 41) followed by type JC3.4 (FIG. 34), but only a few of the later JC4.1 and JC4.2 types were noted (FIG. 41). Apart from a single sherd with obtuse cross hatch all the burnish was acute. Flat-rimmed and plain-rimmed BB1-type dishes were also produced (FIG. 37, D1.1, D4.1) and a single, late, flanged bowl type (FIG. 36, B24.1), but none with incipient flanges. Other forms included fragmentary wide-mouthed jars and even less common beakers and flagons.

The second most common grey ware was the blue-grey, medium-grained fabric (SANDRM), present from Period 1 but increasingly common in Periods 4 and 5 (TABLE 4; FIG. 45). The longevity of this fabric is reflected in the wide range of forms produced; from characteristically early types (FIG. 36, J16.1, B1.21, B15.11, B16.21, B20.11, B20.21 and B21.11; FIG. 37, P2.11) to classically later types including B24.1-type bowls (FIG. 36), tankards (FIG. 37, T3.11) and hook-rimmed jars (FIG. 34, J5.31, J5.41). Jars were by far the most common vessel class, comprising mainly storage jars with rims designed to take lids or tie-on covers (FIG. 34, J1.12, J1.41, J4.31, J5.3, J5.41, J5.51, J5.52, J6.11 and J6.21), including some very large types (FIG. 34, J12.22; FIG. 35, J14.31). BB1-type jars were also common, the chronological range again reflecting the long life of the fabric. Later types were prevalent (FIG. 34, JC3.4; FIG. 41, JC4.1, JC4.2), although earlier types occurred in small quantities (FIG. 41, JC2.1, JC3.1 and JC3.2). Acute cross-hatch burnish was more common than the later obtuse, but no sherds with intermediate right-angled cross hatch were noted. A range of BB1 dishes was produced, with flat and plain rims (FIG. 37, D1.1, D4.1) and bowls with flanged rims (FIG. 36, B24.1), but

TABLE 4 ROMAN POTTERY: SUMMARY OF FABRIC BY PERIOD

	P1				P2				P3				P4				P5				P6			
Fabric Name	**Qty**	**Wt (g)**	**% Rim**	**Avg wt**	**Qty**	**Wt (g)**	**% Rim**	**Avg wt**	**Qty**	**Wt (g)**	**% Rim**	**Avg wt**	**Qty**	**Wt (g)**	**% Rim**	**Avg wt**	**Qty**	**Wt (g)**	**% Rim**	**Avg wt**	**Qty**	**Wt (g)**	**% Rim**	**Avg wt**
SANDRF	91	807	151	9	524	3120	569	6	265	2629	539	10	183	1669	329	9	170	1101	194	6	46	421	28	9
SANDBRF	17	160	21	9	16	140	52	9	0	0	0	0	2	11	5	6	1	1	0	1	1	4	0	4
SANDRM	26	245	65	9	279	2191	356	8	160	1395	137	9	311	3760	306	12	256	2669	162	10	147	1764	113	12
SANDMC	4	29	0	7	370	3372	268	9	151	1609	165	11	61	629	71	10	92	964	91	10	46	466	52	10
SANDRC	116	2622	11	23	224	2186	239	10	115	869	93	8	100	1037	73	10	66	798	78	12	13	216	27	17
BBC	9	24	0	3	104	1053	95	10	112	1043	128	9	217	2505	335	12	333	4109	537	12	132	1216	174	9
SVOXGR	1	4	0	4	39	300	74	8	47	218	32	5	3	13	0	4	13	79	13	6	2	14	0	7
SANDRL	1	21	7	21	0	0	0	0	1	9	0	9	0	0	0	0	6	64	0	11	11	72	21	7
SANDRGC	0	0	0	0	1	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SVOXG	20	153	47	8	288	2073	391	7	219	1393	381	6	49	434	36	9	76	385	92	5	14	61	10	4
SVOXORG	0	0	0	0	0	0	0	0	0	0	0	0	1	63	13	63	1	9	0	9	0	0	0	0
SVOXGM	0	0	0	0	4	149	10	37	0	0	0	0	3	49	7	16	3	132	12	44	0	0	0	0
SANDOXF	2	3	0	2	13	54	0	4	6	60	19	10	10	79	44	8	10	85	5	9	3	9	3	3
SANDOX	0	0	0	0	3	11	0	4	0	0	0	0	2	15	0	8	4	14	7	4	1	2	0	2
SANDOXCCW	0	0	0	0	16	177	0	11	15	103	0	7	16	102	0	6	6	11	0	2	2	12	0	6
SANDOXC	0	0	0	0	5	59	7	12	4	54	0	14	5	79	7	16	17	441	0	26	2	14	0	7
SANDOXG	0	0	0	0	5	188	0	38	1	8	0	8	1	24	0	24	2	33	0	17	1	12	0	12
MISCCR	1	6	9	6	67	463	108	7	37	223	43	6	13	176	24	14	10	117	35	12	5	23	0	5
TOTAL REGIONAL	**288**	**4074**	**311**	**14**	**1958**	**15541**	**2169**	**8**	**1133**	**9613**	**1537**	**8**	**977**	**10645**	**1250**	**11**	**1066**	**11012**	**1226**	**10**	**426**	**4306**	**428**	**10**
BB1	100	923	166	9	912	8821	1029	10	797	6570	860	8	1005	11206	1215	11	845	7847	888	9	416	4272	348	10
SAVNAK	13	301	12	23	124	4407	13	36	21	473	0	23	10	283	0	28	12	664	18	55	5	120	4	24
NFE	0	0	0	0	8	38	0	5	1	28	0	28	72	840	248	12	29	489	3	17	16	92	33	6
NFO	1	9	0	9	0	0	0	0	0	0	0	0	5	65	18	13	2	10	0	5	6	61	0	10
NFM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	23	5	23
OXFW	0	0	0	0	0	0	0	0	1	142	9	142	4	121	11	30	5	128	14	26	0	0	0	0
OXFCC	0	0	0	0	10	64	0	6	4	18	0	5	14	181	0	13	12	44	8	4	13	65	5	5
OXFCCR	0	0	0	0	8	147	0	18	5	45	8	9	30	300	61	10	46	688	101	15	31	328	26	11
OXFCCW	0	0	0	0	0	0	0	18	0	0	0	0	2	8	0	4	1	49	10	49	7	212	0	30
SHELL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MANCH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VERM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAERLM	0	0	0	0	2	196	0	98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MORTCCW	0	0	0	0	0	0	0	0	1	32	0	32	0	0	0	0	0	0	0	0	1	27	0	27
WSMORT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	26	12	26	0	0	0	0
TOTAL TRADED	**114**	**1233**	**178**	**11**	**1064**	**13673**	**1042**	**13**	**830**	**7308**	**877**	**9**	**1142**	**13004**	**1553**	**1**	**953**	**9945**	**1054**	**10**	**496**	**5200**	**421**	**10**
MISCR	5	26	13	5	35	231	21	7	12	57	0	5	36	203	10	6	32	253	0	8	14	88	0	6
CREAM	2	10	0	5	8	37	13	5	2	8	0	4	7	21	10	3	7	60	18	9	1	5	0	5
SANDBL	0	0	0	0	0	0	0	0	7	71	0	10	1	6	0	6	2	21	0	11	4	25	3	6
OOLIM	0	0	0	0	0	0	0	0	1	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL UNKNOWN SOURCE	**7**	**36**	**13**	**5**	**43**	**268**	**34**	**6**	**22**	**139**	**0**	**6**	**44**	**230**	**20**	**3**	**41**	**334**	**18**	**8**	**19**	**118**	**3**	**6**
RHEN	0	0	0	0	0	0	0	0	1	2	0	2	0	0	0	0	1	1	0	1	0	0	0	0
SAMSG	7	36	11	5	16	145	32	9	8	48	8	6	3	26	11	9	2	6	10	3	1	3	0	3
SAMCG	4	11	27	3	117	866	326	9	115	1797	349	16	61	605	123	10	26	131	49	5	5	45	18	9
SAMEG	0	0	0	0	1	7	7	7	2	6	0	3	9	139	9	15	3	17	12	6	3	30	10	10
SAM.MISC.	0	0	0	0	0	0	0	0	0	0	0	0	5	57	6	11	1	3	0	3	0	0	0	0
DR20	1	9	0	9	64	6869	0	107	6	302	0	50	7	504	0	72	5	78	0	16	3	22	0	7
GAUL4	0	0	0	0	0	0	0	0	0	0	0	0	1	8	0	8	1	51	0	51	0	0	0	0
S/SPAN	0	0	0	0	0	0	0	0	1	23	0	23	0	0	0	0	0	0	0	0	0	0	0	0
MISC.AMPH	0	0	0	0	4	38	0	10	1	10	0	10	3	29	0	10	0	0	0	0	4	91	0	23
MORTC1/2	0	0	0	0	0	0	0	0	1	76	7	76	2	360	8	180	0	0	0	0	0	0	0	0
TOTAL IMPORTED	**12**	**56**	**38**	**5**	**202**	**7925**	**365**	**39**	**135**	**2264**	**364**	**17**	**91**	**1728**	**157**	**19**	**39**	**287**	**71**	**7**	**16**	**191**	**28**	**12**
TOTAL POTTERY	**421**	**5399**	**540**	**13**	**3267**	**37407**	**3610**	**11**	**2120**	**19324**	**2778**	**9**	**2254**	**25607**	**3129**	**11**	**2099**	**21578**	**2369**	**10**	**957**	**9815**	**880**	**10**

none with incipient flanges. Flagons were relatively common, generally pulley-rimmed (FIG. 34, F5.31), in particular cup-rimmed type F5.11 (FIG. 34). Less common were wide-mouthed jar types JW3.2 and JW4.31 (FIG. 35). A more unusual jar or beaker was represented by a single body sherd decorated with a face (FIG. 37, MS3.11), which was associated with a Period 5 human burial in Area IV (HB 9).

The coarser sandy fabric (SANDRC) was also used predominantly for storage jars and BB1 copy jars/cook pots, although a wide range of other forms was produced (FIG. 33a). This was the most common fabric in the small Period 1 assemblage, after which it continued in use, but was never particularly common (TABLE 4; FIG. 45). Storage jars again usually had rims suitable for lids (FIG. 34, J1.32) or tie-on covers (FIG. 34, J5.12, J5.21; FIG. 35, J14.21), and some were similar to Savernake types (FIG. 34, J8.21, J9.12). BB1 copy jars JC3.1 and JC4.1 (FIG. 41) were the most common forms, earlier and later types occurring in much smaller quantities (FIG. 41, JC2.1, JC3.1 and JC4.1, JC4.2 respectively). Only acute cross-hatch burnish was noted. Some BB1 flat-rimmed D1.1 dishes were copied (FIG. 37) but flanged-rim B24.1 bowls were slightly more common (FIG. 36). Beakers (FIG. 34, BK3.21, BK3.31) were proportionately more common in this fabric than they were in any of the finer grey wares.

The final main grey-ware fabric (BBC) was used predominantly for BB1 copies. It occurred in small quantities in Periods 1 and 2 growing increasingly common subsequently, paralleling the rising use of BB1 (TABLE 4; FIG. 45). Jars were particularly common (FIG. 34, JC3.4; FIG. 41, JC3.2, JC4.1) although only a few of the earliest and latest BB1 types were noted (FIG. 41, JC2.1, JC4.2). Obtuse cross-hatch burnish was slightly more common than acute, and only two sherds with right-angled cross hatch were recorded. Flange-rimmed bowls (FIG. 36, B24.1) were by far the most common, followed by plain or slightly bead-rimmed dishes (FIG. 37, D4.1; FIG. 41, D5.1). Very few early flat-rimmed dishes (FIG. 37, D1.1) were noted and only one bowl with an incipient flange rim (FIG. 41, B23.3). A variety of other forms was represented in small quantities, including bowls (FIG. 36, B4.21), flagons (FIG. 34, F6.32) and wide-mouthed jars (FIG. 35, JW4.21). Amongst the latter was a near-complete vessel with distinct decoration (FIG. 35, JW4.11), which had been used as a cremation urn (HB 45).

The limestone-tempered sandy ware (SANDRL), represented by a jar with an out-curving rim (FIG. 34, J10.31) and a large bowl (FIG. 36, B5.11), occurred in very small quantities, as did the grog-tempered ware (SANDRGC) represented by a large, crudely made jar (FIG. 35, J13.11) and a storage jar with a heavy beaded rim (FIG. 34, J8.26). The latter is the reduced variant of fabric SANDOXG discussed below.

Catalogue (FIG. 34)

Flagons (F)

Flagons with small flange

F2.41 Flagon with near upright rim and small flange, decorated with vertical burnishing on the neck. BBC *2350, Area V (023 018)* (Acc. no. 271)

Pulley-rimmed flagons

F5.11 Cup-rimmed flagon with a deliberately blackened external surface and vertical burnished decoration. SANDRF (also in SANDMC, SANDRC, SANDRM), *C1143, Area IV, Period 4* (Acc. no. 629)

F5.31 SANDRM, *1728, Area IV (007 068)* (Acc. no. 411)

Miscellaneous flagons

F6.31 Slightly squared beaded rim. SANDRM (also in BBC, SANDRF), *3246, Area VI (067 107)* (Acc. no. 630)

F6.32 Flattened, near triangular rim. SANDRM, *3860, Area IX (067 178)* (Acc. no. 631)

Flagons or small jars

F8.21 Globular jar or flagon with heavily beaded rim and short neck. BBC, *857, Area IV (020 074)*

F8.31 Shallow lid-seat rim. SANDMC, *4649, Area III (084 046)* (Acc. no. 632)

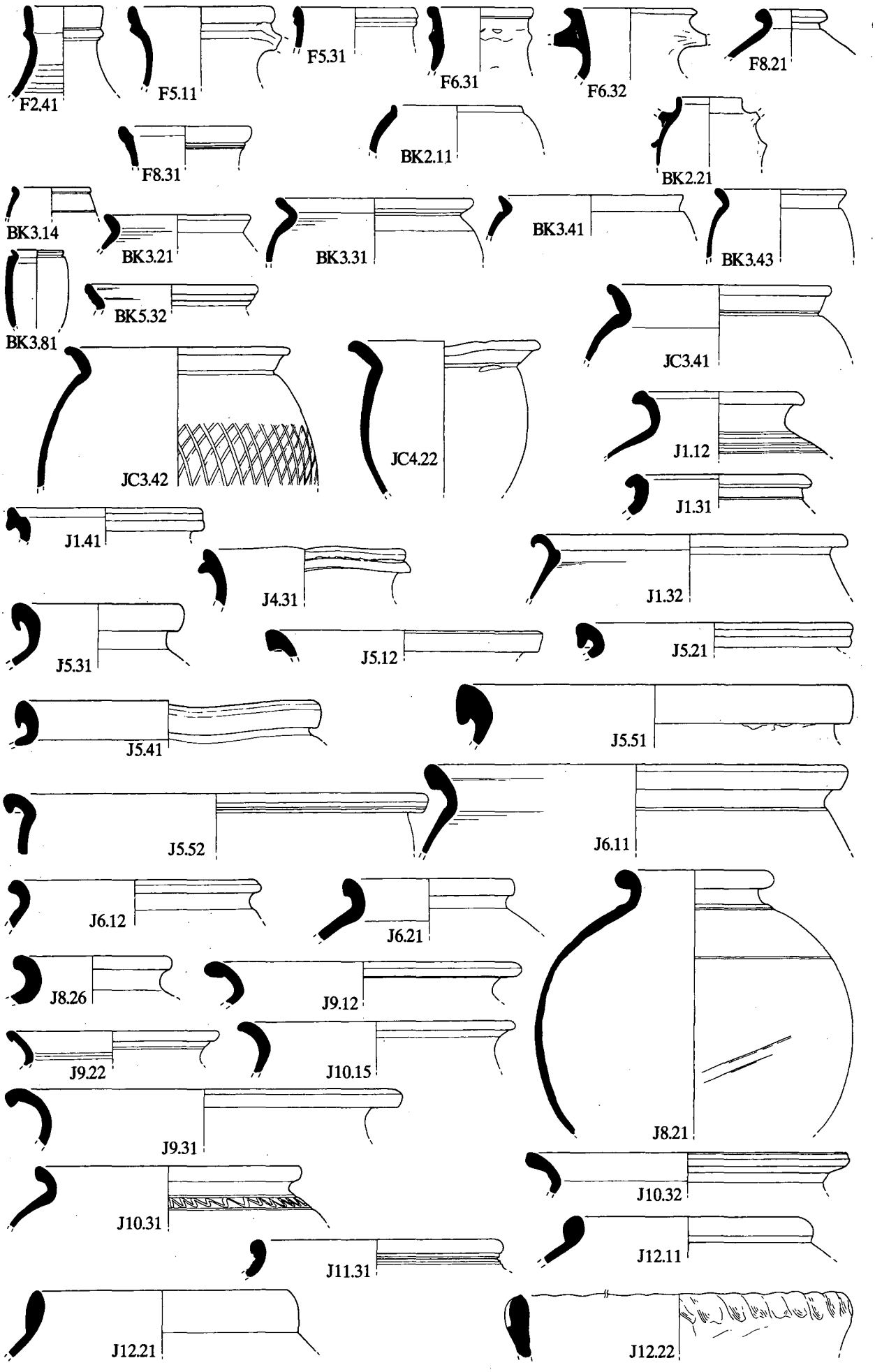


FIG. 34 Roman pottery: the grey wares; flagons, beakers and jars; scale 1:4

Beakers (BK)

Globular beakers
BK2.21 Beaker with upright rim and handle. SANDRM, *C6017, Building IX, Period 3* (Acc. no. 277)

Bag-shaped beakers
BK3.21 SANDRC (also in BBC, SANDOXF, SANDRM), *C1002, Trench E* (Acc. no. 405)
BK3.31 With slightly cupped rim. SANDRC (also in SANDRF), *144, Area I (086 071)* (Acc. no. 404)
BK3.41 Thickened rim. SANDRF, *C1517, Building VII* (Acc. no. 281)
BK3.43 SANDRF (also in SANDRC, SANDRM and BBC), *C1003 Trench E* (Acc. no. 379)
BK3.81 Barrel-shaped or pear-shaped beakers with short everted rims and pronounced shoulders. SANDRF (also in BB1, SANDRM), *2586, Area V (036 032)* (Acc. no. 286)

Miscellaneous beakers
BK5.32 Grooved everted rim. SANDBRF, *1400, Area IV (013 080)* (Acc. no. 395)

Jars (JC, J, JW, JLS)

Jars with increasingly splayed rims and a marked change of angle at the base of the neck
JC3.41 SANDMC, *C1581, Building VIII, Period 4* (Acc. no. 318)
JC3.42 With acute cross-hatch burnish. SANDMC (also in BB1, BBC, SANDRF, SANDRC, SANDRM, SANDOX), *C6017, Building IX, Period 3* (Acc. no. 319)

Jars of narrow girth with markedly splayed rims
JC4.22 SANDMC, *C1581, Building VIII, Period 4* (Acc. no. 321)

Everted lid-seated rims
J1.12 Near triangular rim, similar to vessel 40 from Lamyatt Beacon (Leech 1986, fig. 71) and Ilchester form 186 in local grey-ware fabric Gi (Leach 1982, fig. 71). SANDRM, *C6033, Building IX, Period 3* (Acc. no. 633)

Hooked lid-seated rims
J1.31 SANDRF, C1371, *Building VII, Period 4* (Acc. no. 289)
J1.32 SANDRC, 5447, *Area IX (069 196)* (Acc. no. 394)

Pulley lid-seated rims
J1.41 Jar similar to form 339 from a context at Camerton dated A.D. 150–200 (Wedlake 1958, fig. 41). SANDRM, *970, Area V (073 029)* (Acc. no. 295)

Everted pulley rim
J4.31 Pronounced pulley rim, waster. SANDRM, *5478, Area IX (076 200)* (Acc. no. 393)

Hooked-rim jars
J5.12 Slightly undercut hook-rimmed jar, broadly similar to Ilchester forms 199 and 206 in local grey fabric Gi (Leach 1982, fig. 71). SANDRC (also in SANDRF, SANDRM, SANDMC, BBC, SANDOXC), *2827, Area V (050 027)* (Acc. no. 391)
J5.21 Markedly undercut sub-pulley rim. SANDRC, *1111, Area III (074 047)* (Acc. no. 403)
J5.31 Sharply curved-under hooked rim, medium to short neck. SANDRF, *3477, F102/HB 9, Area IV, Period 5* (Acc. no. 291)
J5.41 Sharply curved-under, pointed hooked rim, with short neck and medium to wide mouth, similar to Ilchester form 200 in local grey-ware fabric Gi (Leach 1982, fig. 71) and Camerton forms 267 and 8, from levels dated A.D. 300–380 and A.D. 180–350 respectively (Wedlake 1958, fig. 39). Waster. SANDRM (also in SANDRF, SANDRC), *C6026, Building IX, Period 3* (Acc. no. 292)
J5.51 Heavy hooked rim. SANDRM, *C1029, Area III, Period 1* (Acc. no. 294)
J5.52 Heavy hooked rim. SANDRF, *1600, Area IV (014 075)* (Acc. no. 392)

Near triangular rims
J6.11 With a sharp change in angle at the base of the neck. SANDRM (also in SANDRC, SANDMC), *1382, Area IV (014 078)* (Acc. no. 397)
J6.12 SANDRF, *C1368, Building VIIi, Period 2* (Acc. no. 293)
J6.21 Narrow-mouthed globular jars, similar to Camerton form 264 from a context dated A.D. 70–95 (Wedlake 1958, fig. 39). SANDRM (also in SANDRF, SANDRC), *4230, Area I (087 090)* (Acc. no. 396)

Storage jars with heavy beaded rims

J8.21 With cordon at base of neck, similar to Savernake type 24 (Annable 1962, fig. 5) and form 42 from Period 1b, second century, at Chew Valley Lake (Rahtz and Greenfield 1977, fig. 99). SANDRC (also in SANDRM), *1713, Area IV (010 068)* (Acc. no. 413)

J8.26 Similar to Chew Valley Lake form 55 (Rahtz and Greenfield 1977, fig. 99). SANDRM (also in SANDMC, SANDOXG, SAVNAK, SANDRGC), *1359, Area IV (016 072)* (Acc. no. 406)

Storage jars with splayed necks

J9.12 Storage jar with beaded rim, similar to Savernake forms 21 and 23 (Annable 1962, fig. 5) and Oare form 47 (Swan 1975, fig. 4). SANDRC (also in SANDRF, SANDRM, BBC, SANDMC), *C1119, Building IV, Period 5* (Acc. no. 398)

J9.22 Slightly hooked rim. SANDRC (also in BBC, SANDOXF), *3929, Area X (077 182)* (Acc. no. 634)

J9.31 SANDRC (also in BBC), *516, Area V (073 039)* (Acc. no. 635)

Out-curving rims

J10.15 SANDRM (also in SANDRC, SVOXGR, SVOXORG, SANDOXC), *4629, Area III (080 045)* (Acc. no. 400)

With slightly thickened angular rims, similar to Oare types 50–2 (Swan 1975, fig. 4)

J10.31 With a band of wavy incised decoration just below the rim. SANDRM (also in SANDRC, SANDMC, SANDRF, SAVNAK, BB1, SANDBL, SANDRL), *1720, Area IV (009 073)* (Acc. no. 298)

J10.32 SANDRC (also in BBC, SANDRF), *624, Area V (068 032)* (Acc. no. 636)

Neckless storage jars with beaded rims

J11.31 With incised grooves below the bead. SANDRC, *1246, Area IV (016 077)* (Acc. no. 637)

Neckless storage jar with folded over 'collar' rim

J12.11 Similar to vessel 39 from Lamyatt Beacon (Leech 1986, fig. 21) and Chew Valley Lake form 60 (Rahtz and Greenfield 1977, fig. 100). SANDRF, *C1371, Building VII, Period 4* (Acc. no. 302)

J12.21 SANDRM (also in BBC), *C6007, Building IX, Period 6* (Acc. no. 303)

J12.22 SANDRM, *C1383, Building VII, Period 4* (Acc. no. 401)

(FIG. 35)

J12.31 Near-triangular grooved rim. SANDRC, *F18, Trench E* (Acc. no. 402)

Very large, crudely made jars with folded over rim

J13.11 SANDRGC, *2107, Area IV (027 076)* (Acc. no. 496)

J13.12 SANDRC (also in SANDMC), *C1405, Building I, Period 5* (Acc. no. 304)

Large storage jars with stubby folded-over rims with finger/thumb impressions

J14.11 With occasional finger impressions. SANDRC (also in SANDRM, SANDMC), *1353, Area IV (016 080)* (Acc. no. 305)

J14.13 With heavy finger impressions on top of rim, and a band of finger impressions on the neck. SANDRF, *5535, u/s* (Acc. no. 414)

Sub-pulley, folded-over rims

J14.21 With occasional finger impressions. SANDRM (also in SANDRC), *2704, Area* V *(049 023)* (Acc. no. 476)

Frilled folded-over rims

J14.31 Heavily finger-impressed and with a double row of perforations below the rim. SANDRM (also in SANDRF, SANDMC, SANDRC), *2764, Area V (050 024)* (Acc. no. 307)

J14.32 Frilled rim and perforated. SANDMC, *C1552, Building VIII, Period 6* (Acc. no. 412)

Everted rim

J14.51 Broadly similar to Camerton types 645–8 (Wedlake 1958, fig. 49). SANDRF (also in SANDRM, SANDMC), *C6017, Building IX, Period 3* (Acc. no. 308)

High-shouldered wide-mouthed jar or bowl

JW2.11 With upright neck and out-curving rim, and combed decoration on the neck. Similar to forms from Lamyatt Beacon (Leech 1986, fig. 21.37), from a late fourth-century context in Exeter (Holbrook and Bidwell 1991, fig. 59, type 16.1), and a context dated A.D. 50–200 at Camerton (Wedlake 1958, fig. 37.237). SANDMC (also in SANDRC), *3789, Area IX (071 176)* (Acc. no. 638)

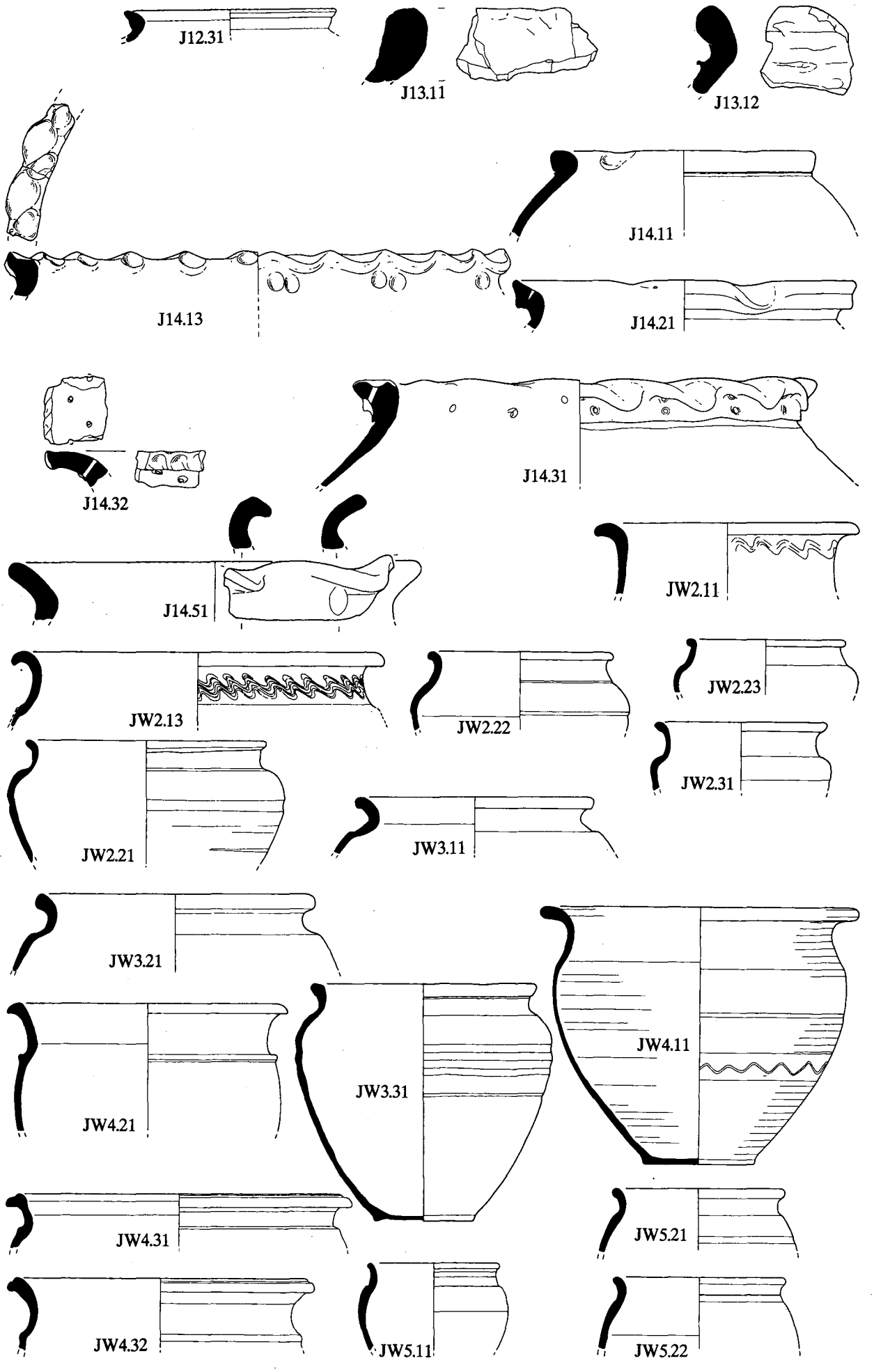


FIG. 35 Roman pottery: the grey wares; jars; scale 1:4

JW2.13 With slightly in-sloping neck and sooting on neck and inside rim. SANDOXF, *2786, Area V (050 024)* (Acc. no. 301)

Wide-mouthed jar with gently in-sloping neck and belly grooves

A common form in north Somerset in the late first and second century, with examples coming from Chew Valley Lake in fabric N (Rahtz and Greenfield 1977, fig. 98.19–34) and Cheddar Vicarage (Rahtz 1966, fig. 8.7; Hirst and Rahtz 1973, fig. 11.1h, 2h-m, 8a, 9a). Produced in SANDRF, SANDBRF, SANDRC, SANDMC, SANDRM, SVOXGR, BBC, SANDOXF).

JW2.21 SANDBRF, *1489, Area IV (005 080)* (Acc. no. 324)

JW2.22 SANDRF, *C6041, Building IX, Period 3* (Acc. no. 322)

JW2.23 SANDRF, *C1510, Building VIIi, Period 2* (Acc. no. 326)

Wide-mouthed jar with near upright neck and angled shoulder

JW2.31 With belly groove similar to Cheddar Vicarage 11a (Hirst and Rahtz 1973, fig. 12). SANDRF (also in BB1, BBC, SANDBRF, SANDRC, SANDMC, SVOXGR), *2681, Area V (055 033)* (Acc. no. 639)

Wide-mouthed jars with short necks and high shoulders

JW3.11 With sharply angled shoulder and lightly beaded rim, loosely paralleled at Cheddar Vicarage (Hirst and Rahtz 1973, fig. 12.8a and fig. 13.16e), and Camerton (Wedlake 1958, fig. 34.78–88). SANDMC, *1077, Area V (064 026)* (Acc. no. 323)

JW3.21 With sharply angled shoulder and thickened, near triangular rim. SANDMC (also in BBC, SANDRM, SANDRC), *C6017, Building IX, Period 3* (Acc. no. 325)

JW3.31 With a rounded shoulder, thickened angular rim, and girth grooves. Similar to a vessel from Period 2 at Cheddar Vicarage (Hirst and Rahtz 1973, fig. 12.2x), also in a fine micaceous grey ware. SANDRF (also in SANDRM), *1509, Area IV (021 083)* (Acc. no. 328)

Slack-shouldered wide-mouthed jars

JW4.11 Complete pot (containing a cremation, HB 45) with near upright neck and out-curving rim, decorated with burnished bands and incised wavy lines. BBC, *227, C1125, Area II (083 090)* (Acc. no. 501)

JW4.21 With near triangular rim and shoulder cordon. Paralleled at Lamyatt Beacon (Leech 1986, fig. 21.27) and perhaps a development of the beaded rim form noted at Camerton (Wedlake 1958, fig. 34.73). Similar forms were produced by the Alice Holt industry from about A.D. 250 (Millett 1979, fig. 4.24). SANDRC (also in SANDRF, SANDRM, BBC), *F21, Area V, Period 2* (Acc. no. 640)

JW4.31 With pulley rim and shoulder cordon. A shallower grey-ware bowl with a similar rim was found at Camerton in a ditch fill dated A.D. 25–50 (Wedlake 1958, group 11, fig. 37.232). SANDRM, *2469, Area V (046 018)* (Acc. no. 416)

JW4.32 With blackened surface. SANDRF, *5535, u/s* (Acc. no. 415)

Short to medium-necked jars with slack shoulders

JW5.11 Small jar with near upright neck and slightly beaded rim. SANDRM (also in BB1, BBC, SANDRF), *C1509, Building VII, Period 2* (Acc. no. 641)

JW5.21 Short-necked jar with slightly beaded rim. SANDRF, *C1397, Building VII, Period 1* (Acc. no. 642)

JW5.22 SANDRF, *1510, Area IV (020 083)* (Acc. no. 643)

(FIG. 36)

Globular jars with inturned rims and external lid seating

J16.11 With beaded rim and small external cordon, paralleled by Camulodunum form 253 (Hawkes and Hull 1947, fig. 55.12–16, pl. LXXXI) where it was found in first-century contexts; at Camerton (Wedlake 1958, fig. 38.258) from a context dated A.D. 50–200. Variants of this form are produced at Alice Holt where they are dated A.D. 150–270 (Lyne and Jefferies 1979, fig. 30.4.37/8); a similar form is also included in the kiln group from Caldicot, Gwent (Barnett *et al.* 1990, fig. 7.34). SANDMC, *C1129/HB26, Area IV, Period 5* (Acc. no. 309)

J16.21 With small beaded rim and prominent external cordon, similar to Usk type 17 (Greene 1993, 34, fig. 5) in the fortress coarse ware, a fine orange-buff fabric with some sand and grog. At Usk an Italian derivation is proposed for the form, although similarities with the La Tène Haltern 58 are also noted (ibid., 45–6). Also paralleled by an unusual variant of Camulodunum form 254 (Hawkes and Hull 1947, fig. 56.1), itself compared to the wheel-made Haltern 91. SANDRF, *415, Area II (072 071)* (Acc. no. 644)

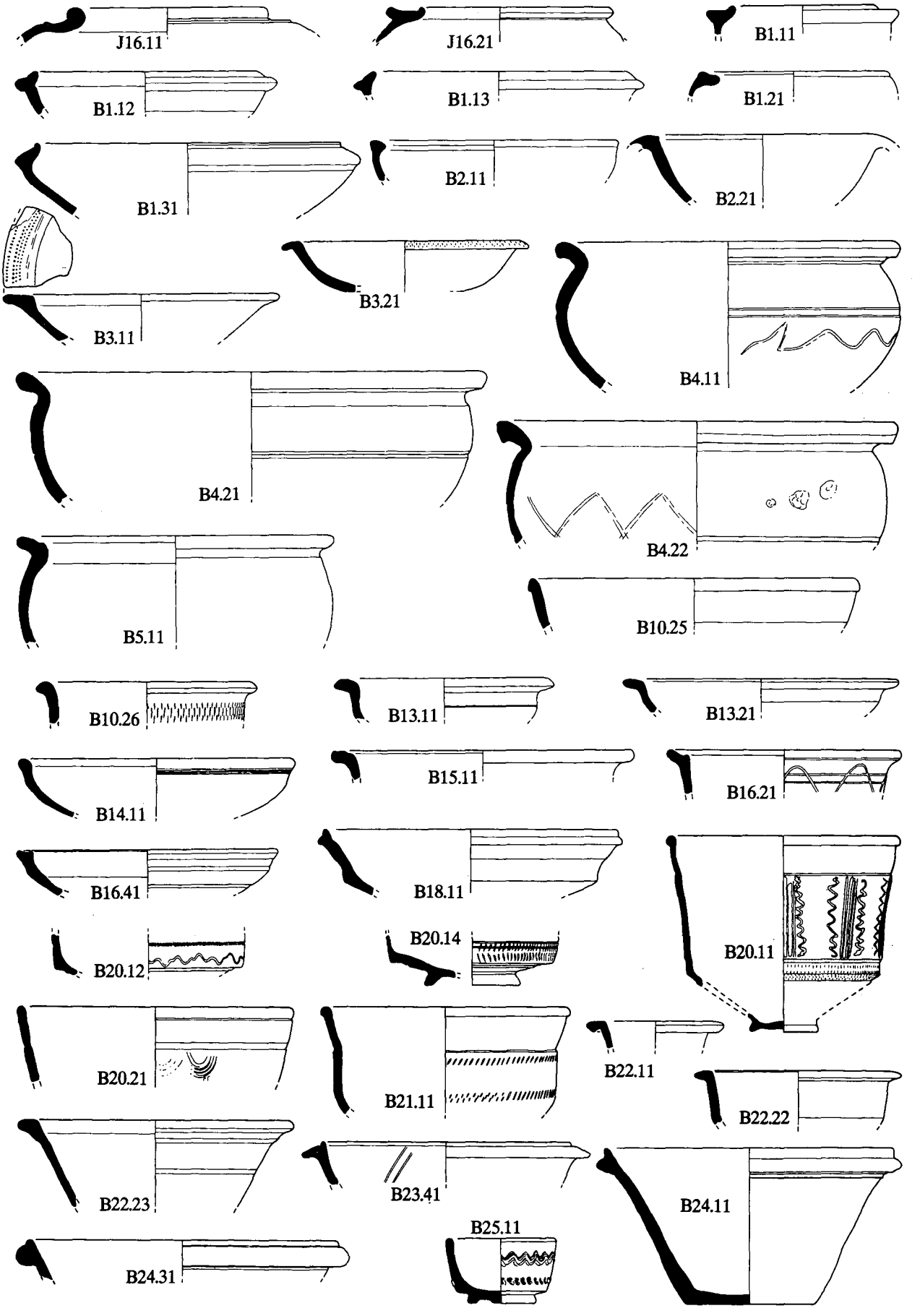


FIG. 36 Roman pottery: the grey wares; bowls; scale 1:4

Bowls

Bowls or dishes with in-turned rims and external lid seating, and a prominent external cordon

The rim form is similar to Camulodunum form 45B (Hawkes and Hull 1947, pl. LI) although there is no evidence to suggest that the Fosse Lane example is from a tripod bowl. At Camulodunum the form is found in contexts dating from A.D. 49–64. Closer parallels are perhaps provided by grey-ware bowls from Camerton (Wedlake 1958, fig. 36.180 and, less similar, 178) from contexts dated A.D. 150–200, thought to have first appeared towards the end of the first century. A similar form is also noted at Exeter, Fortress ware A type 16.1 (Holbrook and Bidwell 1991, fig. 52).

B1.11 Bowl with a small slightly beaded rim. SANDRF, *C1397, Building VII, Period 1* (Acc. no. 329)

B1.12 Bowl or dish with gently curving walls. Similar to Exeter gritty grey-ware form 25.1, found in Hadrianic/early Antonine contexts and thought to be imitating early BB1 flanged bowls and dishes, south-western BB1 type 70 (Holbrook and Bidwell 1991, fig. 67). SANDBRF, *C1521, Building VII, Period 2* (Acc. no. 417)

B1.13 Bowl or dish with a pointed rim (Wedlake 1958, fig. 35.103). SANDBRF, *2873, Area V (052 081)* (Acc. no. 444)

B1.21 Bowl or jar with rounded in-turning rim and external cordon and groove. Possibly derived from Camulodunum 255B (Hawkes and Hull 1947, pl. LXXXIII). SANDRM, *C6030, Building IX, Period 3* (Acc. no. 442)

B1.31 Bowl or dish with profile sharply inturned at shoulder and upright beaded rim. The form is a cross between two forms noted at Camerton; a group 6 shallow 'plate' in dark-grey ware with an inturned pointed rim (Wedlake 1958, fig. 35.103), from a context dated before A.D. 300, and thought to have its origins in forms from the east of the country (ibid., 133); and a group 7 carinated bowl from a layer dated A.D. 25–50. With blackened external surface. SANDRBRF (also in SVOXGR), *C1522, Building VII, Period 1* (Acc. no. 331)

Shallow bowls or dishes with rims overhanging internally

B2.11 Dish or shallow bowl with pronounced internal lip forming T-shaped rim. SANDRF, *3906, Area V (081 031)* (Acc. no. 441)

B2.21 Flanged bowl with slight internal lip. Similar rims occur in Severn Valley ware, Webster type F dated second–third century (P. Webster 1976, fig. 8.47/8 and 51). Also a shallow dish from a context dated A.D. 55–90 at Camerton (Wedlake 1958, group 6, fig. 35.107) and a pie dish from a pit dated A.D. 120–150 (ibid., group 22, fig. 43.438). SANDBRF, *2636/2687, Area V (045 026 and 041 024)* (Acc. no. 380)

Bowls or dishes with flange rims and curving walls

B3.11 Dish or shallow bowl with flat-flange rim, imitating London ware or *terra nigra* forms. The illustrated example has rouletted decoration around the rim and a blackened surface. SANDRF, *C6056, Area IX/X, Period 1* (Acc. no. 332)

B3.21 Dish or shallow bowl with slightly down-curving flanged rim and decorated with rouletting. SVOXGR (also in SANDRF), *5516, u/s* (Acc. no. 645)

Large bowls with upturned rims and grooved bellies, Savernake type 43 in fabric 2 (Swan 1975, fig. 4)

Parallels can be found at Camerton, type 234 in a hard dark-grey ware from a pit dated A.D. 80–150 (Wedlake 1958, group 11, fig. 37) and Cheddar Vicarage, in a hard light-grey micaceous ware (Hirst and Rahtz 1973, fig. 13.12e). The form may also be related to Severn Valley ware type F (P. Webster 1976, fig. 8), e.g. form 229 at Gloucester (Ireland 1983, fig. 71).

B4.11 Full, rounded belly with wavy incised decoration below. SANDRF (also in BBC, MISCRM), *C1501, Building VII, Period 3* (Acc. no. 334)

With slacker profile

B4.21 With blackened external surface and thickened rim. SANDRC (also in BBC, SANDRM, SANDMC, SVOXGR), *C1366, Building VII, Period 2* (Acc. no. 335)

B4.22 With thickened, slightly undercut rim; crude rusticated blobs externally, possibly accidental, and burnished cross hatch internally. Internal decoration, lattice, is also present on the Camerton example referred to above. SANDMC (also in SANDRF), *2527, Area IV (009 101)* (Acc. no. 336)

Large bowl with flat grooved rim

B5.11 SANDRL (also in SANDOXG), *u/s, Trench A* (Acc. no. 494)

Samian Dr 37 copies

B10.25 SANDRF (also in OXFCCR), *1334* (Acc. no. 443)

B10.26 With rouletted decoration. SANDRF, *1533, Area IV* (016 085) (Acc. no. 495)

Carinated bowl or dish with everted rim

B13.11 Gently carinated, similar to Camerton type 217 from a ditch dated A.D. 25–50 (Wedlake 1958, group 11, fig. 37). SANDRF, *5147, Area IX (060 190)* (Acc. no. 440)

B13.21 Sharply carinated. SANDRF, *1362, Area IV (015 079)* (Acc. no. 439)

Carinated dish or shallow bowl with beaded rim

B14.11 Similar to bowls noted at Exeter in south-western BB1, type 49.2 (Holbrook and Bidwell 1991, 128, fig. 43) dated Conquest to first half of the second century. See also Catsgore (Leech 1982a, fig. 104.235) where a similar form in 'sandy BB1' is dated *c.* A.D. 100/20–150/80. With blackened surface. SANDBRF (also produced in SVOXG, SANDRF), *2382, Area IV (045 077)* (Acc. no. 363)

Reeded-rim bowl

B15.11 With two grooves. Similar forms occur at Exeter in Exeter Fortress ware A (Holbrook and Bidwell 1991, type 22.1, fig. 53) dated A.D. 100–120; and in Exeter micaceous grey ware (ibid., type 51.1, fig. 65) from a late first-century context. SANDRM, *5535, u/s* (Acc. no. 438)

Hemispherical bowls with lid-seat rims

B16.21 With elongated rim and shallow groove. SANDRM, *C1333, Building VIII, Period 6* (Acc. no. 437)

B16.41 Shallow bowl, carinated just below the rim. SANDBRF, *C6042, Building X, Period 2* (Acc. no. 436)

Carinated bowl with flanged rim

B18.11 Sub-Belgic shallow bowl with markedly splayed walls above the cordon. A bowl of similar profile without the flanged rim was recovered from a late first- to early second-century context at Chew Valley Lake in a hard, fine, dark-grey micaceous fabric (Rahtz and Greenfield 1977, fig. 98.7); and the form is probably related to the Camerton group 6 platters (Wedlake 1958, fig. 35). The type is perhaps derived from the Gallo-Belgic platters with overhanging rims, such as Camulodunum forms 3–9 (Hawkes and Hull 1947, pl. XLIX). SANDRF, *4611, Area III (075 047)* (Acc. no. 646)

Deep carinated bowls with beaded rims

Small carinated bowls with straight upright/near upright walls and incised or less commonly barbotine decoration. The form is probably a late first- to early second-century London ware copy (Marsh 1978, fig. 6.21, 48.1), although similar forms are produced further north in Severn Valley ware, Webster type H Iron 'C' derived bowls (P. Webster 1976, fig. 9.59–60).

B20.11 With vertical linear and zig-zag incised decoration on body and rouletted decoration on the carination, similar to Ilchester form 238 (Leach 1982, fig. 72). SANDRF (also in SVOXG, SANDRM), *1509, Area IV (021 083)* (Acc. no. 359)

B20.12 Carinated body sherd with rouletted decoration. Similar to forms at: Camerton (Wedlake 1958, fig. 49A.709), and probably the same as fragmentary Camerton form 701 which is published upside down (ibid., fig. 49); Chew Valley Lake in a light grey-brown micaceous fabric (Rahtz and Greenfield 1977, fig. 98.3). SANDRF, *C6024/27, Building IX, Period 3* (Acc. no. 435)

B20.14 Pedestal base of bowl with rouletted carination. SANDRF, *C1573, Building VIII, Period 4* (Acc. no. 434)

B20.21 With less pronounced beaded rim and decorated with the inscribed arcs and vertical lines commonly found on London wares (Marsh 1978, fig. 6.21, 48.1). SANDRF (also in SANDRM, SANDMC, SANDRC, BBC, SVOXGR), *C1518, Building VIIb, Period 2* (Acc. no. 364)

Campanulate bowls

B21.11 With out-curving upper wall and beaded rim similar to London ware type 44 and related to samian form 29, although other influences are also evident (Marsh 1978, 178, fig. 6.19). Similar forms are found at Camerton, group 16, forms 304–6 (Wedlake 1958, fig. 40) and Ilchester forms 241/2 (Leach 1982, fig. 72). The illustrated example has rouletted decoration. SANDRF (also in SVOXG, SANDRM), *2656, Area V (043 039)* (Acc. no. 360)

Straight-sided bowls with flat out-turned rims

B22.11 With angular rim, possibly a military type similar to Exeter Fortress ware B type 31.1 (Holbrook and Bidwell 1991, fig. 55) found in contexts dated A.D. 100–120 and early Antonine to late second century; or comparable with Exeter micaceous grey-ware type 52.1 (ibid., fig. 65) dated late first to early second century. SANDRF (also in SANDRM), *2841, Area V (046 017)* (Acc. no. 433)

BB1-type bowls

B22.22 Carinated bowl or dish, very abraded, but with traces of burnished cross-hatch decoration externally. SANDRF (also in SANDRC), *F128, Area III, Period 4* (Acc. no. 432)

B22.23 SANDMC, *1119, Area III (076 046)* (Acc. no. 361)

BB1-type conical bowls with flat grooved rims

B23.41 With near upright walls and near-triangular flange. SANDBRF (also in SANDRM), *2686, Area V (041 024)* (Acc. no. 431)

BB1-type conical bowls with flanged rims

B24.11 BBC (also in BB1, SANDRC, OOLIM), *857, Area IV (020 074)* (Acc. no. 357)

B24.31 With heavy rounded flange. SANDRC (also in BB1, BBC), *C1552, Building VIII, Period 6* (Acc. no. 676)

Plain-rimmed bowl

B25.11 With returned base. SANDMC, *4000, Area VI (068 108)* (Acc. no. 647)

BB1-type dishes with flat out-turned rims

Dishes and platters (FIG. 37)

D1.12 Surface abraded, but appears to have been blackened. SANDRF, *C1502, Building VII, Period 3* (Acc. no. 351)

D1.13 SANDMC (also in BB1, SANDRF, BBC, SANDRC, SANDRM, SANDMC), *C6033, Building IX, Period 3* (Acc. no. 356)

BB1-type plain-rimmed, handled dishes

D3.21 Oval fish dish. SANDRC (also in BB1), *480, Area III (080 049)* (Acc. no. 430)

BB1-type plain-rimmed dishes

D4.11 With increasingly splayed walls. BBC (also in BB1, SANDRF, SANDRM, SANDMC, SANDRC), *857, Area IV (020 074)* (Acc. no. 648)

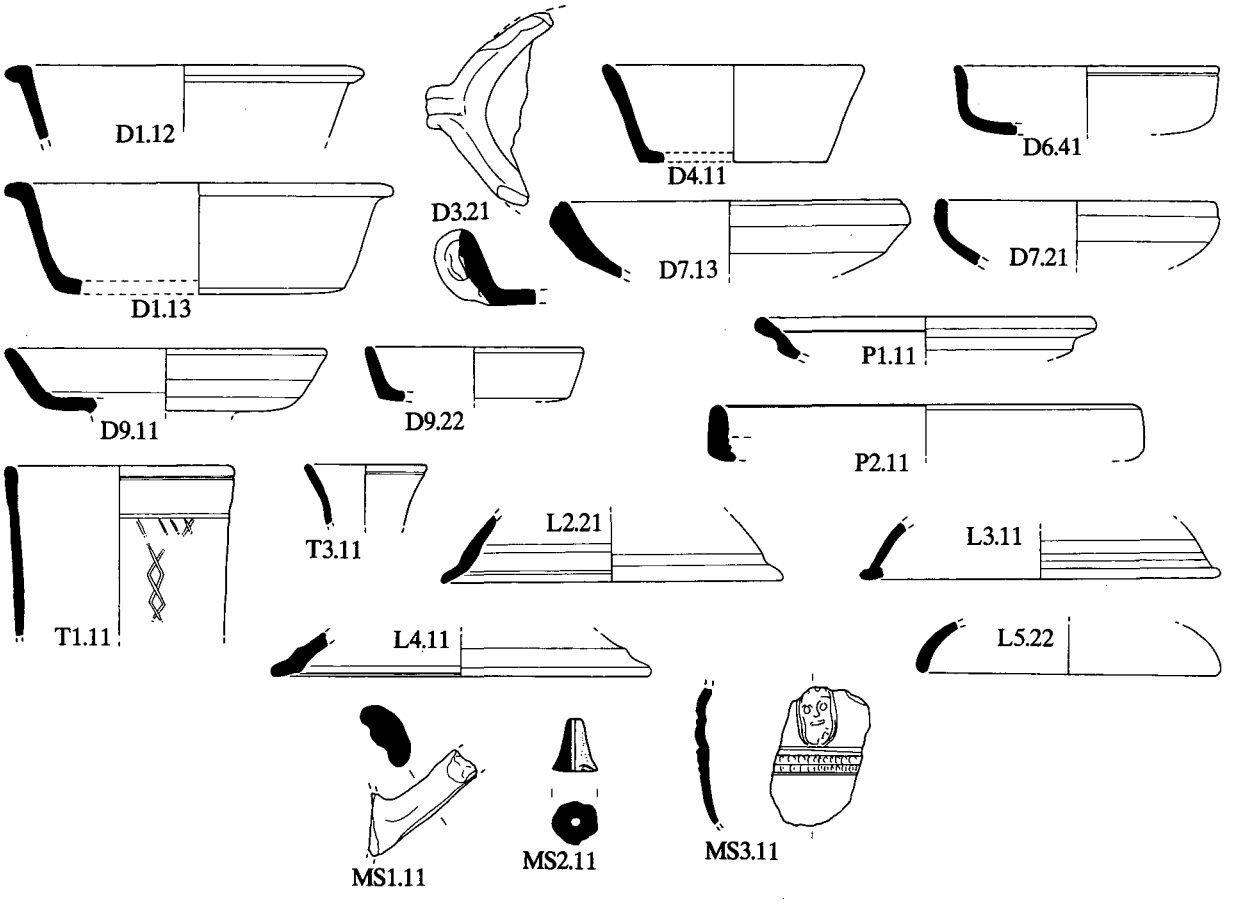


FIG. 37 Roman pottery: the grey wares; dishes, platters, tankards, lids and miscellaneous forms; scale 1:4

BB1-type dishes with beaded rims

D6.41 BB1-type shallow dish or platter with sagging base and groove below the rim. SANDRF, *F36, Area IV* (Acc. no. 429)

Dishes or platters with ridged rims

D7.13 With gently carinated walls and angular flange. SANDRF (also in SANDBRF), *976, Area V (069 029)* (Acc. no. 428)

D7.21 With curving walls. SANDRF (also in SANDMC), *C1033, Area III, Period 4* (Acc. no. 427)

Platters or shallow dishes with plain rims

D9.11 With splayed walls and grooved at base of wall internally; similar to Camulodunum form 21 from contexts dated A.D. 10–65 (Hawkes and Hull 1947, 22, fig. 48.1, pl. L.21D). With deliberately blackened surface. SANDRF, *C6024/27, Building IX, Period 3* (Acc. no. 426)

D9.22 Platter with blackened surface. SANDRF, *C1575, Building VIII, Period 4* (Acc. no. 425)

Gallo-Belgic derived platters

P1.11 Similar to Camerton form 111 but with a slightly sagging base (Wedlake 1958, fig. 35). The Camerton vessel, in a dark-grey ware with traces of mica, comes from the lowest level of the Fosse Way ditch dated A.D. 55–90. SANDBRF, *F22, Area V* (Acc. no. 424)

Gallo-Belgic derived platter with upright rim

P2.11 Camulodunum form 24 found in contexts dated A.D. 43–65 and a native copy of Gallo-Belgic platter forms 7–8 (Hawkes and Hull 1947, 222, pl. L). SANDRM, *5478, Area IX (076 200)* (Acc. no. 423)

Tankards (T)

Tankard with upright walls

T1.11 Broadly similar to Webster form 38 (P. Webster 1976) dated mid- to late first century. With blackened surfaces and cross-hatch decoration, similar to Chew Valley Lake form 154 in Severn Valley fabric L thought to be from Shepton Mallet (Rahtz and Greenfield 1977, fig. 103). SANDRF (also in SVOXG, SVOXGR, MISCCR), *2864, Area V (056 035)* (Acc. no. 343)

Tankard with markedly splayed walls

T3.11 Very small tankards, broadly similar to Webster form 44 (P. Webster 1976) dated to the fourth century. Parallels are found in hard sandy grey fabric with orange surfaces at Chew Valley Lake (Wedlake 1958, fig. 103.159). SANDRM, *2514, Area V (044 007)* (Acc. no. 345)

Lids (L)

L2.21 Lid with less-pronounced bead rim. SANDRF, *1313, Area IV (018 078)* (Acc. no. 421)

L3.11 Lid with T-shaped rim. SANDRF, *C1351, Building VII, Period 2* (Acc. no. 419)

L4.11 Lid with internal groove. SANDMC, *C1504, Building VII, Period 2* (Acc. no. 420)

L5.22 Lid with plain convex rim. SANDBRF (also in BB1, BBC, SANDRF, SVOXGR, MISCRF), *C1306, Building VII, Period 2* (Acc. no. 422)

Miscellaneous forms (MS)

MS1.11 *Patera* handle. SANDMC, *4069, Area VI (076 119)* (Acc. no. 649)

MS2.11 *Tettina* spout. Parallels can be found at Cheddar Vicarage in a hard light-grey sandy fabric (Hirst and Rahtz 1973, fig. 12.5A); and Chew Valley Lake in a hard gritty light-grey fabric (Rahtz and Greenfield 1977, fig. 105 257), SANDMC, *4755, Area VII (069 136)* (Acc. no. 650)

MS3.11 Face pot, body sherd only. Found associated with a human burial. SANDRM, *C1102/F102, HB 9, Area IV, Period 5* (Acc. no. 503)

Severn Valley wares

SVOXG Severn Valley ware, oxidised. The standard fabric was soft, reddish yellow (Munsell 5YR 6/8 to 7.5YR 7/6), often oxidised throughout though sometimes with a grey core (Munsell 10YR 6/1); occasionally with a white or brown colour coat. The most obvious inclusion macroscopically is often iron ?ore, varying from up to *c.* 2 mm on coarser examples which have a 'freckly' surface, to <0.1 mm on finer examples. Similar to Tomber sample 1 (Tomber 1981). A coarser, oxidised variant has numerous larger rock inclusions, broadly matching Tomber sample 2 (Tomber 1981).

SVOXGR Reduced variant of SVOXG. Light brownish grey (Munsell 2.5Y 6/2).

SVOXORG Organic-tempered oxidised variant of SVOXGL. Distinguished by the presence of burnt organic inclusions and elongated voids, light reddish brown (Munsell 5YR 6/4) with a grey core (Munsell 10YR 6/1).

SVOXGM Shepton Mallet mortaria. As well as mortaria in SVOXG fabric there was also a coarser, oxidised fabric similar to Tomber sample 2 (Tomber 1981). The trituration grits comprise mainly angular white and grey quartz <*c.* 3 mm, with sparse sub-rounded ?ironstone and sandstone, both <*c.* 3 mm. All sherds were very abraded, none having the customary red-brown slip.
Kay Hartley noted that no sherds had the micaceous quality of the finds from the kiln-site.

Discussion

Severn Valley wares represented only 4% by count and 3% by weight of the overall assemblage, even including reduced ware and mortaria. Tankards were the only classic Severn Valley ware form represented. The oxidised fabric SVOXG predominated, encompassing two overlapping variants similar to those described by Tomber (1981). The range of forms indicated production from the late first century into the later second century. The ware was present in Period 1 but was more common in Period 3 (TABLE 4; FIG. 45). Only 20% of sherds were decorated, although this must in part reflect the frequent occurrence of surface damage. The majority were decorated with combinations of linear-pattern burnish, grooves and cordons characteristic of Severn Valley ware; 2% had barbotine dots, well over half using white slip; 1% had trailed barbotine; 2% were colour coated, approximately half having brown colour coats with red and white colour coats represented in equal proportions; and 1.6% had London-ware motifs.

Mid-to-late first-century to early second-century tankards (FIG. 38, T1.12, T1.13) were by far the most common individual form; second-century to third-century types (FIG. 38, T2.11, T2.12) were less common, but the later types noted in the grey-ware assemblage (FIG. 37, T3.11) were absent. Where decoration survived, tankards had incised grooves and/or cross-hatch or vertical linear burnish. Bowls however were the more common vessel class, often copying samian types. Most frequently noted were Dr 37 copies with decoration reflecting a variety of influences. Some, like the grey wares, were influenced by late first-century to early second-century London ware types (FIG. 38, B10.22, B10.28 and perhaps B10.23), while some showed affinities with second-century Caerleon wares (FIG. 38, B10.21). Almost as common were Dr 31 copies (FIG. 38, B9.11, B9.13), while copies of Curle 11 (FIG. 38, B7.12) were present in much smaller quantities.

Other types included campanulate bowls (FIG. 38, B21.21, B21.31); shallow lid-seated bowls or dishes derived from Iron Age forms (FIG. 38, B16.11, B16.12, B16.31); bowls with flange rims (FIG. 38, B3.31, B3.33); and shallow bead-rimmed bowls similar to grey-ware types (FIG. 36, B14.11). Only a few of the characteristically early carinated bowls (P. Webster 1976, 33, fig. 9.59–60) were noted (FIG. 38, B20.31). Beakers were fairly common, either bag-shaped with everted rims (FIG. 38, BK3.53, BK3.61) and sometimes sub-cornice rims (FIG. 38, BK3.76, BK3.77), or with long insloping necks (FIG. 38, BK1.12). A number of sherds from indented beakers were also noted (FIG. 38, BK4.22, BK4.23). The few flagons were all second-century types (FIG. 38, F1.2, F8.11). The absence of jars is in marked contrast to classic Severn Valley assemblages in which jars form the most common vessel class.

Other oxidised Severn Valley variants occurred in very small quantities. The only form in the limestone variant was a cornice-rimmed beaker (not illustrated), and the only form in the organic variant a jar with a plain out-curving rim (not illustrated). Both are first-century to early second-century fabrics (P. Webster 1976, 18), of a type common to many assemblages in the core Severn Valley area.

The reduced Severn Valley ware (SVOXGR) represented less than 1% of the assemblage. Like the oxidised fabric it was present from Period 1 on, but was most common in Period 3 (TABLE 4; FIG. 45). Stylistically it fell between the Severn Valley ware and the grey wares.

Forms similar to oxidised Severn Valley ware types included tankards with upright walls (FIG. 38, T1.12, T1.13). Beakers were common, including a number with everted rims otherwise too fragmentary for precise identification. Bag-shaped beakers were most common (FIG. 38, BK3.13), followed by beakers with long insloping necks (FIG. 40, BK1.21). Some forms had parallels in both the oxidised Severn Valley ware and the grey-ware assemblages, for example carinated bowls with barbotine dots (FIG. 38, B20.31), while some had parallels only in the grey wares; wide-mouthed jars (FIG. 35, JW2.31), bowls (FIG. 36, B4.21), and copies of BB1 jars (FIG. 38, JC2.13). About 15% of the small assemblage had surviving decoration, lower than for the oxidised ware, but higher than for the other grey wares. Barbotine dots were most common, and acute cross-hatch burnish on the BB1 copies. Otherwise decoration was restricted to cordons and grooves characteristic of Severn Valley ware.

Catalogue (FIG. 38)

Flagons

Ring-necked flagons

F1.2 Thickened, slightly squared upper ring. SVOXG, *1835, Area IV (010 060)* (Acc. no. 410)

Small jar or flagon

F8.11 Markedly splayed, shallow cupped rim, similar to Camerton types 324/5 dated A.D. 150–200 (Wedlake 1958, fig. 41). The illustrated example is burnt/sooted on the rim. SVOXG, *C6030, Building IX, Period 3* (Acc. no. 274)

Beakers

Beakers with long insloping necks

BK1.12 With everted rim. SVOXG (also in SANDRF, SANDRM, SANDMC, SANDOXG, BBC, SANDBL), *2638, Area V (045 026)* (Acc. no. 651)

Globular beaker

BK2.61 With sub-pulley rim. SVOXG (with limestone), *C1397, Building VII, Period 1* (Acc. no. 278)

Bag-shaped beakers with everted rims

BK3.11 SVOXG, *660, Area V (071 033)* (Acc. no. 652)

BK3.13 With a blackened external surface. SVOXGR (also in SANDRF), *C1526, Building VII, Period 2* (Acc. no. 279)

Bag-shaped beaker with near-upright neck and beaded rim

BK3.53 SVOXG (also in SANDRF, SANDRC, SANDRM), *C1368, 1560, Building VII, Period 2* (Acc. no. 383)

Bag-shaped beakers with everted rims and cordons on neck

BK3.61 SVOXG, *C6027, Building IX, Period 3* (Acc. no. 282)

Bag-shaped or barrel-shaped beakers with sub-cornice rims.
Similar beakers are found at Usk in Caerleon ware where they are dated *c.* A.D. 110 to 160/70 (P. Webster 1993, 262, fig. 121.17/18); and at Wilderspool (Hartley and Webster 1973, nos 23–33).

BK3.75 Slight groove below the rim. SVOXG (also in MISCCR), *C6024, Building IX, Period 3* (Acc. no. 653)

BK3.76 SVOXG, *1001, Area V (073 034)* (Acc. no. 387)

BK3.77 SVOXG (also in MISCCR), *1376, Area IV (015 079)* (Acc. no. 388)

Indented beakers with everted rims

BK4.22 SVOXG, *C6033, Building IX, Period 3* (Acc. no. 384)

BK4.23 SVOXG, *F22, Area III* (Acc. no. 285)

Bag-shaped or oval-bodied beaker

BK6.21 With gently everted rim. SVOXG, *F37, Area V, Period 2* (Acc. no. 287)

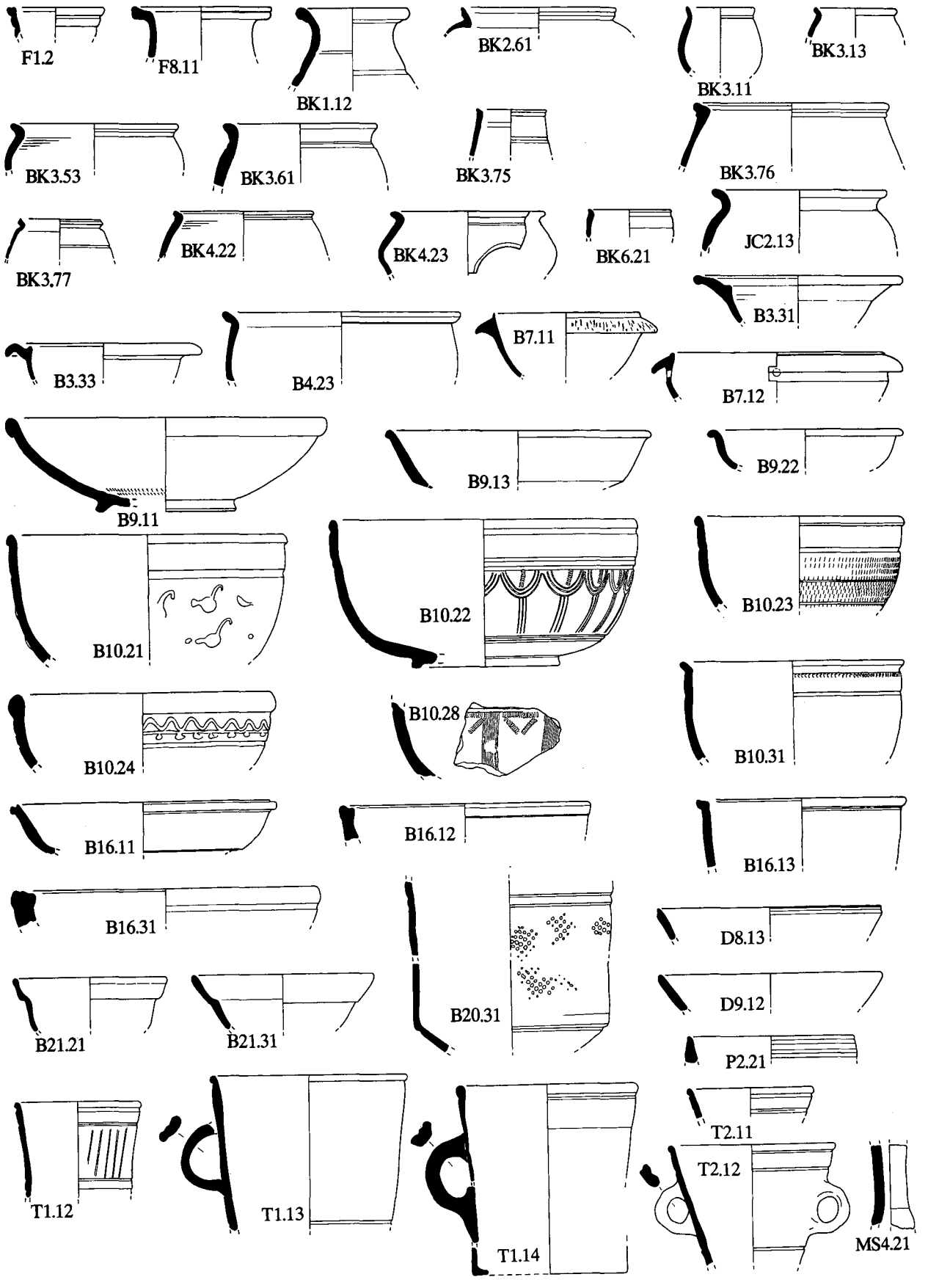


FIG. 38 Roman pottery: Severn Valley ware; scale 1:4

Jars

Imitation BB1 cook pots

JC2.13 With near-upright/slightly everted rim. SVOXGR (also in BBC, SANDMC, SANDRC, SANDRF, SANDRM, SANDOXF), *C1369, Building VII, Period 2* (Acc. no. 311)

Bowls, dishes and platters

Bowl with up-turned flange rim and low internal bead

B3.31 With beaded tip. SVOXG, *1995, Area V (014 038)* (Acc. no. 333)

B3.33 Flange with down-curving tip. SVOXG, *4214, Area VI (045 186)* (Acc. no. 370)

Large bowl with up-turned rim

B4.23 Profile very short so uncertain if belly had decorative groove. SVOXG, *2302, Area V (012 033)* (Acc. no. 374)

Bowl or dish with flange below the rim

B7.11 Bowl with curving walls and heavy, near-triangular flange, possibly copying samian form Curle 11. With abraded rouletting on the flange. SVOXG, *1954, Area V (020 035)* (Acc. no. 341)

B7.12 Down-curving flange, possibly copying samian form Curle 11. Perforated. SVOXG, very micaceous (also in SANDRF) *2031, Area IV (007 092)* (Acc. no. 337)

Hemispherical bowls with bead rims, copying samian form Dr 31

B9.11 With slightly undercut rim. The illustrated example is however in Oxford colour-coated ware (also in SVOXG, MISCRF, MISCRM), *C1135, Area III, Period 5* (Acc. no. 338)

B9.13 SVOXG, *C6032, Building IX, Period 2* (Acc. no. 371)

B9.22 With elongated bead rim. SVOXG (also in CREAM), *2149, Area V (016 034)* (Acc. no. 370)

Bowls copying samian form Dr 37

B10.21 Very abraded so no evidence of a colour coat, with barbotine decoration similar to that found on Caerleon ware, produced from *c.* A.D. 110 until *c.* A.D. 160–170 (P. Webster 1993, 256, fig. 119, 9.1, 10.3, fig 120, 12.2). SVOXG (also in SANDRF, OXFCCR), *C1368 and C1351, Building VII, Period 2* (Acc. no. 339)

B10.22 With inscribed arcs, similar to London ware. SVOXG, *C6041/C6036/C6001, Building IX, Periods 3 and 4* (Acc. no. 365)

B10.23 With rouletting on belly. SVOXG, *Trench C, u/s* (Acc. no. 366)

B10.24 Loosely paralleled by Lamyatt Beacon form 108 in a hard, sandy red fabric with a grey core (Leech 1986, fig. 23). With remains of a red colour coat. SVOXG, *5074/5135, Area IX (060 180)* (Acc. no. 340)

B10.28 With incised and rouletted decoration. SVOXG, *C6032, Building IX, Period 2* (Acc. no. 381)

B10.31 With rouletted decoration below the rim, possibly imitating London ware. SVOXG, *C1509 and C1500, Building VIIb, Period 2* (Acc. no. 342)

Hemispherical bowls with lid-seat rims

With hollowed rims, similar to Camulodunum forms 44A and 47B (Hawkes and Hull 1947, pl. LI and LII). A similar rim is however included in the Camerton group 1A Early Iron Age types, form 22B a bowl or lid (Wedlake 1958, fig. 32), and would therefore seem to be a local native tradition. Similar rims also noted on late first- to early second-century fine wares from London (Marsh 1978, fig. 6.11, 25.4)

B16.11 Fine bowl with well-defined groove, similar to Camerton form 469 in a finely grained grey ware, from a context dated A.D. 90–200 (Wedlake 1958, group 22, fig. 44). SVOXG, *C1013, Area VI, Period 3* (Acc. no. 372)

B16.12 SVOXG, *237, Area II (080 089)* (Acc. no. 367)

B16.13 With grooves under rim. SVOXG, *1511, Area IV (019 082)* (Acc. no. 654)

B16.31 With two grooves on rim, similar to Camulodunum form 44B (Hawkes and Hull 1947, fig. 48.19 and pl. LII) from contexts dated A.D. 43–61; and similar to Camerton group 1A Early Iron Age type 22C (Wedlake 1958, fig. 32). SVOXG, *C1142/F132, HB 29, Area III, Period 5* (Acc. no. 362)

Deep carinated bowl, probably with a beaded rim

B20.31 Represented only by body sherds so the precise form is uncertain, decorated with lozenges of barbotine dots. SVOXGR, *C6024/6027, C6032 and C6039, Building IX, Periods 3 and 2* (Acc. no. 385)

Campanulate bowls

B21.21 With less pronounced bead rim. SVOXG, *C6024/27, Building IX, Period 3* (Acc. no. 368)

B21.31 With plain rim. SVOXG, *C1311, Building VII, Period 2* (Acc. no. 369)

Small bowl or dish with ridged rim

D8.13 SVOXG, *1680, Area IV (008 074)* (Acc. no. 655)

Platter or shallow dish with plain rim

D9.12 With splayed walls, grooved internally at wall base; similar to Camulodunum form 21 which occurs in contexts dated A.D. 10–65 (Hawkes and Hull 1947, 22, fig. 48.1. pl. L.21D). Possibly originally with a deliberately blackened surface. SVOXG, *C6036, Building IX, Period 3* (Acc. no. 656)

Platters with upright rims

P2.21 With a rim grooved externally and traces of brown colour coat. SVOXG, *C6032, Building IX, Period 2* (Acc. no. 407)

Tankards

Tankards with upright walls, broadly similar to Webster form 38 dated mid- to late first century (P. Webster 1976). Similar tankards, probably produced at Shepton Mallet are noted at Chew Valley Lake in Severn Valley fabric L (Rahtz and Greenfield 1977, fig. 103, form 154); Cheddar Vicarage (Hirst and Rahtz 1973, fig. 12, form 2v); and at Camerton in a buff ware with black surfaces and traces of mica (Wedlake 1958, fig. 40, form 311). The illustrated example has blackened surfaces.

T1.12 Very abraded, but the external surface appears to have originally been deliberately blackened and decorated with a band of vertical burnishing. SVOXG (also in SVOXGR, SANDRF, MISCCR), *C6049, Building X, Period 2* (Acc. no. 378)

T1.13 With a double grooved strap handle. Very abraded and no trace of decoration surviving. SVOXG, *1599, Area IV (014 076)* (Acc. no. 377)

T1.14 SVOXG, *C1374, Building VII, Period 2* (Acc. no. 418)

T2.11 Tankards with increasingly splayed walls, broadly similar to Webster form 43 dated late second to third century (P. Webster 1976). SVOXG (also produced in BBC, SANDRF, SVOXG, SANDRM), *C6027, Building IX, Period 3* (Acc. no. 657)

T2.12 Fragments including two double-grooved strap handles, thought to be from the same vessel although no actual joins were found. SVOXG, *C1375 and C1513, Building VII, Period 1* (Acc. no. 344)

Handle or spout

MS4.21 SVOXG, *Trench A, u/s* (Acc. no. 658)

Shepton Mallet mortaria
by Kay Hartley

Shepton Mallet mortaria are generally considered to date to the early second century, although they cannot readily be dated from rim form and there is no good external dating evidence. A total of 81 sherds was recovered from Fosse Lane (SVOXGM), first appearing in Period 2 (TABLE 4; FIG. 45). The majority however was unstratified so it is impossible to identify chronological trends. Their distribution is very local and even then minimal. Out of 418 sherds studied by the author from recent excavations around Bath only one sherd was attributed to Shepton Mallet with any confidence, whilst a much larger assemblage of 734 sherds from Exeter (Holbrook and Bidwell 1991) produced only four sherds. This mortaria has also been noted at Bush Marsh, Knowle, Clatworthy, Charterhouse-on-Mendip and Sea Mills. The distinctive forms (FIG. 39, M2.21, M2.22, M4.11, M4.14 and M5.41) and the use of an overall red-brown slip are paralleled in military period mortaria from Exeter (ibid., fig. 85, types B2, 3 and 7, 207 and 209), and Caerleon mortaria dated *c.* A.D. 115–180 (Hartley 1993, fig. 194.411–14).

Five stamps were recovered, all consistent with production in the Shepton Mallet pottery. Two stamps (FIG. 39.2 and 3) may in fact show opposite ends of the same stamp, but will be

regarded as separate until other stamps are discovered which confirm this. Even this small sample of Shepton Mallet mortaria shows that the potters had a penchant for stamps of this type. One cannot yet be certain that letters are involved, much less literacy. Including the above, there are now eight or nine stamped mortaria known from this small workshop and five to eight different dies are involved. There is no known stamp from these potteries which is obviously literate and many are clearly trademarks. Not all of the mortaria made there were stamped, but they can usually be recognised from the distinctive forms and slip. The trituration grit differs from that used at Caerleon, which had a considerable market in this area.

Catalogue (FIG. 39)

Down-turned flange sometimes folded under at tip, similar to south-western white-slipped ware types dated A.D. 180–250 at Usk (Hartley 1993, fig. 196), but with a less down-curving flange.

M2.21 SVOXGM, *981, Area V (067 027)* (Acc. no. 504)

M2.22 Flange folded under at tip. SVOXGM, *1229, Area IV (017 064)* (Acc. no. 505)

Mortarium with high bead, flange sharply down-turned with distal bead. Similar to forms dated A.D. 110–180 at Caerleon (Hartley 1993, 413, fig. 194.11–13, 16–19) and pre-Flavian or early Flavian military forms from Exeter (Holbrook and Bidwell 1991). A similar flange is also illustrated from Ilchester in fabric MM of uncertain origin (Leach 1982, fig. 68.82).

M4.11 SVOXGM, *5538, u/s* (Acc. no. 506)

M4.14 Spout, dated early second century. SVOXGM, *1056, Area V (076 038)* (Acc. no. 507)

M5.41 Wall-sided mortaria with reeded rim. An unusual form with no exact parallels, broadly similar to a vessel with a more elongated collar noted at Chew Valley Lake Period 1, late first century to second century, in a soft fine orange fabric with a grey core (Rahtz and Greenfield 1977, fig. 102.127). Thought to date to the early second century. SVOXGM, *647, Area II (087 071)* (Acc. no. 508)

Stamps (FIG. 39)

1. Flange fragment. A simple trademark stamp, made up of a series of square punched holes, arranged in pairs, has been impressed close together, at least three times, across the flange. No other example is known. *224, Area II (085 090)* (Acc. no. 624)

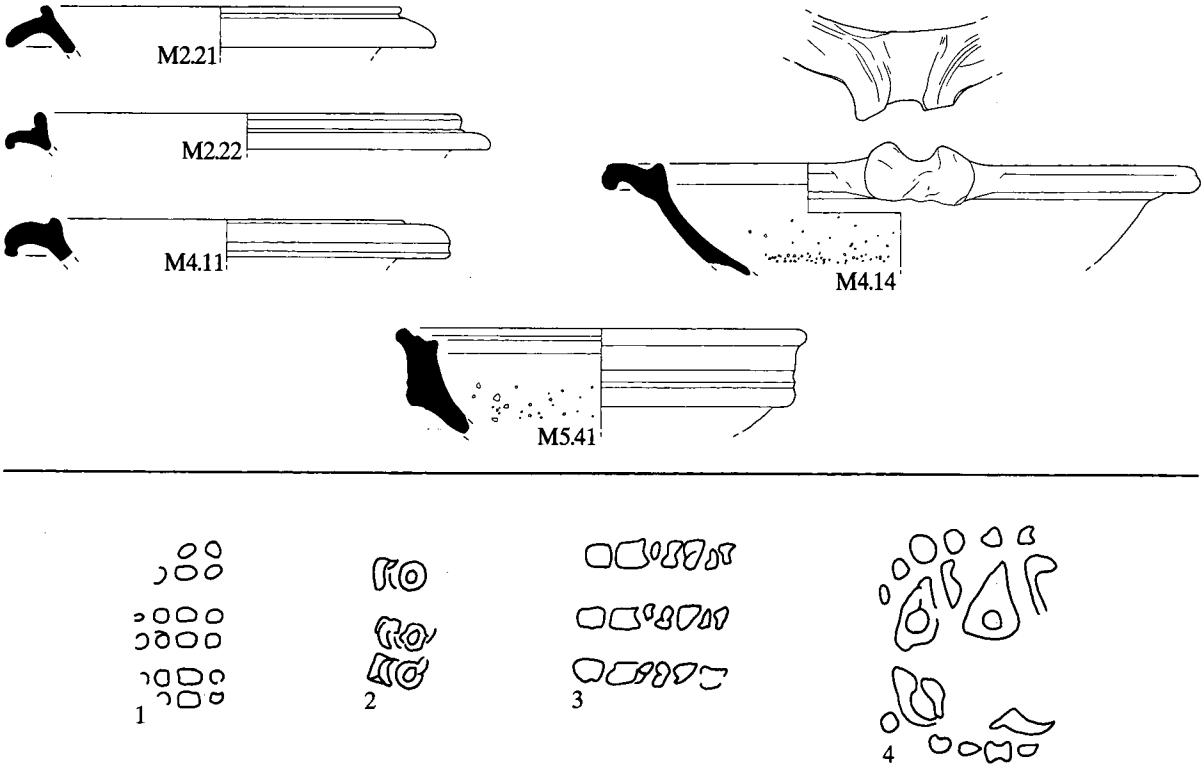


FIG. 39 Roman pottery: Shepton Mallet mortaria; scale 1:4 (stamps 1:1)

2. Rim-section incomplete. The narrow stamp has been impressed close together, at least three times across the flange. No other example of this stamp is known.*963, Area V (077 029)* (Acc. no. 625)
3. A different mortarium also with incomplete rim-section and at least three stamps of similar type impressed close together. No other example is known. *4664, Area III (078 050)* (Acc. no. 626)
4. A burnt fragment. The abraded stamp is not otherwise recorded; *2827*

All four of these mortaria plus a fifth (not illustrated) fit with production in the Shepton Mallet pottery, though none of the customary red-slip survives and they do not have the micaceous quality of the finds from the kiln site.

Miscellaneous oxidised wares

SANDOXF Fine oxidised sandy ware
Oxidised version of SANDRF. Reddish yellow (Munsell 7.5YR 6/6 to 5YR 6/8) sometimes (24% by count) with a reduced core (Munsell 10YR 5/2 greyish brown)

SANDOX Oxidised sandy ware
Soft to medium, reddish yellow (Munsell 5YR 6/8) often (46% by count) with a reduced core (Munsell 10YR 5/2). Inclusions; abundant angular/subangular white and clear quartz <0.2 mm, may have sparse subangular ?ironstone <2.5 mm and sparse to moderate black sand <0.5 mm

SANDOXCCW
White colour-coated variant of SANDOX, often (50% by count) with a reduced core and sometimes also a reduced internal surface

SANDOXCCW
White colour-coated variant of SANDOX with sparse elongated voids

SANDOXC
Oxidised sandy ware, coarser variant of SANDOX

SANDOXG Oxidised sandy ware with grog
Very hard, surfaces yellowish red (Munsell 5YR 5/6) to red (Munsell 2.5YR 5/6), with a grey (Munsell 10YR 5/1) or brown (Munsell 7.5YR 6/4) core. Inclusions of abundant, well-sorted milky white quartz <0.2 mm and sparse/moderate ill-sorted quartz <2 mm, moderate to abundant grog <2 mm, and sparse black ?ironstone <1 mm

MISCCR Red/brown colour-coated ware
Hard, often with reddish-yellow external surface (Munsell 5YR 6/6) and dark greyish-brown internal surface (Munsell 10YR 4/2) and grey core (Munsell 10YR 6/1). Otherwise similar to SVOXG

Discussion

Like the grey wares the oxidised wares were classified by coarseness and frequency of inclusions. None occurred in sufficient quantities for chronological trends to be assessed, the combined oxidised wares representing only 4% of the assemblage (TABLE 3). Only the fine sandy ware (SANDOXF), present in small quantities in all periods, represented 1% of the assemblage. Most sherds in SANDOXF are probably misfired grey wares. Characteristic grey-ware forms included a BB1 type JC2.13 jar (FIG. 38) and wide-mouthed jar type JW2.23 (FIG. 35). Beakers were the only other class represented (FIG. 34, BK3.21). Decoration was noted on 6% of sherds, the majority having motifs common to grey wares: acute cross-hatch burnish, London ware type wavy incised lines, barbotine dots, and combing (FIG. 35, JW2. 13). The most unusual form however, a near-complete face pot (FIG. 40, BK2.62) associated with a burial (HB 26), was deliberately oxidised.

The red/brown colour-coated ware (MISCCR) was the only other oxidised ware to represent 1% of the assemblage. A single sherd was noted in Period 1 but it was most common in Period 2, the proportion declining markedly in Period 4 (FIG. 45). A tankard was noted in this ware (FIG. 38, T1.12) and it seems likely that the majority in fact represents a harder fired, colour-coated variant of the Severn Valley ware. Other sources may well be represented however. A total of 23 sherds had roughly textured internal surfaces, probably caused by overfiring. Beakers were by far the most common class. The majority had sub-cornice rims

(FIG. 40, BK3.72 and BK3.73), although fine bag-shaped beakers with gently everted rims were also noted (FIG. 40, BK3.15). Indented beakers were also common, 19% of sherds having indentations. Some of the rims were paralleled at Usk (FIG. 40, BK4.11 and BK4.24) while others, with long insloping necks, were broadly similar to New Forest types 30, 33, 36–9 (Fulford 1975, fig. 13.3). Other decoration represented included roughcasting and rouletting.

The medium-grained fabric was represented in small quantities in all but Period 1. Generally it had a white colour coat (SANDOXCCW). Plain sherds were also noted (SANDOX) although many of these may originally have been colour coated. The range of forms and the use of colour coating suggest the majority were deliberately oxidised. The only colour-coated forms were flagons, either bead-rimmed (FIG. 40, F4.11) or with a developed ring neck (FIG. 40, F1.31). Forms in the plain variant included a flagon (FIG. 40, F3.31), a long-necked beaker (FIG. 40, BK1.21), a BB1 type BK3.9 beaker (FIG. 41), a JC3.4 type jar (FIG. 34) and a decorated bowl (FIG. 40, B17.11).

The sandy ware with grog (SANDOXG), first noted in Period 2, is probably a mis-fired variant of the reduced SANDRGC fabric discussed above. It too was used predominantly for heavy storage jars, although a single, long-necked beaker of type BK1.12 was also noted (FIG. 38). Jars included simple-rimmed forms similar to Savernake types, and a rim (FIG. 40, J14.41) and body sherd decorated with finger impressions (FIG. 40, MS6.11).

Catalogue (FIG. 40)

Ring-necked flagons

F1.31 With out-curving neck and pronounced triangular upper ring. SANDOXCCW, *2214, Area I (088 093)* (Acc. no. 269)

Flagons with pulley-wheel rims

F3.31 Slightly cupped pulley rim with more pronounced lower bead. Similar to types noted at Camerton (Wedlake 1958, fig. 41.345). SANDOX (also produced in BB1), *2639, Area V (045 027)* (Acc. no. 272)

Miscellaneous flagons

F4.11 Beaded rim. BBC (also in BB1, SANDBRF, SANDMC, SANDOXF, SANDRF, SANDRM), *855, Area IV (020 075)* (Acc. no. 659)

F4.21 Slightly flattened rim. SANDOXCCW, *1730, Area IV (007 069)* (Acc. no. 477)

Beakers with long in-sloping neck

BK1.21 Beaker with everted rim. SANDOX (also in SVOVGR, BBC, SANDRF), *2073, Area V (013 011)* (Acc. no. 275)

BK1.51 With grooved rim. MISCCR, *C6032, Building IX, Period 2* (Acc. no. 482)

BK2.62 SANDOXF, *4110, C1129, HB 26, Area IV, Period 5* (Acc. no. 502)

Bag-shaped beakers with everted rims

BK3.12 MISCCR (also in SVOXG, SANDRF), *2635, Area V (046 025)* (Acc. no. 280)

BK3.15 Fine, very slightly everted rim. MISCCR, *4218, Area VI (039 199)* (Acc. no. 386)

BK3.65 Slacker form. MISCCR, *C6032, Building IX, Period 2* (Acc. no. 479)

Bag-shaped or barrel-shaped beakers with sub-cornice rims (see Severn Valley ware catalogue for full discussion of this form)

BK3.72 With pronounced groove below the rim. MISCCR, *1001, Area V (073 034)* (Acc. no. 660)

BK3.73 Small cornice rim with pronounced groove below. MISCCB (also in MISCCR, SVOXG), *2975, Area II (076 083)* (Acc. no. 284)

Indented beakers

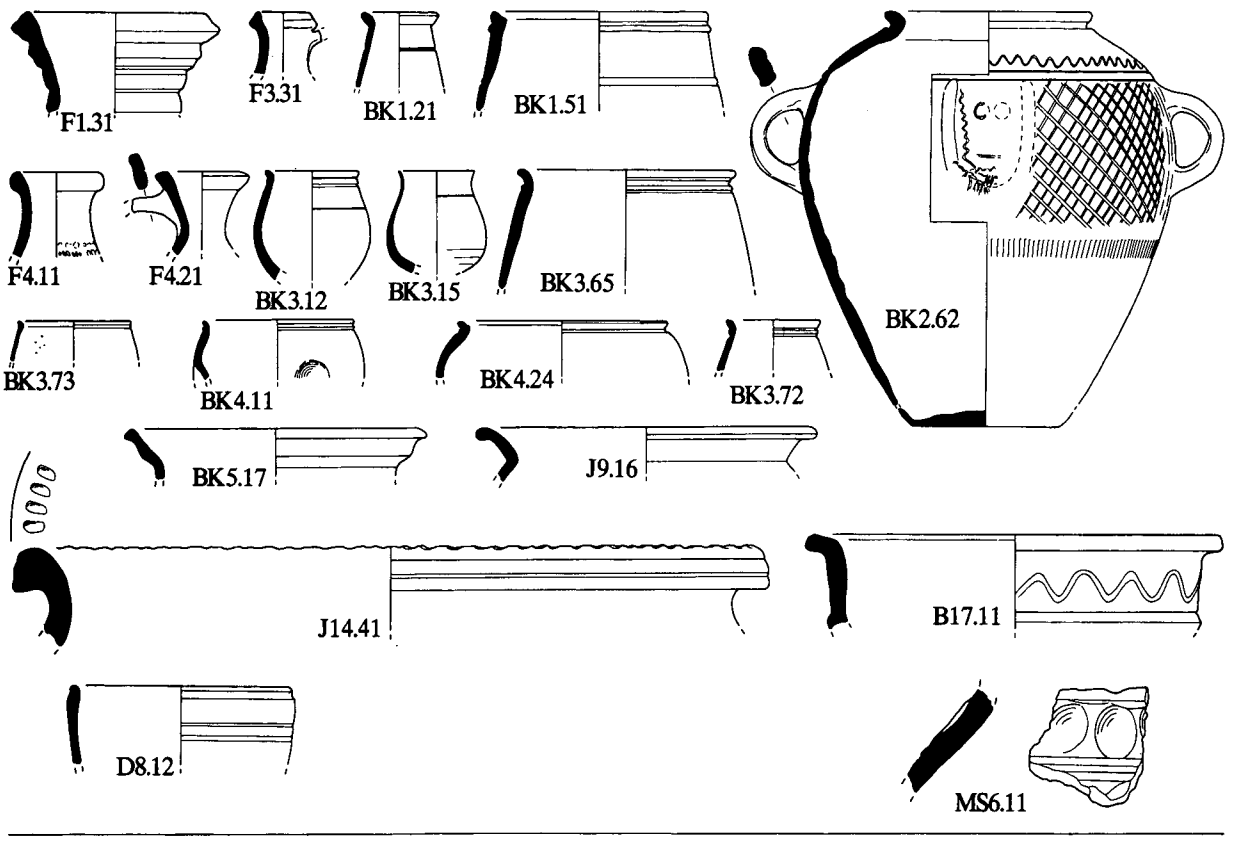
BK4.11 With cornice rim, similar to Caerleon ware types found at Usk (Greene 1993, fig. 120.16.1–4). MISCCR, *C6032, Building IX, Period 2* (Acc. no. 483)

BK4.24 With sharply everted grooved rim. MISCCR, *4206, Area X (085 184)* (Acc. no. 481)

BK5.17 SANDOXF, *C1127, Area IV, ?Period 4* (Acc. no. 478)

Storage jars with splayed necks

J9.16 Similar to Oxfordshire type O27 (Young 1977). SANDOXF, *4716, Area V (068 044)* (Acc. no. 486)



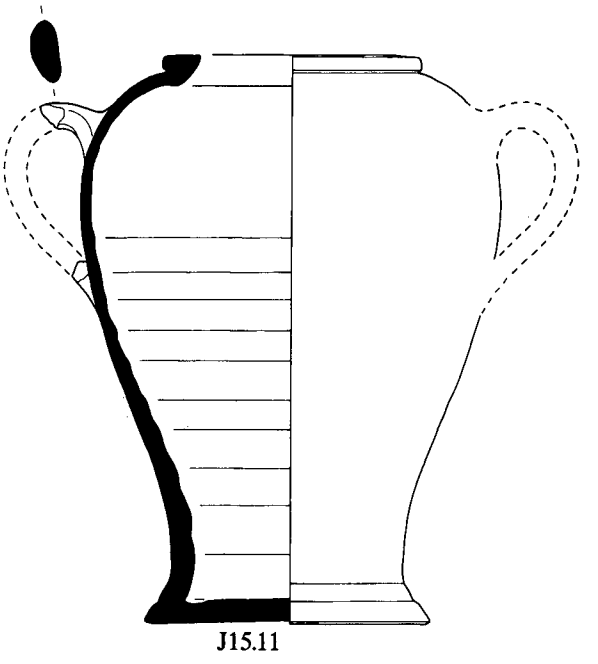


FIG. 40 Roman pottery: miscellaneous oxidised wares; scale 1:4

Medium to large storage jars with finger/thumb impressions on the rim

J14.41 Hooked, folded-over rim with external groove and finger-impressed decoration only on top of rim. Similar forms are noted in a grog-tempered fabric from Ilchester (Leach 1982, fig. 73.271–90, fig. 74.291–3), and at Norton Fitzwarren (Timby 1989, fig. 22.1–5). SANDOXG, *5526, u/s* (Acc. no. 661)

Carinated bowls with flat or slightly up-turned rims

B17.11 With slightly upturned rim and upright walls above the cordon decorated with incised zig-zags. SANDOX, *C1133, Area III, Period 3* (Acc. no. 662)

Small, fine bowl or dish with ridged rim
D8.12 With near-upright walls. MISCCR, *1068, Area V (077 038)* (Acc. no. 480)
MS6.11 Body sherd with finger-impressed decoration from a large storage jar similar to types noted at Ilchester (see J14.41 above). SANDOXG, *C1364, Building VIII, Period 4* (Acc. no. 663)

Double-handled, high-shouldered jar or honey pot with flattened rim
J15.11 From the Roman building discovered in 1878 to the west of Fosse Lane. Shepton Mallet Museum Collection (Somerset County Museum)

Traded wares

The more common traded wares are not described.

BB1: Black-burnished ware (D. Williams 1977, 189; Farrar 1973, 69–78)

SAVNAK: Savernake ware (Annable 1962, Swan 1975)

New Forest wares (Fulford 1975):
NFE: New Forest ware enclosed forms (ibid., fabric 1a, 24)
NFO: New Forest ware open forms (ibid., fabric 1b, 25)
NFM: New Forest ware mortaria (ibid., fabric 2a, 26)

Oxfordshire wares (Young 1977)
OXFCCR: Oxfordshire Red colour-coated wares (ibid., 123–84)
OXFCC: very abraded sherds of Oxford ware with no surviving colour coat
OXFW: Oxfordshire white-ware mortaria (ibid., 56–79)
OXCCW: Oxfordshire white colour-coated ware (ibid., 17–22)

MANCH: Mancetter-Hartshill mortaria (Hartley 1973, 143–7)

VERM: Brockley Hill/Verulamium region mortaria. Hard, greyish-cream fabric (Munsell 10YR 8/2), sometimes with a pink (Munsell 7.5YR 7/4) or black core. May have a self-coloured or buff slip (Munsell 7.5YR 6/6). Inclusions of abundant rounded and sub-angular quartz grains, typically *c.* 0.5 mm in size, and sparse large (up to 3.5 mm) iron ore and flint fragments. Trituration grit mainly flint with some quartz and rare red-brown and black fragments.

CAERLM: Caerleon mortaria (Hartley 1993, 392)

SHELL: late shelly or 'calcite-gritted' ware (Brown 1994)
Hard, with a soapy texture, light yellowish brown (Munsell 10YR 6/4) to dark grey where sooted (Munsell 7.5YR N4/0) with abundant ill-sorted shell <1 mm and occasionally up to 7 mm.

MORTCCW White colour-coated mortaria
Medium to hard, with reddish-yellow margins (Munsell 5YR 6/8) below the white colour coat, and a light brownish-grey core (Munsell 2.5Y 6/2). Inclusions of abundant subangular pink and clear/white quartz <*c.* 0.3 mm, and sparse elongated ?ironstone <*c.* 2 mm. The trituration grits comprise similar pink and clear/white quartz grains <*c.* 4 mm.

WSMORT White sandy mortaria
Medium to hard, very pale brown (Munsell 10YR 7/2). Inclusions of abundant angular or subangular, moderately sorted white quartz <0.1 mm. Trituration grits of white quartz and flint with occasional black ?ironstone. Description based on one sherd.

Black-burnished ware

Discussion

Black-burnished ware was the most common traded ware and the most common individual fabric, representing 37% by count and 30% by weight (TABLE 3). Recent publications from Dorchester (Seager Smith and Davies 1993) and Exeter (Holbrook and Bidwell 1991) have

refined the dating of BB1 forms and decorative motifs, indicating that the chronological trends proposed by Gillam for northern military sites (Gillam 1976) may not be so applicable to sites close to the centre of production. The Fosse Lane assemblage probably fits into the general south-western pattern (P. Woodward 1987a, 112) with characteristic forms and decorative motifs having earlier starting dates or at least wider date ranges.

Jars dominated the assemblage, including two sherds with graffiti (FIG. 44.31 and 32). The problems of dating these jars are discussed elsewhere (Holbrook and Bidwell 1995). Most common (19%) were jars of wide girth with increasingly splayed rims, similar to the type illustrated in grey ware (FIG. 34, JC3.42). At Dorchester a similar form, type 2, was dated second-century or later on external evidence, but was in fact most common in the late first to early second century (Seager Smith and Davies 1993, 231, fig. 122). Types with slightly splayed rims (FIG. 41, JC3.22, JC3.23) were less common (14%), a number having wavy burnished lines around the necks. At Dorchester (ibid.) and Exeter (Holbrook and Bidwell 1991, 18–22, fig. 60) these were common in first-century contexts, but the type continued in production into the second century. Other early types (FIG. 41, JC2.11, JC3.11, and JC3.21) occurred in much smaller quantities (4% and 3% respectively). Fairly common (14%) were late third- to fourth-century jars of near-equal girth (FIG. 41, JC4.11). However, least common (2.5%) were the latest type, of very narrow girth (FIG. 41, JC4.21), similar to Dorchester type 3, itself broadly dated late third- to late fourth/early fifth-century, but most common in the early fourth century (Seager Smith and Davies 1993).

The most common decoration was obtuse cross-hatch burnish (420 sherds), followed by the earlier acute cross hatch (302 sherds). Obtuse cross hatch first occurs in contexts dating from *c.* A.D. 223–225 at Vindolanda (Bidwell 1985, 175) and is thought to appear at Exeter at a similar date (Holbrook and Bidwell 1991, 96). The intermediate right angle-cross hatch, first appearing at both Vindolanda (Bidwell 1985, 175) and Exeter (Holbrook and Bidwell 1991, 96) at the end of the second century was far less common (92 sherds). A variety of other jars were represented by single examples: jars with lid-seat or pulley rims (FIG. 41, J1.21 and J4.12 respectively), and wide-mouthed jars or bowls (FIG. 41, JW1.11).

Dishes were the second most common class, with plain-rimmed dish form D4.1 (FIG. 37) being the most common type (11.5%) reflecting the form's longevity. These were increasingly common from Period 4, similar to the pattern noted at Dorchester (Seager Smith and Davies 1993, 252). Dishes with slightly beaded rims (FIG. 41, D5.11) occurred in small numbers (2.4%); while bowls or dishes with markedly beaded rims (FIG. 41, D6.11) were very rare (0.1%). Second-century flat-rimmed 'dishes/bowls', with profiles too fragmentary for precise classification, were moderately common (2.8%), while flat-rimmed dishes (FIG. 41, D1.11) were present in small numbers (1.2%). So too were conical bowls with grooved rims, most (1.7%) with flat rims (not illustrated), but some having the flange slightly lower (FIG. 41, B23.31) or higher (FIG. 41, B23.11) than the bead (0.5% and 0.4% respectively). Far more common (14%) were bowls with fully flanged rims (FIG. 41, B24.12), although only one flange-rimmed dish was positively identified (FIG. 41, D2.11). Individual examples of less typical bowl forms were also present (FIG. 41, B14.12 and B16.22).

There were relatively few beakers (2.4%), although fragmentary profiles without handles may well have been classified as jars. All were probably early Antonine or later, globular beakers with upright or beaded rims (FIG. 34, BK2.11) being more common (1.7%) than bag-shaped types. The remaining vessel classes, flagons and lids (FIG. 37, L5.22, FIG. 41, L1.11, L1.21, L2.11), were poorly represented (1% and <1% respectively). There were a couple of narrow-mouthed flagons, one with a pulley-wheel rim and one with a beaded rim (neither illustrated), but flagons with less restricted mouths were more common (FIG. 41, F5.41).

Catalogue – Black-burnished ware (FIG. 41)

Flagons

Pulley-rimmed flagons

F5.41 Lower bead forming pronounced flange. BB1 (also in BBC), *2390, Area IV (044 084)*

Beakers

Globular beakers

BK2.11 With upright rim. BB1 (also in BBC, SANDMC, SANDRC, SANDRF), *C1515, Building VII, Period 2* (Acc. no. 276)

Handled beakers

BK2.41 Single-handled beaker with beaded rim. BB1, *3459, Area VI (005 124)* (Acc. no. 485)

Barrel-shaped or pear-shaped beakers with short everted rims and fairly slack profile

BK3.91 No handle evident, although one may have originally been present. Similar to the south-western type dated early Antonine to mid-third century (Holbrook and Bidwell 1991, type 12.1, 118, fig. 36). BB1 (also in SANDBRF), *C1033, Area III, Period 4* (Acc. no. 487)

Jars/cook pots

Jars with near-upright/slightly everted rims.

Similar to south-west Dorset types 23/24 (Holbrook and Bidwell 1991, 122, figs 38–9)

JC2.11 BB1, *C1509, Building VII, Period 2* (Acc. no. 310)

Jars with slightly everted rims

JC3.11 BB1, *C6032, Building IX, Period 2* (Acc. no. 665)

JC3.13 BB1, *C1336, Building VII, Period 2* (Acc. no. 314)

JC3.21 Similar to south-east Dorset type 12 (Holbrook and Bidwell 1991, 103, fig. 27), decorated with wavy burnished line. BB1, *4205, Building X (083 184)* (Acc. no. 666)

JC3.22 Similar to south-west Dorset types 23/24 (Holbrook and Bidwell 1991, 122, figs 38–9), decorated with intersecting wavy burnished lines. BB1 (similar forms also produced in BBC, SANDRF, SANDBRF, SANDRC, SANDRM, SANDMC, MISCRM), *2853, Area V (056 038)* (Acc. no. 315)

JC3.23 Decorated with wavy burnished line. BB1, *C1375, Building VII, Period 1* (Acc. no. 316)

JC3.24 With zig-zag burnish on the neck. BB1, *2876, Area V (052 081)* (Acc. no. 317)

JC3.31 BB1 (also in BBC, SANDMC, SANDOXC, SANDRF, SANDRM, SANDBL, MISCRM), *1501, Area IV (004 081)* (Acc. no. 667)

Jars with markedly splayed rim

JC4.11 Jar of near-equal girth, with obtuse cross-hatch burnish surmounted by a groove. Similar to Exeter forms dated late third-century to fourth-century (Holbrook and Bidwell 1991, 103, fig. 28, type 20.1b). BB1 (also in BBC, SANDRF, SANDBRF, SANDRC, SANDRM, SANDMC), *C1143, Area IV, Period 4* (Acc. no. 668)

JC4.21 Jar of narrow girth, with obtuse cross-hatch burnish. BB1 (also in BBC, SANDRC, SANDRM), *C1371, Building VII, Period 4* (Acc. no. 320)

Sunken-handled jars with everted rim

J10.41 BB1, *667, Area V (072 034)* (Acc. no. 669)

J10.42 BB1 (also in SANDRF), *4181, Area V (072 035)* (Acc. no. 670)

Everted lid-seated rims

J1.21 Rounded rim. BB1, *F37, Area V, Period 2* (Acc. no. 288)

Everted pulley rims

J4.12 Neckless jars with narrow mouths. BB1, *C1413, Building I, Period 5* (Acc. no. 671)

Small-necked jar or bowl with simple out-curving rim.

JW1.11 With marked shoulder. BB1 (also in MISCRM), *2019* (Acc. no. 672)

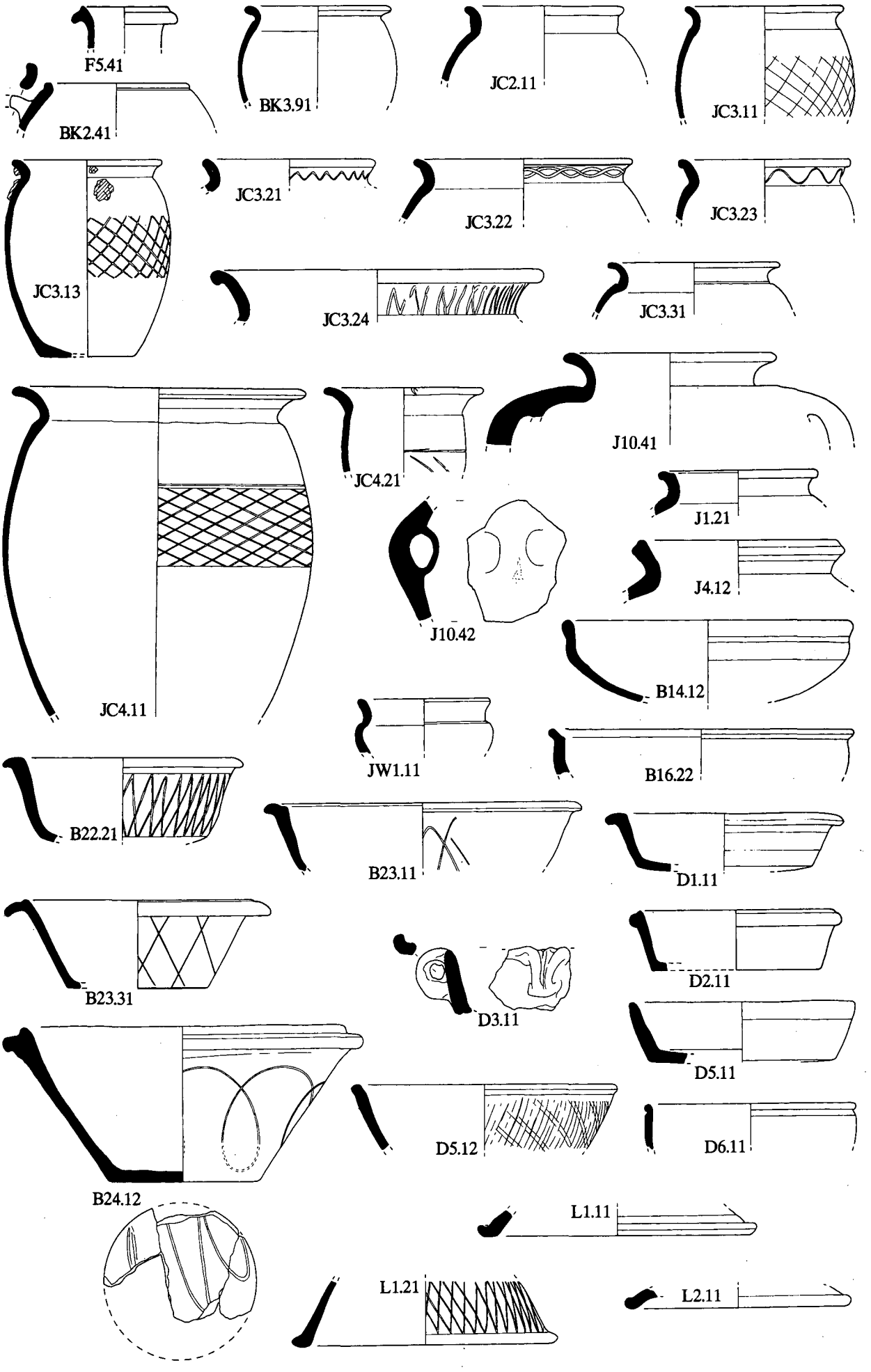


FIG. 41 Roman pottery: Black-burnished ware (BB1); scale 1:4

Carinated dish or shallow bowl with beaded rim

Similar to Exeter south-western BB1 type 49.2 (Holbrook and Bidwell 1991, 128, fig. 43, type 49.2) dated Conquest to the first half of the second century.

B14.12 BB1, *1353, Area IV (016 080)* (Acc. no. 673)

Hemispherical bowls with lid-seat rims

B16.22 With elongated rim and shallow groove. BB1, *2502, Area V (039 017)* (Acc. no. 490)

Straight-sided bowls with flat out-turned rims

B22.21 BB1 (also in BBC, SANDRF, SANDRM), *4196, Area VII (067 145)* (Acc. no. 491)

Conical bowls with flat grooved rims

Traditionally considered as intermediate to flat-rimmed and flanged bowls, although more recently seen as a residual version of earlier reeded and flanged bowls (Holbrook and Bidwell 1991, 98). Elsewhere in the South West they appear in secure late second-century contexts (Owen 1979, fig. 44.21), rather earlier than they reached northern sites such as Vindolanda (Bidwell 1985, 176), and at Exeter they were produced until the mid- to late third century (Holbrook and Bidwell 1991, 98).

Bead lower than flange

B23.11 BB1 (also in BBC), *4206, Area X (085 184)* (Acc. no. 518)

Flange lower than bead

B23.31 BB1 (also in BBC), *1186, Area III (076 046)* (Acc. no. 519)

Conical bowls with flanged rims

B24.12 Evidence from Exeter confirms Gillam's dating of this form as generally appearing *c.* A.D. 270, although its origin could be up to a quarter of a century earlier than this (Holbrook and Bidwell 1991, 99), while in the north, at Vindolanda, the earliest context for bowls with true flanges is dated 'no earlier than *c.* A.D. 275' (Bidwell 1985, 77). With scribbled decoration on base. BB1, *C1394, Building VII, Period 2* (Acc. no. 358)

Dishes with flat out-turned rims

D1.11 BB1, *C1512, Building VII, Period 2* (Acc. no. 350)

Dishes with flanged rims

D2.11 The type is broadly dated from first/mid-second century to the end of the industry. The earliest example from Exeter in south-east Dorset BB1 is from an early Antonine deposit (Holbrook and Bidwell 1991, type 54.1, 97. fig. 32.1), and there is an example from a context at Camerton dated A.D. 150–200 (Wedlake 1958, fig. 44.471). BB1, *F30, Area III, Period 2* (Acc. no. 352)

Plain-rimmed, handled dishes

D3.11 Uncertain if oval or round. BB1, *C1394, Building VII, Period 2* (Acc. no. 354)

Dishes with slightly beaded rims

D5.11 Slightly splayed walls. Similar to forms dated mid-second century to third century at Exeter (Holbrook and Bidwell 1991, type 57, 112, fig. 32). BB1 (also in SANDRF, SANDRM, SANDRC, BBC), *C1371, Building VII, Period 4* (Acc. no. 348)

D5.12 With cross-hatch burnish. BB1, *1375, Area IV (015 079)* (Acc. no. 674)

Dishes with markedly beaded rims

D6.11 With upright walls, a mid-second-century or later type. BB1, *1955, Area V (018 038)* (Acc. no. 488)

Lids with upturned rims

L1.11 Slightly beaded rim. BB1 (also in BBC), *2632, Area V (045 026)* (Acc. no. 484)

Near-triangular rim

L1.21 With cross-hatch burnish externally. BB1 (also in BBC), *F30, Area III, Period 2* (Acc. no. 493)

Lids with beaded/slightly beaded rims

L2.11 Pronounced bead. BB1 (also in SANDRF, SANDBRF, SANDRM, SVOXG, SVOXGR), *C6042, Building X, Period 2* (Acc. no. 675)

Other traded wares

Discussion

The remaining traded wares occurred in much smaller quantities (TABLE 3).

Savernake ware, most common in the earlier periods particularly Period 2 (FIG. 45), was represented by classic Savernake jar types with short near-upright necks and beaded rims (Swan 1975, fig. 4, forms 50–2), or more splayed necks (ibid., form 47), and neckless jars with beaded rims (ibid., fig. 3, form 30).

New Forest wares were most common in Period 4, although stray sherds were noted in earlier periods (TABLE 4; FIG. 45). Enclosed forms were far more common than open forms, and beakers were by far the most common class. Beakers with long in-sloping necks predominated (Fulford 1975, type 27.11–12), some possibly from indented beakers (ibid., types 30, 33, 36–9). The second common type was indented beakers, either with beaded (ibid., type 27.13–14) or fluted rims (ibid., type 27.1–10); both dated *c.* A.D. 270–340. The few flagons had flange necks with everted (ibid., type 8) or in-turned rims (ibid., type 11), the former dated *c.* A.D. 300–330 and the latter *c.* A.D. 300–350/70; and the only jug was a pulley-rimmed type dated A.D. 320–370 (ibid., type 18). A very narrow range of bowls was represented, copying samian forms Dr 38 (ibid., type 63) and less commonly Dr 37 (ibid., type 67), both dated *c.* A.D. 300–370. Only one form sherd in New Forest mortaria was noted, for which Fulford's publication has no exact parallels, but a similar type is published from Exeter (Hartley 1991, 211, fig. 87.B30).

Oxfordshire wares were not particularly common at Fosse Lane. Although some sherds are noted from Period 2 on, it was not until Period 4 that jointly the various fabrics represented more than 1% of the assemblage (FIG. 45). Red colour-coated wares were the main fabric, and very abraded sherds with no surviving colour coat were attributed to this category. The majority of vessels date to *c.* A.D. 270 or later. Bowls were the main vessel class represented (82%, FIG. 33a). The majority copied samian forms, most commonly a Dr 31 copy (27%) dated A.D. 270–350/400+ (FIG. 38, B9.11) (Young 1977, type C44/45) but the following forms were represented in smaller quantities: a Dr 38 copy (10%) dated *c.* A.D. 240–400+ and one of the most common Oxfordshire colour-coated forms (ibid., type C51); a Dr 37 copy (3.4%) dated A.D. 240–400+ and never particularly common (ibid., type C55); and a Dr 36 copy (1.8%) dated A.D. 270–400+ (ibid., type C48). Also present were types intermediate to Dr 37 copies and necked bowls dated A.D. 300–400+ (type C68), although they were very fragmentary. The second most common individual form however (20%) was the Young type C75 bowl dated *c.* A.D. 325–400+ and one of the most common colour-coated bowl types produced. Fragments from bowls similar to Young type C78, dated *c.* A.D. 340–400+ were also noted, together with wall-sided carinated bowls of Young type C82 dated A.D. 325–400+. Mortaria were the second vessel class represented (15%). Samian Dr 45 copies (type C97) were by far the most common variety (13%), not surprising as the type was produced from *c.* A.D. 240–400+ and is common elsewhere. The remainder comprised the flanged Young type C100 dated A.D. 300–400+ although more popular as the century progressed. More unusual was a small beaker similar to Young type C102.1, an uncommon form dating to the end of the fourth century.

White-ware mortaria was the second most common Oxfordshire product. Although only six sherds were stratified the dated forms indicated that, as might be expected, this was reaching the site well before the red colour-coated wares. Three forms made up the bulk of the assemblage. The most common (30.5%) was Young type M2 produced from *c.* A.D. 100 to *c.* A.D. 170, although the Fosse Lane example more probably dated to A.D. 100–140 (Kay Hartley pers. comm.). Second (25%) was Young type M22, the standard late Roman mortarium of the Oxford potteries, produced *c.* A.D. 240–400+ and the principal mortarium product from about A.D. 300 (25%). The third (24%) was Young type M18 dated A.D. 240–300. Other forms were noted in smaller quantities: Young types M17 (12%) and M6 (3.5%), and a

fragment most probably from a wall-sided mortaria (not illustrated) dated to *c.* A.D. 180–240 by Kay Hartley (pers. comm.). Finally, very small quantities of Oxfordshire white colour-coated ware were present, first appearing in Period 4, although only ten sherds were stratified. Mortaria predominated (83%) in types WC7, WC5 and a fragment similar to type C100. The only bowl was a fragment from a possible Dr 38 copy (not illustrated).

Catalogue – Shelly and white ware (FIG. 42)

J5.32 Hook-rimmed jar. SHELL, *u/s, north-west corner of Building XI* (Acc. no. 306)

B27.11 Wall-sided bowl with internal flange, similar to a New Forest type dated broadly A.D. 270–400 (Fulford 1975, fig. 23.89). WSMORT, *4656, Area III (082 049)* (Acc. no. 498)

B27.12 Wall-sided bowl dated *c.* A.D. 160–220 by Kay Hartley (pers. comm.). WSMORT, *3702, Area VI (023 161)* (Acc. no. 497)

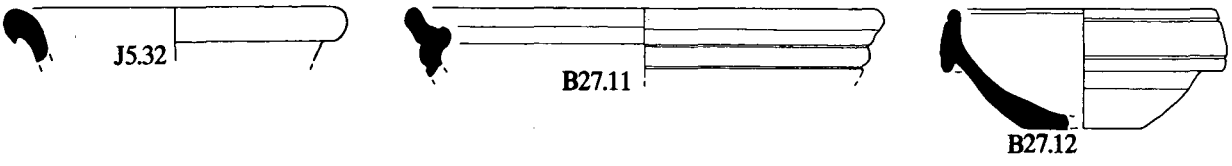


FIG. 42 Roman pottery: shelly and white wares; scale 1:4

Shell-tempered or 'calcite-gritted' ware was represented by a single unstratified rim from a characteristically late jar (FIG. 42, J5.32), which appeared to have been used with a lid for cooking as external sooting stopped abruptly around the rim. Harrold in Bedfordshire (Brown 1994) is the likely source.

The remainder of the traded wares comprised mortaria, all occurring in very small quantities (TABLE 3). Only two of the white colour-coated mortaria (MORTCCW) were stratified, one from Period 3 and one from Period 6. Three main mortaria types were represented; hammerhead (FIG. 43, M2.11), wall-sided (FIG. 43, M5.21, M5.31 and M5.32) and high bead with short, near horizontal flange (FIG. 43, M2.71). In addition a possible hammerhead mortarium was represented by a single fragmentary rim. The various parallels indicate a number of possible sources; South Wales or Gloucester (Hartley 1993, type 25, fig. 190) or more specifically south-east Gloucestershire/north Wiltshire (ibid., 392, fig. 196), and the Upper Thames Valley or Oxfordshire area (Leach 1982, forms 89–91). The dating of the forms indic- ates production from the mid-second century to the mid-third century or later.

All the Brockley Hill/Verulamium mortaria sherds were unstratified, but the single form sherd (FIG. 43, M1.12) was broadly Flavian in date (Kay Hartley pers. comm.). No forms were represented in the white sandy mortaria (WSMORT), thought to be from the same Hampshire source as the white-ware bowls discussed above (Kay Hartley pers. comm.). A small quantity of Caerleon mortaria was present, including a stamped rim (FIG. 43, M4.21). The ware is broadly dated *c.* A.D. 110–170/80 (Hartley 1993, 392, 411–14, fig. 194). Only two sherds were stratified, both from Period 2. Finally, a single, unstratified body sherd of Mancetter-Hartshill mortaria was also represented.

Catalogue – Traded and imported mortaria (FIG. 43)

Traded mortaria

Hammerhead

M2.11 Similar to forms in fabric Mi at Ilchester, also with a cream or white slip (Leach 1982, fig. 68, form 87), and thought to originate either in the Upper Thames Valley or the Oxfordshire area (ibid, 140). A

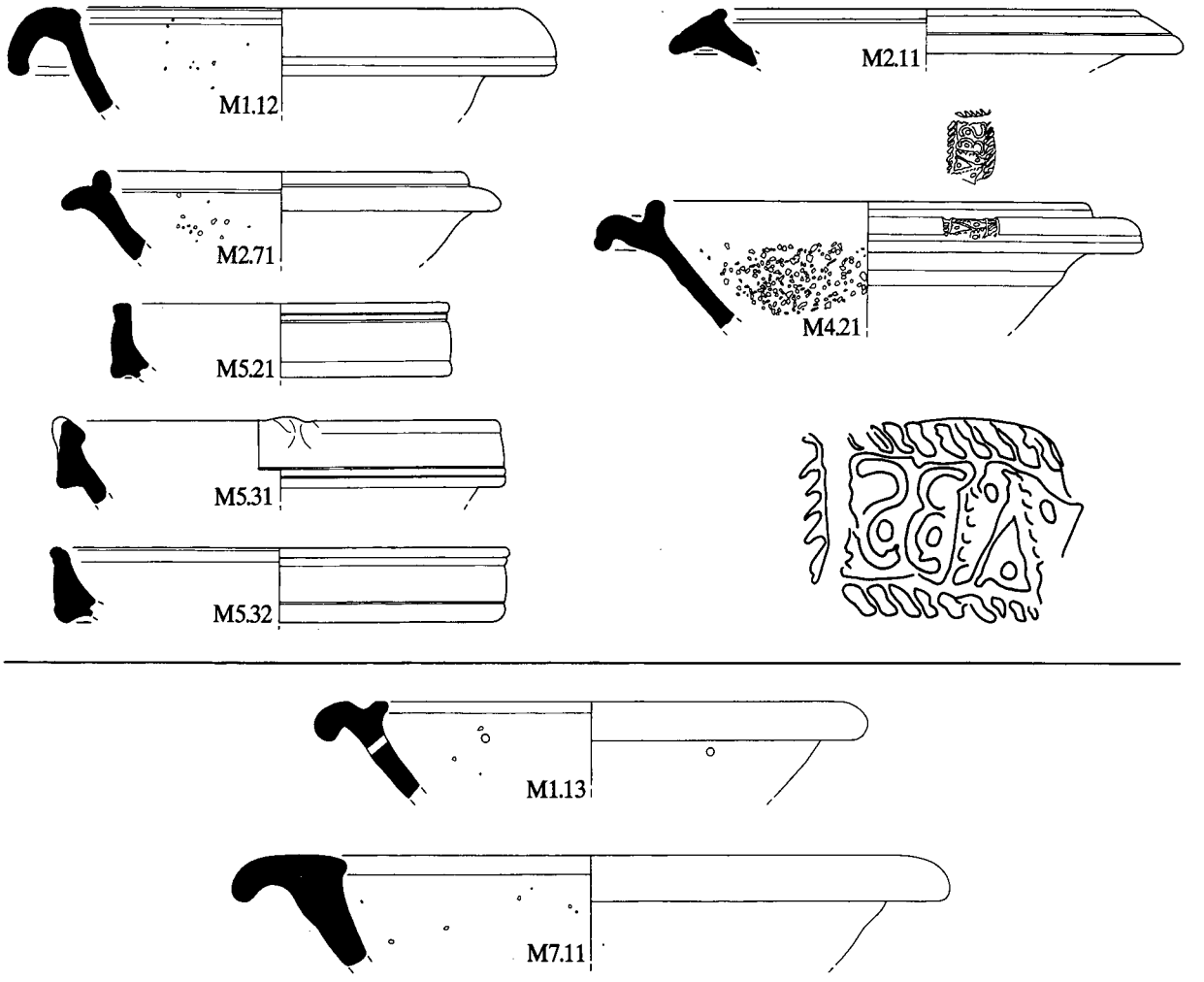


FIG. 43 Roman pottery: traded and imported mortaria; scale 1:4 (stamps 1:1)

mid-third-century or later date has been suggested for the Fosse Lane example (Kay Hartley pers. comm.). MORTCCW, *5374, Area IX (068 183)* (Acc. no. 510)

Wall-sided mortaria copying samian form DR 45

M5.21 Similar to type 7 at Usk dated A.D. 190–250 (Hartley 1993, fig. 196). A similar form was noted at Catsgore in cream-slipped mortaria (fabric 1) of unknown derivation, dated A.D. 150/80 or later (Leech 1982a, fig. 98.31). MORTCCW, *u/s* (Acc. no. 511)

Heavier-walled variant

M5.31 A similar form is noted at Ilchester in cream-white slipped fabric Mi (Leach 1982, fig. 68.91) Also perhaps related are the wall-sided mortaria from Chew Valley Lake (Rahtz and Greenfield 1977, fig. 102.128, 132), both in a coarse sandy fabric with a dark-grey core and orange-brown surfaces, the latter from Period 1, late first century to second century. Dated A.D. 160–240 by Kay Hartley (pers. comm.). MORTCCW, *4506, Area VI (068 124)* (Acc. no. 512)

M5.32 MORTCCW, *1683, Area IV (007 071)* (Acc. no. 516)

Bead above flange

M2.71 With a thick, stubby, curved flange and a slight internal groove, dated *c.* A.D. 250 or later by Kay Hartley. Although similar to vessels in the Usk/Kingsholm fabric (Hartley 1993, fig. 188.1) it was not a known Usk type. MORTCCW, *4551, Area III (9065 047)* (Acc. no. 509)

M4.21 With high bead, flange sharply down-turned with a distal bead. Retrograde stamp reading ABS, with dotted A and dots in the field (see Nash-Williams 1929, fig. 68, no. 37 for another of the same die). CAERLM, *C1001E, Area IV* (Acc. no. 628)

Bead lower than deep well-curved flange

M1.12 Flavian (Kay Hartley pers. comm.). MOVR, *5520, u/s* (Acc. no. 513)

Imported mortaria

Down-turned flange with a slightly higher, wide and flat bead, and a wide, deep channel next to the bead.
M1.13 Bushe-Fox type 22–30 (Bushe-Fox 1913, fig. 19) from northern France, dated A.D. 70–150 by Kay Hartley. With a circular rivet hole. MORTC1, *C6024/6027, Building IX, Period 3.1/2* (Acc. no. 515)

Wide. Almost flat flanged rim
M7.11 Gillam type 238 (Gillam 1970, fig. 24; Hartley 1977, Group II) from northern France, dated A.D. 65–100 by Kay Hartley. MORTC2, *Trench B, C1008 E, Area VI, Period 4* (Acc. no. 514)

Imported wares

RHEN: Central Gaulish Rhenish ware (Greene 1978; Symonds 1992)

Samian (P. Webster 1996)
SAMSG: South Gaulish
SAMCG: Central Gaulish
SAMEG: East Gaulish
SAM.MISC: indeterminate sherds

Amphorae
DR20: Dressel 20 (Peacock and Williams 1986, class 25)
GAUL4: Gauloise 4 (Laubenheimer 1985)
S/SPAN: Southern Spanish (Peacock 1971; 1974)
MISC.AMPH.: indeterminate sherds

MORTC1: continental mortaria from Northern France, similar to Usk mortarium fabric 10 (Hartley 1993, 391)

MORTC2: continental mortaria from Northern France, similar to Usk mortarium fabrics 1–4 (Hartley 1993, 390)

Amphorae and samian comprised the bulk of the imported wares. The only other imports were a few undecorated body sherds of Central Gaulish Rhenish ware, and a small quantity of mortaria imported from northern France during the late first or early second century (FIG. 43, M1.13, M7.11).

Roman amphorae
by David Williams

A total of 1,117 sherds of amphorae was recovered, representing 4% by count and 18% by weight of the overall assemblage (TABLE 3). More than 90% of these, by both sherd count and weight, belong to the globular-shaped Dressel 20 amphora (Peacock and Williams 1986, class 25). This particular form is the most commonly found amphora in Roman Britain on most types of site, and was made in southern Spain to carry the locally produced olive oil (Williams and Peacock 1983). Dressel 20 amphora first reached Britain at the end of the Iron Age, albeit in small numbers (ibid.). Importation was accelerated following the Roman Conquest and reached a peak during the mid-second century. Dressel 20 continued to be imported until shortly after the mid-third century, following a contraction of the Baetican olive-oil industry (Williams and Carerras forthcoming). However, a certain amount of Baetican olive oil still reached Britain during the late Roman period in the form of the slightly smaller Dressel 23 amphora, which was made in the same kilns that produced the Dressel 20 form (Carreras and Williams forthcoming). The only closely datable Dressel 20 sherds from Fosse Lane are two rims whose shape points to their importation sometime during the period A.D. 140–220 (Martin-Kilcher 1983, fig. 3.36). One occurs in Building IX, Period 3 (C6046) and the other is a plotted find from Area VII (4776).

Repairs to Dressel 20 vessels may have taken place on the site, as two bodysherds contain

lead rivets (C1310, Building VIIiii and C1518, Building VIIii), and two small sherds have rivet holes in them (C1508, Building VIIii). When emptied, these large vessels presumably made serviceable containers, although the residues of olive oil that remained behind on the internal walls must have restricted their use for food and liquids. In this context it is worth noting that a neck sherd from Area III has its edge deliberately smoothed over (F132, C1142). The rim of the amphora may have been removed to allow a better access to the inside of the vessel, and then the jagged edges of the neck smoothed over to facilitate this.

Five Dressel 20 handles were recovered. The end of one appears quite smooth and well-rounded (594, Area V). This may have been caused by a pounding or scraping action, which suggests that the short handle might conceivably have been used as a pestle. Two basal worts were also found, and two clay 'bungs' that were placed in the inside of the basal worts during manufacture. Three burnt bodysherds were noted amongst the plotted finds *(1735, Area IV; 3416 and 3424, Area VI).*

The remaining identified amphorae sherds all belong to two types, southern Spanish and south Gaulish, and only occur as bodysherds. The Spanish material most likely comes from the coastal region between Cadiz and Malaga and may represent a number of different types, but probably all were used to carry fish-based products such as garum, liquamen and salted fish, from the late first century B.C. to the second century A.D. (Peacock 1971; 1974). The French sherds probably come from the flat-bottomed wine amphora form Gauloise 4, which was imported to Britain from the second half of the first century to the early fourth century A.D. (Laubenheimer 1985).

Amongst the stratified material only a single sherd of amphorae, Dressel 20, is from a Period I context (TABLE 4). The majority of sherds, predominantly Dressel 20, occur in Period 2 coming mostly from Building VII (TABLE 5). No Gauloise 4 sherds occur before Period 4.

A full catalogue of the sherds is available in archive.

Samian ware
by Brenda Dickinson

The excavations of 1990 produced 874 samian sherds (TABLE 3) from an estimated total of 445 vessels. The material ranges in date from the middle of the first century to the first half of the third century and the fluctuations in the quantities of deposited material are normal for a British site occupied over these two hundred years. The assemblage is weighted towards the more common dish and cup forms.

All the first-century and some of the early second-century samian comes from the South Gaulish factory of La Graufesenque. This represents 9% of the samian by sherd count and 12% by vessel number. It includes a little pre-Flavian material, though scarcely enough to make the use of samian on the site certain before A.D. 70. Indeed, the evidence of the first-century decorated ware, with eight bowls of form 29 against 20 of form 37 suggests that an even later date is possible, perhaps in the mid-80s. However, as very small quantities are involved such speculation is not completely reliable. The only other possible South Gaulish piece might be second-century Montans ware, but the attribution is uncertain.

In the first decade of the second century the South Gaulish ware was supplemented by Central Gaulish samian from Les Martres-de-Veyre, which would have been the sole source of samian on the site for another ten years or so. The quantities of discarded material dropped during this period, almost certainly because the supply had also decreased, as it clearly had in many other parts of Britain. The drop is not as marked here as on some sites, since the proportion of South Gaulish ware is also small. The percentage of Les Martres ware, including a little Trajanic-Hadrianic and early Antonine material, is 4% by sherd count and 5% by vessel number.

By the Hadrianic or early Antonine period the quantity of discarded samian had increased

considerably, with the ready availability of material from Lezoux. The supply of samian from this pottery, which accounts for 76% of the whole by count and 72% by vessel number, continued until the later second century.

The East Gaulish samian, about 10% of the total by count and vessel number, all seems to be later than *c.* A.D. 160 and a small proportion of it is almost certainly third-century. Only two sources have been identified, the main one being Rheinzabern, whose distribution in Britain was much wider than that of any other East Gaulish factory. There is also a little Trier ware; the precise percentage cannot be determined, in view of the similarities between some of the fabrics of the two factories, but a large proportion of Trier ware would not be expected in the south-west of the province, on the evidence of large collections of samian from sites such as Caerleon, Caerwent and Carmarthen.

In the attributed decorated ware there seems to be a slight bias toward potters working down to the mid-Antonine period, but the plain ware suggests that the greater proportion of the samian was deposited in the later second century (Appendix 2A). This discrepancy could be explained in two ways: either, and perhaps more likely, the sample of attributed decorated ware is too small to be significant, or the proportion of decorated to plain ware dropped in the later second century.

The plain forms certainly suggest a bias towards the later Antonine period. Comparing some of the commonest Hadrianic and early Antonine vessels on the site with their later second-century counterparts, we find the following ratios:

18/31 to 31	2:11
18/31R to 31R	13:28
27 to 33	2:13

Although the date-ranges for the production of forms 27 and 33 overlapped, it is reasonably certain that all the examples of form 33 from this site are Antonine, and mostly from the later half of the period.

In this comparison form 31R, which is the only form which is unlikely to be earlier than A.D. 160, fares the worst. This factor, combined with the comparative scarcity of forms in the same date range, such as 45, 79 and Ludowici Tg, and the absence of form 80, suggests that the decline in the quantities of discarded samian began in the last three decades or so of the second century. It may have been accompanied by a decrease in the proportion of decorated to plain ware. Even so, it seems that samian continued to be used on the site into the third century.

The status of the site cannot be adduced from the samian, though there are hints of economies being made. The proportion of decorated to plain ware is not unusually low for Britain and there are no abnormal signs of the prolonged use of vessels, which is normally shown by unusually heavy wear on footrings. However, heavy wear on some rim sherds suggests secondary use of sherds as smoothing tools and a few vessels other than purpose-made mortaria had been used for grinding. Sixteen vessels showed signs of repair by riveting.

The amounts of samian recovered from the various buildings on the site were generally small and little in the way of dating can be drawn from them. For what it is worth, first-century samian underlay Buildings VII to X, but not, apparently, Buildings I and IX. For the same reason, it is not clear whether anything can be implied from the predominance of Hadrianic and early Antonine material from Building IX, or of mid- to late Antonine material from Building X.

The small quantity of burnt samian from Building VII included a dish of form 31R, which should not be earlier than *c.* A.D. 160. However, none of the potentially third-century (East Gaulish) ware was burnt.

Similarly, the final silting of Ditch F318 (Area VII) contained heavily burnt Central Gaulish ware of mid- to late Antonine date and an unburnt East Gaulish sherd.

One deposit in Building X (6033) produced mid-Antonine samian which was almost

entirely heavily burnt. It seems to be a consistent group, with several dishes of the transitional form 18/31R-31R, which would not be much later than A.D. 160, and one of form 31R, which could be contemporary with them. Several of these dishes had metallic accretions.

Although the bulk of this assemblage is residual it is significant in that it is broadly speaking typical of a British site occupied continuously from the first to the third century. In general terms, and on a larger scale, it is comparable with the samian recovered from the 1985 excavations at Ilchester (Leach and Ellis 1992). It is also not dissimilar to the slightly larger collection from the 1990–1 excavations at Alchester.

Distributions of samian by date-range and by period are tabulated in Appendix 2.

Catalogue (FIG. 44)

1. Form 37, South Gaulish. A thin-walled bowl, with bird (Hermet 1934, pl. 28.57) and a scroll with a palmate leaf (ibid., pl. 6, 7). *c.* A.D. 70–90. *C1302, Building VII, Period 2* (Acc. no. 454)
2. Form 37, heavily burnt, Central Gaulish. Sherds from a bowl in the style of Casurius ii. The surviving panels contain: i) a saltire, with large fan-shaped motif (Rogers G7) at the top, cordate leaves (Rogers J56) at the sides and a small fan-shaped motif (Rogers G259) at the bottom. ii) Leaves, as in i), flanking a single-bordered festoon. One of the festoon panels has a sea-horse (D.33 = 0.33). Nearly all the details are known for Casurius and they all occur on a bowl in his style from London (Stanfield and Simpson 1958, pl. 135, 36), which could be from the same mould as the Fosse Lane example. *c.* A.D. 160–190. *C1309 and C1509, Building VII, Period 2* (Acc. no. 461)
3. Form 37, heavily burnt, East Gaulish. The triangular leaf on a baluster motif, here between medallions of different sizes, is on a stamped bowl of Comitialis from Bogel (Wiesbaden Museum), with an ovolo which he used on moulds at Trier. Later ?second-century. *C1349, Building VIII, Period 4* (Acc. no. 458)
4. Form 37, Central Gaulish. A bowl in the style of Butrio, showing his usual guide-line among the decoration. The panels include: i) Venus at an altar (D.209 = 0.323) and a seated Jupiter (D.5 = 0.4), over a sea-horse (D.34a = 0.48). ii) A figure with draperies, probably standing on a mask (not known to Oswald). Bowls of form 30 with stamps of Butrio feature Jupiter (Jort: Stanfield and Simpson 1958, pl. 57, 651) and the sea-horse (London: ibid., 654). *c.* A.D. 125–145. *3477, Area IV (012 078) and 1611 in F102, Area IV* (Acc. no. 471)
5. Form 37, Central Gaulish. Two sherds, almost certainly joining, from a bowl in the style of Docilis i. The panels include: i) a tree (Rogers N8), bird (not in Oswald), hare (D.950a = 0.2116) and arrow-head motif (part of Rogers U295). 2) Cupid (D.246 = 0.404 variant) and Apollo in chariot (D.73 = 0.117). The use of horizontal astragali at the ends of bead-rows is typical of Docilis's style (*cf.* Stanfield and Simpson 1958, pl. 91.1). The Apollo is on a stamped bowl from Lancaster (ibid., pl. 92.16). The tree and bird are on an unprovenanced bowl in his style in Peterborough Museum. *c.* A.D. 135–160. *C6032, Building IX, Period 2* (Acc. no. 462)
6. Form 37, heavily burnt, Central Gaulish. Three joining sherds from a bowl with sixteen panels, probably consisting of four panels repeated, thus: i) a single-bordered festoon and a lion (0.1403A). ii) A leaf (Rogers J40) on a striated column, or spindle. iii) A cup (not in Rogers), in a triple-bordered medallion, over a mask (0.1270A). iv) = ii). The large beads, festoon, and leaf all appear on stamped bowls of Casurius ii. The mask is on bowls in his style from Corbridge (Stanfield and Simpson 1958, pl. 136.52), the Wroxeter Gutter (Atkinson 1942, pl. 36.69) and Carrawburgh. The medallion is on a bowl in his style from Bewcastle (Stanfield and Simpson 1958, pl. 138.1), which has a plainware stamp of Apolaustrus in the rim. Though by no means typical of Casurius, the Fosse Lane bowl is likely to be by him, or an associate. A sherd from the same context, also heavily burnt, does not join the bowl, but has one of Casurius' ovolos (Rogers B208) and so strengthens the attribution. *c.* A.D. 160–190. *C6032, Building IX, Period 2* (Acc. no. 465)
7. Form 37, South Gaulish. A winding scroll has two rows of pointed leaf-tips in the bottom of a lower concavity, and a basal zone of S-shaped gadroons. The gadroons are on a signed bowl of M. Crestio from Wiesbaden and the rest of the decoration would not be inconsistent with his style. There is too little evidence to confirm the attribution, but the date-range is not in doubt. *c.* A.D. 75–100. *F3, Trench E* (Acc. no. 475)
8. Form 37, Central Gaulish. A double medallion contains a cup (Rogers T5). The cup was used by several Antonine potters at Lezoux, but Catussa is probably the only one who also used the medallion. It occurs on a stamped form 37 from York (Sheffield Museum), and the cup is on a signed jug mould from Lezoux. *c.* A.D. 160–190. *F18, Trench E* (Acc. no. 468)
9. Form 37, Central Gaulish. The bottom of the decorated area includes two double-bordered medallions separated by a striated column (of the same general type as Rogers P37). Hadrianic or early Antonine, on the evidence of fabric and glaze. *F30, Trench A* (Acc. no. 469)

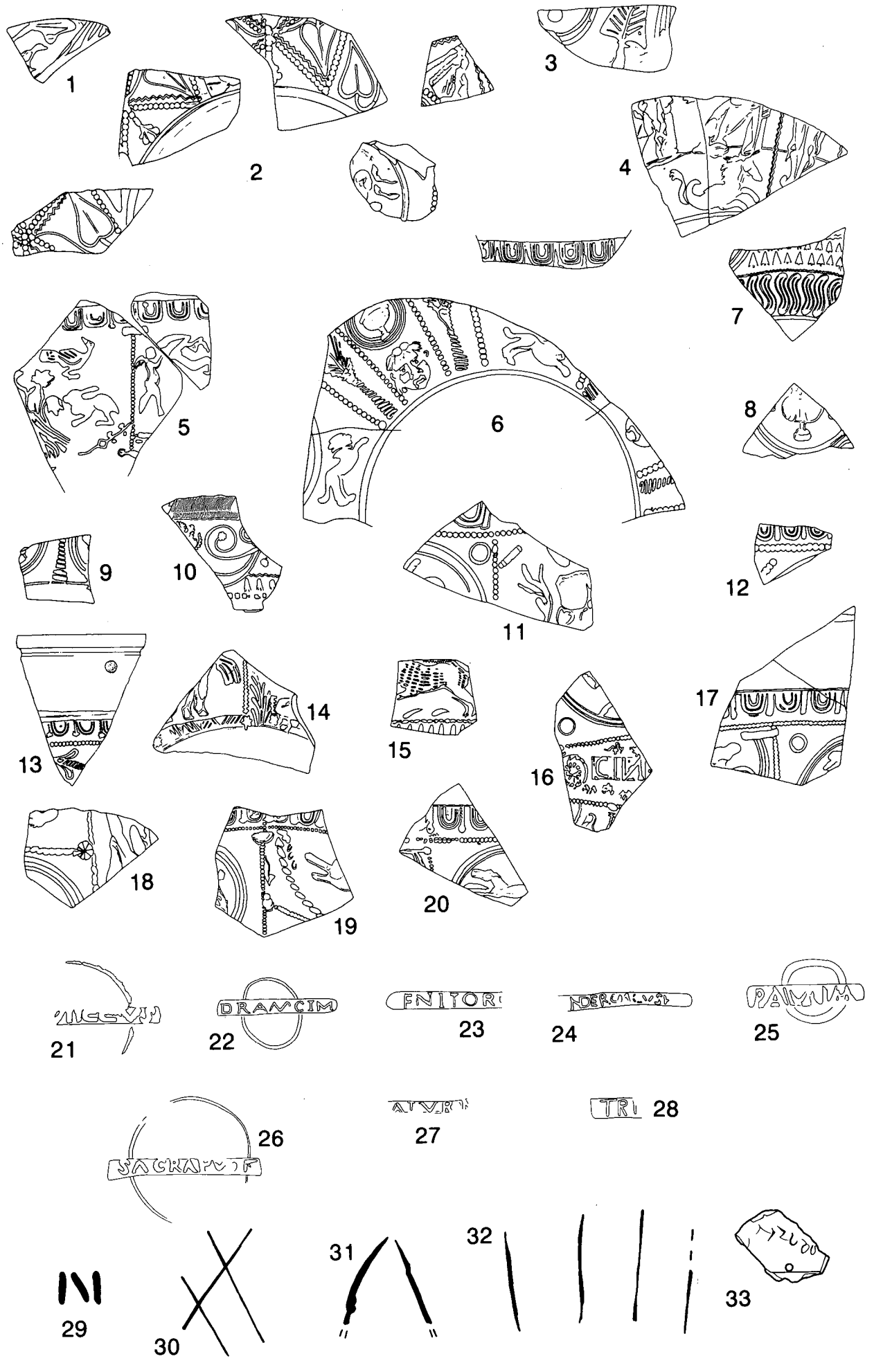


FIG. 44 Roman pottery: decorated samian; scale 1:2; samian stamps; scale 1:1; sherds with graffiti; scale 1:2

10. Form 29, South Gaulish. The scroll in the upper zone has a chestnut leaf and spirals in the upper concavity. The divided lower concavity, with its row of pointed leaf-tips, recalls the style of Iustus i, who used this device on both forms 29 and 37, but the leaf does not appear in his rather limited repertoire. *c.* A.D. 70–85. *195, Area V (085 023)* (Acc. no. 470)
11. Form 37, burnt, Central Gaulish. The ovolo (Rogers B223, or a variant) was used at Lezoux by Casurius ii and the large beads also suggest his work. The panels contain: i) an eagle (D.981 = 0.2167 variant) in a double medallion with fainter inner border, and a corner ring. ii) Apollo (D.56 = 0.93). The last occurs on a bowl in the style of Casurius from Birdoswald and a similar, though larger, medallion is on a bowl in his style from Water Newton. For the eagle, cf. a bowl from Corbridge (Stanfield and Simpson 1958, pl. 134.28). The use of rings in the corners of panels is not common for Casurius, but occurs on an unstamped bowl from Haltonchesters. No parallel has been found in Casurius' work for the placing of an astragalus across the corner of a panel. *c.* A.D. 160–190. *343, Area V (066 042)* (Acc. no. 446)
12. Form 37, Central Gaulish. The ovolo (Rogers B160), the large beads and the panel with double medallion and corner astragalus (Rogers R18) were all used at Lezoux by Do(v)eccus I. *c.* A.D. 165–200. *1470, Area IV (007 080)* (Acc. no. 459)
13. Form 37, Central Gaulish (Les Martres-de-Veyre). Part of a lead rivet survives in the plain band above the decoration. The ovolo (Rogers ?B6) and trilobed motif (Rogers ?G171), here impressed horizontally, occur on a bowl in the style of the mould-maker X-13, in a group of samian from Regis House, London, which came from the Second Fire deposit. *c.* A.D. 100–120. *1497, Area IV (005 082)* (Acc. no. 447)
14. Form 37, South Gaulish. A panelled bowl with: i) a maenad (D.353 = 0.704), over flat-topped grass tufts. ii) A vertical series of overlapping trifid motifs. iii) A bird to left, looking back (blurred). The decoration is divided up by sharp zig-zag borders, ending in six-petalled rosettes. The maenad is on two bowls from Newstead (Curle 1911, 217, 1 and 2) and on bowls with an ovolo used in the Flavian-Trajanic period, from Carlisle, Caer Llygwy and York. The grass tufts, here continuing below the basal ridge, are on a stamped bowl of the Flavian-Trajanic potter, Sabinus iv, from London (BM M589). *c.* A.D. 85–110. *1515, Area IV (021 085)* (Acc. no. 453)
15. Form 37, South Gaulish. Zonal decoration, with a boar to left (not in Oswald), over grass blades, and a basal zone of pointed palisades. The last occurs on bowls of Frontinus, including one from La Graufesenque (Hermet 1934, pl. 117.14). *c.* A.D. 75–100. *1588, Area IV (004 087)* (Acc. no. 450)
16. Form 37, Central Gaulish, with a large label stamp of Cinnamus ii (CIN[NAMI] retr. die 5b), used at Lezoux. This stamp, used widely on bowls in Cinnamus' developed style, occurs often at forts on Hadrian's Wall, but is commoner in Antonine Scotland. *c.* A.D. 150–180. The panels include: i) a large double-bordered medallion and a corner ring. ii) A rosette (Rogers C98) and the stamp, amid leaf-tips. iii) An animal or ?animals. *1675, Area IV (009 073)* (Acc. no. 448).
17. Form 37, Central Gaulish. A bowl in the style of Cinnamus ii, with his ovolo 3 (Rogers B143) and panels with: i) a sea-horse (D.36 = 0.52) in an incurving, double-bordered festoon. ii) Probably a draped woman (D.205 = ?0.325), in a double medallion. The sea-horse is on form 37 from London (Stanfield and Simpson 1958, pl. 160, 42) and the other figure is on form 30 from Gaul (ibid., pl. 159, 23). *c.* A.D. 150–180. *1697, Area IV (014 069)* (Acc. no. 452)
18. Form 37, Central Gaulish. A panelled bowl, with: i) a man on a mask (D.327 = 0.537). iia)A double festoon; iib) a sea-horse (D.33 = 0.33). Both vertical and horizontal borders consist of rhomboidal beads (Rogers A36) and a rosette (Rogers C171) masks the joins. All the details occur on a stamped bowl of Mercator iv (Stanfield and Simpson's Mercator 2: 1958, pl. 145, 4) from Corbridge. The arrangement of the decoration is identical, but the two bowls cannot be shown to be from the same mould, as the placing of the rosette is slightly different. *c.* A.D. 160–190. *2966, Area II (072 078)* (Acc. no. 451)
19. Form 37, Central Gaulish. A panelled bowl, with: i) a small, double-bordered medallion. iia) A sea-cow (D.29 = 0.42) in a leafy festoon (Rogers F8). A cup (Rogers U64) is at the top of the panel border and an acanthus (Rogers ?R25) is placed vertically at the junction of vertical and horizontal borders. This bowl is in the Donnaucus-Sacer style, with decoration composed of elements used first at Les Martres-de-Veyre by X-13, a potter who supplied moulds to Donnaucus, and by Sacer i, who worked mainly at Lezoux. The sea-cow is on a bowl from Les Martres in the Donnaucus style (Terrisse 1968, pl. XXXV.10032). The medallion and festoon are on different bowls in the same style from the London Second Fire deposits (Regis House), both from Les Martres. The astragalus and cup are on another bowl from London (Stanfield and Simpson 1958, pl. 46.529). X-13 either moved from Les Martres to Lezoux, or sold moulds there, and this bowl is in Lezoux fabric. The festoon is more common at Lezoux, where it was used by some members of the Sacer i group. *c.* A.D. 125–140. *3918, Area VI (038 188)* (Acc no. 472)
20. Form 37, Central Gaulish. A bowl in the style of Cinnamus ii, with his ovolo 2 (Rogers B231) and panels with: i) an incurving, double-bordered festoon. ii) A horse (D.908 = 0.1976) in a double-bordered medallion. The festoon and horse are on stamped form 37s from London (Stanfield and Simpson 1958, pl. 160.35, 163.70, respectively). The medallion is on a stamped form 30 from Corbridge (ibid., pl. 160.41). *c.* A.D. 150–180. *4614, Area III (077 043)* (Acc. no. 449)

Samian stamps

Each entry gives: potter (i, ii, etc., where homonyms are involved), die number, form, reading of the stamp, published example, pottery of origin, date, discussion and site context. (a), (b) and (c) indicate:

(a) Stamp attested at the pottery in question.
(b) Potter, but not the particular stamp, attested at the pottery in question.
(c) Assigned to the pottery on the evidence of fabric, distribution and/or form.

Ligatured letters are underlined.

Catalogue (FIG. 44)

21. Do(v)eccus i 11a 38 or 44 [DO]VIICCVS Lezoux (b). Do(v)eccus i is one of the latest Lezoux potters whose wares reached Britain, and most of his output is after *c.* A.D. 165. His stamps are common on Hadrian's Wall and on vessel types which were not normally made before *c.* A.D. 160, such as 31R, 79 and 80. This stamp, however, has been found at Rough Castle, and is likely to be from his earliest die. *c.* A.D. 160–180. *1646, Area IV (015 071)* (Acc. no. 464)
22. Draucus ii 1b 33, heavily burnt, DRAVCIM Lezoux (b). Draucus ii's output includes forms 27, 79/80 and Ludowici Tg/Tx, and one of his other stamps has been noted several times in Antonine Scotland. This gives him a range *c.* A.D. 150–180, but 1b is probably not earlier than A.D. 160, since it appears not to have been used on form 27 and does not occur in Scotland. *c.* A.D. 160–180. *C6033, Building X, Period 2* (Acc. no. 455)
23. Genitor ii 5b 33 GENITOR[F] Lezoux (a). This stamp occurs in a group of samian from a pottery store at Corbridge, which contained vessels of mid- to late Antonine date (AA3 IV (1908), 270, fig. 10, with pp. 247–58). It is also known from Catterick, Chesterholm, and was used on forms 31R and 79. *c.* A.D. 160–200. *308, Area V (064 043)* (Acc. no. 445)
24. Indercillus 1a 15/17 or 18/31 NDERCILLVSF (Terrisse 1968, pl. LIII, first stamp) Les Martres-de-Veyre (a). The initial I of this stamp and the final letter, inexplicable, rarely show. The forms and fabrics associated with it are Trajanic, and there are two examples from the London Second Fire deposits, *c.* A.D. 100–125. *2522, Area IV (020 098)* (Acc. no. 467)
25. Paullus iv 5a 33, heavily burnt, PA\VLIM (Bull. de l'Inst. Liegeois LXVII, 1949–50, 34) Lezoux (b). Some of the earliest stamps recorded for this potter are from the Rhineland, the Birdoswald Alley and a group of samian from a pottery shop at Castleford destroyed by fire in the 140s. 5a occurs at the fort at Housesteads and in a burial at Riempst (Belgium), with stamped vessels of early to mid-Antonine Lezoux potters and two Banassac potters. *c.* A.D. 135–160. *C6033, Building X, Period 2* (Acc. no. 456)
26. Sacrapus 3a 38 or 44 SACRAPV (Terrisse 1954, 175, 77) Les Martres-de-Veyre (a). One of Sacrapus' dies was used at both Les Martres and Lezoux, but stamps from this particular die are apparently always associated with fabrics of Les Martres. The form suggests Hadrianic-Antonine date. *c.* A.D. 130–150. *Trench B, u/s* (Acc. no. 460)
27. Saturninus ii 8a 31 [S]ATVRN[INI] (Dickinson 1986, p. 195, 3.186). There are many examples of this stamp in the group of late Antonine samian recovered off Pudding Pan Rock, and it was used on some of the later second-century samian forms, such as 31R, 79R and 80. *c.* A.D. 160–200. *C1501, Building VII, Period 3* (Acc. no. 463)
28. Tritancus/Tritaucus 1a 18/31 or 31 TRI[TAVCIM] Lezoux (b). A stamp of a minor Central Gaulish pottery, noted elsewhere on an Antonine form 31. Stamps from another of his dies occur on forms 18/31R and 27, and so his career will not have continued beyond A.D. 160, or so, and he may have started work under Hadrian. *c.* A.D. 130–160. *C6035, Building IX, Period 3* (Acc. no. 473)

Sherds with graffiti
by Roger Tomlin

Catalogue (FIG. 44)

Two samian sherds, both inscribed after firing

29. Base sherd of Central Gaulish samian, much worn; cut into the underside of the foot ring: N.*534, Area V (076 040)* (Acc. no. 474)

30. Base sherd of East Gaulish samian, much worn; incised underneath: two parallel lines cut by a third at 60°. Only one-quarter of the base survives, so that it is not possible to say whether the graffito is complete or which way up it should be read. It could be read as H or (more likely) A, but is most likely a mark of identification. *824, Area V (070 035)* (Acc. no. 457)

Two coarse-ware sherds, both inscribed after firing

31. Rim sherd of a BB1 jar; incised on the wall just below the rim: two opposed diagonal lines. Possibly the upper half of O; an uninscribed space seems to follow, so perhaps [...]O. *295, Area III (081 063)* (Acc. no. 492)
32. Rim sherd of a BB1 copy jar; incised on the rim: five vertical strokes, the last two damaged. It is not possible to tell whether the graffito is complete. Probably a numeral or part of a numeral, i.e. a note of capacity. *460, Area III (084 064)* (Acc. no. 516)

Coarse-ware sherd, inscribed before firing

33. Body sherd in the fine micaceous grey ware (SANDBRF) with a small round hole pierced before firing, and part of a graffito inscribed with a fine point. The graffito is in cursive letters written diagonally downwards in relation to the horizontal axis of the jar. In such a small sample of cursive, each letter can bear more than one interpretation, and it is not possible to eliminate the various possibilities. That said, the graffito looks like: [...]FRVDO[...]. Only the horizontals survive of F, with possible trace of the vertical stroke. There is damage to the left of it, but it may be the first letter. The whole graffito is presumably a potter's signature; more likely a personal name than a place or date. *C1323, Building VIII, Period 6* (Acc. no. 489)

Wares of uncertain source

Miscellaneous red wares
MISCRF Fine
MISCRM Medium
MISCRC Coarse

White/Cream wares
CREAMF Fine
CREAM Medium
CREAMC Coarse

SANDBL Black sandy ware with limestone
Hard, with a grey core (10YR 5/1), reddish-yellow margins (5YR 6/6) and dark-grey surfaces (5Y 4/1). Inclusions of abundant, well-sorted white and clear quartz <0.1 mm, together with sparse red ?sandstone, black ?ironstone and limestone.

OOLIM Oolitic limestone-tempered ware
Medium hardness, light grey throughout (Munsell 10YR 7/2). A micaceous fabric with moderate inclusions of ooliths and sparse fragments of ill-sorted grog <1 mm.

Discussion

These were mainly fragmentary oxidised wares, probably in fact relating to existing oxidised and reduced fabrics, which were roughly sorted by coarseness of inclusions. The few form sherds in the fine category included copies of samian bowls Dr 38 and Dr 31, a L5.22 type lid (FIG. 37), a D4.11 type plain-rimmed dish (FIG. 37) and beaker fragments. The medium category included cook pots of BB1 types JC3.22 and JC3.31 (FIG. 41), assorted jars or bowls (FIG. 41, JW1.11; FIG. 36, B4.11 and FIG. 38, B9.11) and again fragmentary beakers. No form sherds were noted in the coarse category. A single rim from a small cornice-rimmed beaker (FIG. 40, BK3.73) in a reduced colour-coated ware most probably belongs with the colour-coated wares discussed above.

The small collection of white wares was also subdivided on the basis of coarseness into fine, medium and coarse. The fine ware being represented by a fragmentary, simple-rimmed lid (not illustrated), and the coarse wares represented only by body sherds. Two forms in the medium range (FIG. 42, B27.11 and B27.12) were possibly from a source in Hampshire (Kay Hartley pers. comm.). The other forms represented were a fragmentary bowl with an elongated bead rim, a ring-necked flagon with a flaring neck, and a lid, none of which is illustrated.

A limestone-tempered ware (SANDBL) occurred in small quantities, the eight stratified sherds coming from Periods 3–6. Forms included a J10.31 type jar (FIG. 34), imitation BB1 cook pots of types JC3.11–2 and JC3.31 (FIG. 41), a plain-rimmed D4.11 type dish (FIG. 37) and a fragmentary sherd from a beaker. Finally, a few sherds in an oolitic limestone-tempered ware were noted, one of which was stratified in a Period 3 deposit. The only forms were a jar with a plain out-curving rim (not illustrated) and a BB1-type flanged-rimmed bowl (FIG. 36, B24.11).

DISCUSSION

Dating

Although some well-dated parallels were found for the local forms, the majority could only be very broadly dated. The best dating evidence therefore was usually provided by the traded and imported wares.

The samian provided the main source of evidence for the early periods, small quantities of south Gaulish ware indicating activity on the site by the mid-80s if not a little earlier. Further evidence of first-century activity was provided by the presence of Savernake ware, Brockley Hill/Verulamium mortaria, and some forms in the local fabrics (for example FIG. 37, P1.1, P2.1).

BB1, the most common fabric, provided dating evidence throughout the site sequence, as to a lesser extent did BB1 copies in local fabrics. The dating of BB1 forms has traditionally been based on evidence from the northern frontier, but in the South West some forms seem to appear earlier and continue in use longer. Many of the BB1 jars from Fosse Lane were very fragmentary, insufficient profile surviving to estimate the maximum vessel girth. Dating was often therefore entirely reliant on the angle of the rim, making it difficult to assign dates with confidence. Types JC3.4 (FIG. 34) and JC4.1 (FIG. 41) in particular may cover a wider date range than has been suggested. The most common decoration on jars was the third-century or later obtuse cross-hatch burnish, while twelve body sherds decorated with diagonal burnish could be from jars similar to those dated *c.* A.D. 360 or later at Catsgore (Leech 1982, nos 422–3).

BB1 flange-rimmed bowls and splay-rimmed jars (FIG. 41, B24.1 and JC4.2) reflected late third-century to fourth-century activity. The best evidence for the later periods, however, was provided by Oxfordshire and New Forest wares, although even in these forms, examples were often only broadly dated. Fourth-century Oxfordshire forms comprised C44/45, C68, C75, C78 and C82 (Young 1977) and New Forest forms types 18, 63 and 67 (Fulford 1975).

To assess the dating evidence by site period, key groups were identified which, it was hoped, would provide the most reliable data. These were as follows:

Period 1: Area VII
Period 2: Buildings VII and X
Period 3: Building IX
Period 4: Buildings I, VIII, IX; Area IV
Period 5: Buildings I, VIII; Area IV

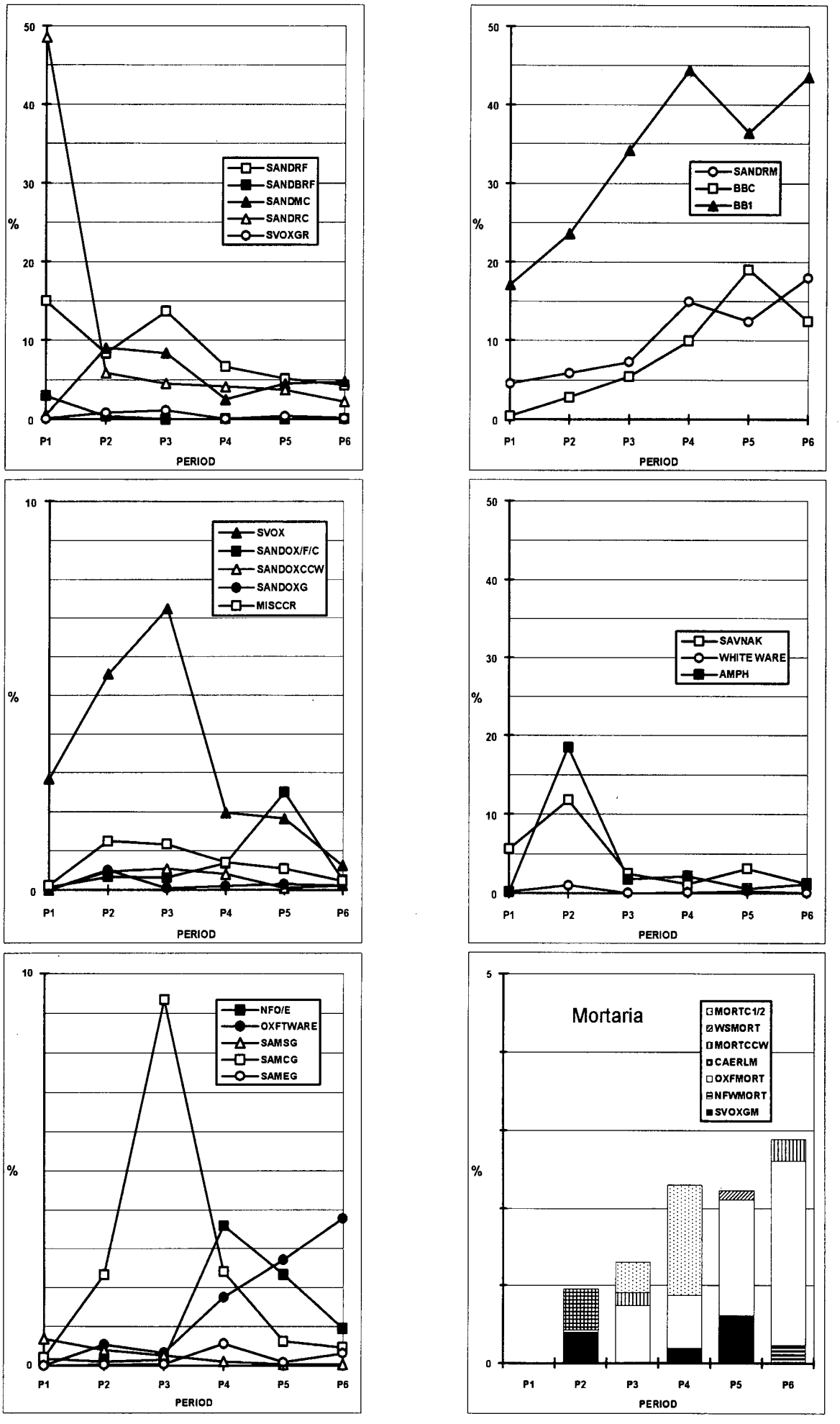
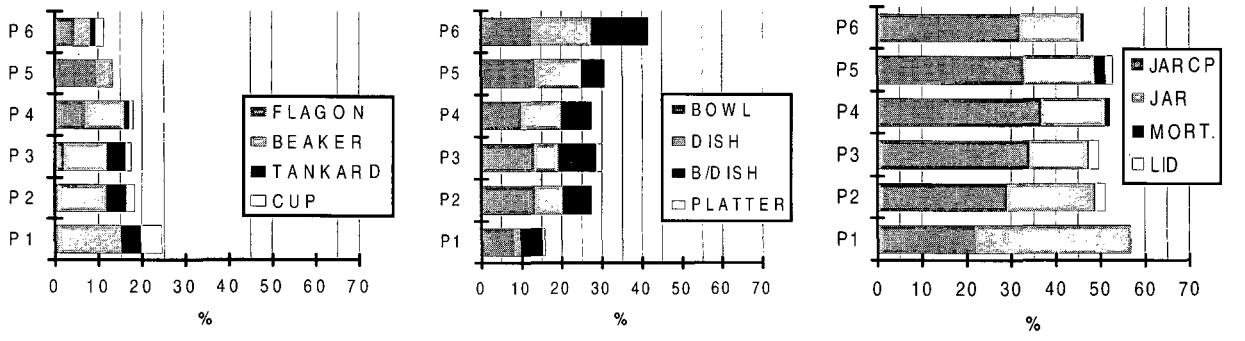
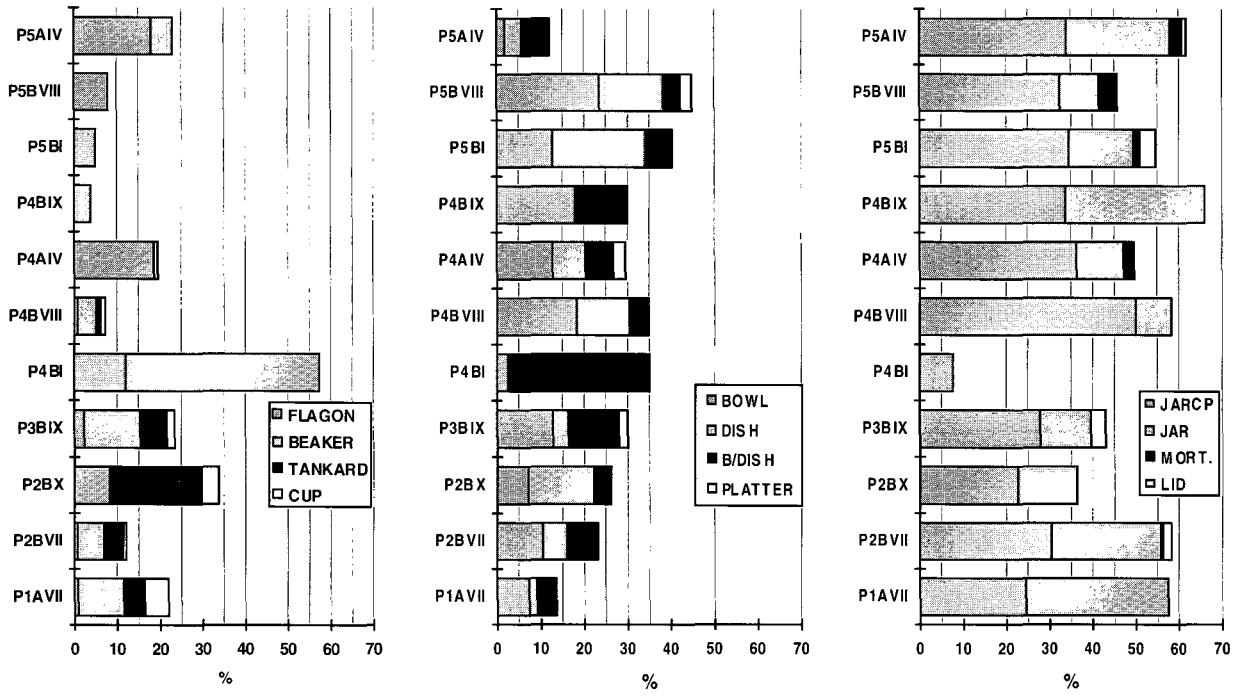


FIG. 45 Roman pottery: chronological patterns of ceramic deposition by fabric (% weight)



46a Vessel classes by period
Total rims extant per Period: P1 - 540; P2 - 3610; P3 - 2771; P4 - 2972; P5 - 2369, P6 - 880



46b Vessel classes by period/key group
Total rims extant per Period/Key Group: P1AVII - 481; P2BVII - 1922; P2BX - 198; P3BIX - 1890; P4BI - 117; P4BVIII - 845: P4AIV - 133; P4BIX - 466; P5BI - 624; P5BVIII - 381; P5AIV - 438
(A = Area; B = Building)

FIG. 46 Roman pottery: occurrence of vessel classes by period and period/key group (% rim EVE)

Distinctions between periods tended to be evident in broad trends, for example changing proportions of fabrics and forms, rather than clear-cut divisions. Residual forms and fabrics were present throughout the sequence, although it was often difficult to distinguish these in the less well-dated regional wares. There was frequently also a degree of contamination by later material. These assemblages are quantified by fabric in TABLE 5 and by vessel class in FIG. 46.

TABLE 5 ROMAN POTTERY: SUMMARY OF FABRICS BY KEY GROUP

	P1			P2						P3			P4		
	Area VII			Building VII			Building X			Building IX			Building I		
Fabric Name	Qty	Wt (g)	% Rim	Qty	Wt (g)	% Rim	Qty	Wt (g)	% Rim	Qty	Wt (g)	% Rim	Qty	Wt (g)	% Rim
SANDRF	87	755	125	323	1977	327	34	171	36	208	1800	380	2	7	3
SANDBRF	17	160	21	14	116	45	1	19	7	0	0	0	0	0	0
SANDRM	20	146	52	176	1477	221	8	39	5	91	746	80	3	29	0
SANDMC	2	14	0	298	2809	189	2	23	0	102	1009	151	1	3	0
SANDRC	115	2614	11	75	871	151	22	93	7	91	611	68	2	2	0
BBC	9	24	0	18	216	26	32	249	0	72	494	97	17	448	27
SVOXGR	1	4	0	20	172	56	0	0	0	44	208	32	0	0	0
SANDRL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SANDRGC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SVOXG	20	152	47	80	649	170	11	93	51	201	1188	355	1	3	0
SVOXORG	0	0	0	0	0	0	0	0	00	0	0	0	0	0	0
SVOXGM	0	0	0	3	146	10	0	0	0	0	0	0	0	0	0
SANDOXF	1	1	0	5	30	0	0	0	0	5	57	19	0	0	0
SANDOX	0	0	0	2	6	0	1	5	0	0	0	0	0	0	0
SANDOXCCW	0	0	0	2	53	0	4	61	0	12	71	0	0	0	0
SANDOXC	0	0	0	3	47	0	0	0	0	2	21	0	2	17	0
SANDOXG	0	0	0	2	124	0	1	22	0	1	8	0	0	0	0
MISCCR	0	0	0	7	28	8	5	59	16	33	203	355	5	21	24
TOTAL REGIONAL	272	3870	256	1028	8721	1203	121	834	122	862	6416	1217	33	530	54
BB1	93	880	166	553	5502	505	76	550	68	418	3432	346	38	423	0
SAVNAK	13	301	12	109	4061	13	0	0	0	16	405	0	0	0	0
NFE	0	0	0	7	36	0	0	0	0	1	28	0	10	198	29
NFO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NFM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OXFW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OXFCC	0	0	0	5	17	0	3	26	0	0	0	0	0	0	0
OXFCCR	0	0	0	2	29	0	0	0	0	2	30	0	0	0	0
OXFCCW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SHELL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MANCH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VERM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAERLM	0	0	0			0	0	0	0	0	0	0	0	0	0
MORTCCW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WSMORT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL TRADED	106	1181	178	676	9645	518	79	576	68	437	3895	346	48	621	29
MISCR	5	26	13	14	130	12	2	23	0	11	38	0	0	0	0
CREAM	2	10	0	1	16	0	0	0	0	2	8	0	0	0	0
SANDBL	0	0	0	0	0	0	0	0	0	6	36	0	0	0	0
OOLIM	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0
TOTAL UNKNOWN SOURCE	7	36	13	15	146	12	2	23	0	20	85	0	0	0	0
RHEN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SAMSG	6	33	7	3	24	5	7	38	0	8	48	8	0	0	0
SAMCG	4	11	27	57	460	184	13	111	8	87	1605	319	5	106	34
SAMEG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SAM.MISC.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DR20	0	0	0	54	6699	0	3	40	0	5	299	0	0	0	0
GAUL4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S/SPAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MISC.AMPH	0	0	0	2	17	0	0	0	0	0	0	0	0	0	0
MORTC1/2	0	0	0	0	0	0	0	0	0	1	76	7	0	0	0
TOTAL IMPORTED	10	44	34	116	7200	189	23	189	8	101	2028	334	5	106	34
TOTAL POTTERY	395	5131	481	1835	25712	1922	225	1622	198	1420	12424	1897	86	1257	117

TABLE 5 (cont)

P4									P5								
Building VIII			**Building IX**			**Area IV**			**Building I**			**Building VIII**			**Area IV**		
Qty	Wt (g)	% Rim	Qty	Wt (g)	% Rim	Qty	Wt (g)	% Rim	Qty	Wt (g)	% Rim	Qty	Wt (g)	% Rim	Qty	Wt (g)	% Rim
46	428	49	9	28	0	56	695	105	4	96	18	10	37	0	26	200	54
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81	1191	45	11	190	45	84	753	150	17	347	0	56	716	43	54	580	62
40	448	59	0	0	0	4	20	0	7	36	0	2	5	0	35	425	44
28	275	14	0	0	0	17	224	0	3	180	3	2	11	0	16	234	31
94	818	113	4	42	28	17	129	17	134	1798	363	74	898	64	31	505	52
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	1	6	0	1	14	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	70	0	6	60	0	3	14	0	0	0	0	0	0	0	6	49	3
0	0	0	1	63	13	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	36	4
0	0	0	0	0	0	3	17	19	0	0	0	9	74	0	1	11	5
0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
12	81	0	0	0	0	0	0	0	0	0	0	4	6	0	0	0	0
0	0	0	0	0	0	0	0	0	17	441	0	0	0	0	0	0	0
1	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1	5	0	1	3	0	0	0	0	0	0	0
309	3335	280	31	383	86	185	1857	291	183	2901	384	159	1754	107	171	2054	255
457	5112	511	27	194	47	72	1280	100	185	2340	208	180	1633	205	118	1173	149
5	55	0	2	131	0	0	0	0	0	0	0	2	40	0	7	574	18
3	16	20	0	0	0	5	54	0	9	181	0	16	278	0	2	11	0
0	0	0	0	0	0	1	52	18	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1	26	11	0	0	0	0	0	0	2	36	5
6	107	0	1	1	0	0	0	0	4	15	0	2	8	8	4	5	0
4	88	7	1	1	0	8	105	31	21	295	22	13	206	29	2	12	3
1	7	0	1	1	0	0	0	0	1	49	10	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	1	26	12	0	0	0
476	5385	538	32	328	47	87	1517	160	220	2880	240	214	2191	254	135	1811	175
20	148	0	1	2	0	2	6	0	2	5	0	4	60	0	12	51	0
1	6	0	0	0	0	0	0	0	1	10	0	1	16	10	0	0	0
1	6	0	0	0	0	0	0	0	0	0	0	1	15	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	160	0	1	2	0	2	6	0	3	15	0	6	91	10	12	51	0
0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
0	0	0	0	0	0	1	5	0	0	0	0	1	4	10	0	0	0
32	322	27	0	0	0	2	21	0	0	0	0	1	1	0	4	17	8
1	9	0	0	0	0	5	108	9	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	5	57	6	0	0	0	0	0	0	0	0	0
3	41	0	2	446	0	0	0	0	0	0	0	1	16	0	1	29	0
1	8	0	0	0	0	0	0	0	0	0	0	0	0	0	1	51	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	19	0	1	10	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	399	27	3	456	0	13	191	15	0	0	0	4	22	10	6	97	8
846	9279	845	67	1169	133	287	3571	466	406	5796	624	383	4036	381	324	4013	438

The stratified assemblages

In each of the following period discussions a summary of the evidence by period is followed by summaries by key group. A quantified summary of the forms occurring in each key group can be found in Appendix 3.

Period 1 (with key group from Area VII)

The Period 1 assemblage dated broadly to the late first to second century. BB1 jars most commonly had acute cross-hatch burnish (nineteen sherds) and the most common jars (6% by Rim EVE) were first- to second-century types (FIG. 34, JC3.4; FIG. 41, JC3.2). All the BB1 dishes and bowls were of the earlier flat-rimmed type (FIG. 41, D1.1, B22.2). The single most common form (17%) was a first- to second-century regional ware type (FIG. 35, JW2.2, JW2.3). Other contemporary regional forms included a number of bowls (FIG. 36, B1.1, B3.1), including London ware types (FIG. 36, B20.1, B20.2). The assemblage produced seven sherds of South Gaulish and four sherds of Central Gaulish samian. The South Gaulish ware from the key group was dated A.D. 70–95, although the latest piece was a sherd of Central Gaulish ware dated Hadrianic or early Antonine.

Some later contamination was evident even in this earliest period assemblage: for example BB1 jars dating to at least the late third century (FIG. 41, JC4.1, JC4.2), a single BB1 sherd with obtuse cross-hatch burnish, and a sherd of New Forest ware.

Period 2

The Period 2 assemblage provided the largest stratified group (30% of the stratified pottery by weight). Residual first- and early second-century pottery dominated the key groups and the collection as a whole; BB1 jars of this date were the most common forms. Characteristically late second- to early third-century BB1 included the single, groove-rimmed bowl discussed below, four sherds with right-angled cross-hatch burnish, and fifteen sherds with obtuse cross hatch dated *c.* A.D. 223–225 or later. The majority of body sherds, however, were decorated with acute cross hatch (82 sherds). There was a small number (2%) of flange-rimmed bowls (FIG. 41, B24.1), generally dated *c.* A.D. 270 or later. Occasional examples have been dated up to a quarter of a century earlier than this (Holbrook and Bidwell 1991, 99) so these need not necessarily be intrusive. The presence of diagnostically later forms in BB1 (FIG. 41, JC4.1) and regional wares (FIG. 34, F5.1, J1.1), and a handful of sherds in Oxfordshire and New Forest ware, indicated some later contamination.

In the Building VII collection, the latest samian was dated *c.* A.D. 160–190 (FIG. 44.2). The BB1 included a single late second- to early third-century groove-rimmed bowl (not illustrated) of a type intermediate to B23.1 and B23.3 (FIG. 41). Flange-rimmed bowls occurred in equal quantities with the earlier flat-rimmed dishes (FIG. 41, B24.1 and D1.1 respectively). Obtuse cross-hatch burnish was almost as common as acute (eight and nine sherds respectively), and late second-century to early third-century right-angle cross hatch was also noted (two sherds). By far the most common form was a first- to second-century BB1 jar (FIG. 34, JC3.2), which may by this period have been residual. The majority of the datable regional forms were late first- to second-century types (FIG. 35, JW2.2, JW2.3; FIG. 36, B14.1, B20.1/2, B21.1) and the samian included residual South Gaulish ware dated *c.* A.D. 70–90. Evidence of later contamination was provided by certain forms (FIG. 41, JC4.1; FIG. 34, F5.1) and small quantities of Oxfordshire and New Forest ware.

None of the pottery recovered from Building X post-dated the second century. The latest samian was mid- to late Antonine. The most common BB1 form was a first- to second-century jar (FIG. 41, JC3.2), and only acute cross-hatch burnish was represented (seven sherds). Flat-rimmed dishes were common, but there were no plain-rimmed dishes or late second- to early third-century groove-rimmed bowls. The datable regional forms were also

first- to second-century types (FIG. 35, JW2.2; FIG. 36, B14.1, B20.1). The most common individual form was a residual mid- to late first-century tankard (FIG. 38, T1).

Period 3

The assemblage was dominated by first- and second-century material although characteristically late third- to fourth-century pottery was also present. The BB1 group included flange-rimmed bowls (FIG. 41, B24.1) and late jar types (FIG. 41, JC4.1, JC4.2), the former being proport- ionately more common than in Period 2. The proportion of obtuse to acute or right-angle cross hatch was markedly higher than in Period 2 (61:65:5 sherds respectively). The Oxford ware group included two very fragmentary bowls dated A.D. 270–400 and A.D. 325–400 (Young 1977, types C75, C48), and a single sherd of New Forest ware. In the local/regional wares, a jar similar to a later Roman type from Camerton was noted (Wedlake 1958, fig. 49, types 645–8).

Building IX produced a few BB1 flange-rimmed bowls (FIG. 41, B24.1), six rims from late third-century BB1 jars (FIG. 41, JC4.1) and a single sherd from the latest BB1 jar type (FIG. 41, JC4.2). However, the high level of residuality indicated by a number of BB1 and regional forms is reflected in the proportions of obtuse to acute or right-angle cross hatch, which vary markedly from the proportions for the period overall (8:43:3 sherds respectively). A few sherds of both Oxford and New Forest ware were present, but no datable forms and the regional wares included a number of later third- to fourth-century jars (FIG. 35, J14.5, JW2.1, JW4.2).

Period 4

This produced the second largest stratified group (21% of the stratified assemblage by weight). Significant quantities of Oxfordshire and New Forest wares appear for the first time in this period (TABLE 4; FIG. 45), suggesting that most of the finds of similar wares from earlier period assemblages may have been intrusive. The majority of Oxfordshire forms could only be broadly dated A.D. 240–400+ (Young 1977, C55, C97, M22), but characteristically later forms were present: a fragmentary bowl dated A.D. 325–400 (ibid., type C75) and a bowl dated A.D. 270–350/400 (ibid., C44/45). New Forest fine-ware forms included a type 27 beaker dated *c.* A.D. 270–340 (Fulford 1975), a type 63 bowl dated *c.* A.D. 300–370 and a type 18 jug dated *c.* A.D. 320–370 (ibid.). In BB1 the most common jar was the later third- to fourth-century type JC4.1, and both JC4.2 jars and flange-rimmed bowls (FIG. 41, B24.1) were more common than in previous periods. Sherds with obtuse cross hatch were now twice as common as acute, while the number with right-angle cross hatch remained small (67:34:7 sherds respectively). Plain-rimmed D4.1 type dishes (FIG. 37) were noticeably more common in this period. This may reflect a chronological trend although the form is not closely datable. A number of regional pottery forms supported a later date, including vessels paralleled by later Roman types at Chew Valley, Camerton, Ilchester and Lamyatt Beacon (FIG. 34, F5.1, J1.1, J5.4, J12.1; FIG. 35, JW4.2, JW2.1). Some residual material was evident.

The key groups (Buildings I, VIII and IX and Area IV) produced assemblages with a similar dating profile to that for the period as a whole.

Period 5

The Period 5 assemblage from the site as a whole and from the key groups (Buildings I, VIII, Area IV) produced little evidence of a later date than Period 4. Form JC4.1 was again the most common BB1 jar, although the latest jar type (FIG. 41, JC4.2) was poorly represented. Obtuse cross-hatch burnish was more common than acute or right-angle cross hatch (59:17:11 sherds respectively), and a sherd with diagonal burnish was noted from Building VIII. Flange-rimmed bowls were common, and the proportion of plain-rimmed dishes was higher than in all preceding periods. The proportion of Oxfordshire wares increased slightly while the proportion of New Forest wares decreased (TABLE 4; FIG. 45). The latest Oxfordshire

tablewares were bowls dated A.D. 325–400 (Young 1977, type C75) and A.D. 270–350/400 (ibid., C44/45). The mortaria forms, C97, M18, M22, WC7 (ibid.), were broadly dated A.D. 240–300 or 400, the latter two being most common in fourth-century assemblages. The New Forest fine-ware forms (Fulford 1975, beaker type 27, bowl type 63) provided a similar date to Period 4, as did the local/regional wares (FIG. 34, F5.1, J5.4).

There was no diagnostically later fourth-century or post-Roman pottery in the post-Roman Period 6. However, some features of the period assemblage may be chronological indicators. There was a marked increase in both flange-rimmed bowls (FIG. 41, B24.1) and the less closely dated plain-rimmed dishes (FIG. 41, D4.1). The proportion of Oxfordshire wares increased yet again while the proportion of New Forest wares decreased (TABLE 4; FIG. 45). All the Oxfordshire forms were produced later than at least *c.* A.D. 270 (Young 1977, C44/5, C75, C48).

Regional trends

Fosse Lane was located near the boundary of two *civitates*, in so far as we can reconstruct them, the Durotriges to the south and the Belgae to the north (Millett 1990, fig. 16). Pre-Roman evidence suggests that the division was a long-standing one (Cunliffe 1991). The pattern of Iron Age ceramic style zones presented by Cunliffe (ibid., fig. 20.4) and Millett (1990, fig. 2) places the site in a zone between two major styles. If pre-Roman patterns of ceramic and coin distributions can be used to suggest social groupings in the south and west (ibid., 15–16), can similar patterns be seen continuing in the Romanized assemblage? One of the key research aims was to assess if and how the location of the site within the region was reflected in the ceramic assemblage and whether the pottery might provide evidence for cultural influences or economic links. The existence of substantial published assemblages from a range of neighbouring sites spanning both political/style zones provides a growing body of data to facilitate such research. Analysis of vessel forms and decorative motifs, rather than a focus solely on fabrics, can provide data comparable with assemblages from sites within and beyond the immediate area (Darling 1989; Fulford 1975, 85–6).

In the early Roman period a wide range of influences can be seen in the forms represented in the assemblage. Some early forms (FIG. 35, JW2.2; FIG. 36, J16.1, B1.1, B1.2, B18.1; FIG. 37, D9.1, P1.1, P2.1) reflect a Belgic influence, perhaps indicating a movement of potters from the South East as has been proposed for the origin for Severn Valley (P. Webster 1976, 41) and Savernake wares (Swan 1975, 45). A further south-eastern influence can be seen in the presence of late first- to second-century 'London type' wares (FIG. 36, B20.1, B20.2; FIG. 38, B10.2), characterised by inscribed decoration. Such types are not generally common in north Somerset, although parallels can be found in Exeter assemblages (Holbrook and Bidwell 1991, 165).

Some second-century forms reflect influences both from the south and Wales to the west. Kay Hartley suggests links between Shepton Mallet, Exeter and Caerleon mortaria. The link may have been the simple one that Shepton Mallet potters came from Exeter and some from Shepton went to Caerleon. But whatever the link was, the fact is that three different potteries worked in the same, very unusual tradition. Caerleon wares were widely distributed across the Bristol Channel in the second decade of the second century until *c.* A.D. 160–170 (P. Webster 1992, 114–15), and similarities with slipped wares from the Shepton Mallet kilns have been noted by P. Webster (1993, 256–7). Examples of this were evident in the Fosse Lane assemblage, for example the barbotine-decorated bowl B10.21 (FIG. 38).

The principal regional influences at Fosse Lane tend however to come from the south and north of the settlement, presumably reflecting the importance of the Fosse Way. Current knowledge of Roman pottery distributions suggests that Fosse Lane lies broadly at the interface between the BB1 dominated South West and, to the north, settlements dominated by Severn Valley wares. Before the excavations, Shepton Mallet was best known as a

production site for Severn Valley wares and mortaria (Scarth 1865–6; P. Webster 1976). At Fosse Lane, however, the combined Severn Valley wares represent only 4% by count of the assemblage (TABLE 3). This contrasts markedly with the 70% from Sidbury, Worcester (Darlington and Evans 1992, 34), at the heart of the Severn Valley area, and the 55% from Wroxeter towards the northern periphery (C. Evans 1994, 78). Defining 'Severn Valley ware' at Fosse Lane is not straightforward; a number of forms in the Severn Valley fabric show a range of non-Severn Valley influences, and the characteristic Severn Valley tankard form also occurs in grey ware. The small quantities could reflect the paucity of early features excavated, although plenty of residual late first- to second-century grey-ware forms are represented in the assemblage.

The Severn Valley ware industry was the sole producer of tankards in Roman Britain. Severn Valley ware tankards are not common in the Fosse Lane assemblage. The fact that they were produced at Shepton Mallet, however, indicates a relationship to the Severn Valley industry potters. This could either have been a cultural influence relating to their function, or a movement of potters. Webster notes parallels for tankards in Durotrigan forms (P. Webster 1975, 231–6). From this he infers a Durotrigan influence in the development of Severn Valley ware, or even a movement of potters from the south (P. Webster 1976, 41). This influence could have touched Shepton Mallet on its way north. Alternatively, the influence could have come from the north when the Severn Valley pottery industry was established and expanding.

The Fosse Lane assemblage differs markedly from classic Severn Valley assemblages in its low proportion of oxidised as opposed to reduced wares. At settlement sites in the Severn Valley heartland, grey wares, including BB1, represented less than 15% of the regional wares (Darlington and Evans 1992, table 1), and at Wroxeter on the northern periphery only 10% (C. Evans 1994, table 9). At Fosse Lane grey wares, including BB1 and Savernake ware, represent 80% by count and 70% by weight, which is more in line with the pattern for the south, and in fact most of the country apart from the Severn Valley itself. At Lamyatt Beacon, grey wares represent about 90% (Leech 1986, 285), and at Bath *c.* 75% (Green and Young 1985, 148). Analysis of assemblages from sites close to the border between the Dobunnic and the Catuvellaunian territories has shown a sharp fall-off in Severn Valley ware, and thus an increase in grey wares, to coincide with the suggested boundary (J. Evans 1994). As more fully quantified data is published from the South West a similar pattern may be discernible marking the border between Dobunnic and Belgic territories.

Turning to the evidence of BB1 from the south, the overall proportion at Fosse Lane (37% by count, 30% by weight) is broadly similar to proportions noted at sites in the Chew Valley (J. Evans forthcoming). This is markedly lower than sites closer to the BB1 source, for example 50–60% at Ilchester (Leach 1982, 142–3), a possible distribution point for the ware (Leech 1986, 285), 76% at Bradley Hill (Leech 1981, 238), and more than 70% at Catsgore (Leach 1984, 25; Leech 1982a, 159, table 2). The proportion is also significantly lower than the 60% noted at Lamyatt Beacon, less than 5 miles away to the south-east (Leech 1986, 285). If ease of access to the source were the key factor one would not expect such a sharp decline between the latter site and Fosse Lane. Although factors such as site function and site chronology must be taken into account (Lamyatt Beacon had a more specialised function), this sudden drop is more likely to reflect the *civitas* boundary that ran between these two sites.

The Fosse Lane assemblage was best paralleled by the north Somerset assemblages, the Congresbury kilns (Usher and Lilly 1964), Chew Valley Lake (Rahtz and Greenfield 1977), Chew Down and Worberry Gate (J. Evans forthcoming), Henley Wood (Watts and Leach 1996), Gatcombe villa (Branigan 1977), Pagans Hill (Rahtz and Harris 1958), and Camerton on the Fosse Way, a similar settlement to Shepton Mallet (Wedlake 1958).

Similarities between the late third- to early fourth-century grey wares of south-east Wales and north Somerset have been noted (Spencer 1988, 114–18; Barnett *et al.* 1990, 143–4; J. Evans forthcoming). The relationship may be either cross-channel, perhaps reflecting the

movement of potters (Spencer 1988, 117; P. Webster 1993, 233), or north–south affecting the two areas independently (Barnett *et al.* 1990, 143–4). There are parallels between the Fosse Lane pottery and Welsh assemblages, for example the occurrence of grey-ware tankards, of wide-mouthed jars (FIG. 35, JW4.1; Spencer 1988, fig. 46.18), of type F5.1 flagons or handled jars (FIG. 34; Barnett *et al.* 1990, fig. 5.4–5), and of more unusual forms such as Fosse Lane form J16.1 (FIG. 36; ibid., fig. 7.43; Spencer 1988, fig. 49.59–62 and fig. 51 showing a similar form from Gatcombe).

As in the early Roman period, the pottery suggested continuing links between Fosse Lane and Exeter and south Wales. The presence of combed or brushed decoration on some grey-ware forms provided a parallel between Exeter (Holbrook and Bidwell 1991, fig. 58.8.1 c and d, 155), Fosse Lane (FIG. 35, JW2.11, JW2.13) and South Wales (P. Webster 1993, 232, fig. 108). It has been suggested that the Exeter examples may have been imported from south Wales, as this decoration is not generally common in the South West (Holbrook and Bidwell 1991, 155). Such decoration can be seen on grey wares from Biglis near Caldicot, Gwent (P. Webster 1988, fig. 13.85) and from Caldicot itself (Spencer 1988, fig. 49.73).

A number of parallels were also noted with other sites to the south: Lamyatt Beacon (Leech 1986), the *civitas* capital at Ilchester (Leach 1982) and the roadside village of Catsgore (Leech 1982a; Ellis 1984).

Perhaps the most important conclusion to be drawn from the pottery is that the Fosse Lane ceramic profile was closer to Belgic sites on the other side of the Mendips than to the Durotrigan sites in the Somerset floodplain. This continued the pre-Roman pattern (Cunliffe 1991, fig. 8.10). The character of the Fosse Lane assemblage seems to reflect the 'border' location of the town, with distinctions being noted in assemblages to the north and south, but ultimately a family resemblance to sites to the north. At the same time it reflected the influence of the two major routeways, the Fosse Way and the River Severn, which allowed a range of influences to reach the site from different directions.

Trade

Just over half the pottery deposited was supplied by non-local producers. Analysis of the pottery indicated the sources supplying the site (TABLES 3, 4; FIGS 45, 47). Assessing changes in supply through time was unfortunately limited by the relatively small amount of stratified pottery, although some patterns could be seen. Dorset BB1 was the only traded ware reaching the site in any quantity, although various other sources were represented. The single most common fabric from Period 2, and representing 44% by weight by Period 4 (TABLE 4; FIG. 45), its occurrence was not as dominant as at sites further south and thus closer to the source.

A mainly coastal distribution has been suggested for BB1 (Allen and Fulford 1987, 282–4, fig. 20), although the Fosse Way on which the settlement was situated is another obvious trade route. As has been noted above, the relative proportions of BB1 at Fosse Lane are significantly lower than at Lamyatt Beacon just to the south, but situated a little way off the Fosse Way (Leech 1986, 285). Marketing patterns in this case seem to have been influenced more by regional boundaries than proximity to the road.

The complexity of marketing patterns is marked as much in the vessel classes traded as in the fabrics represented. At the Beeches, Cirencester, for example, the majority of dishes and bowls were in BB1, but jars were predominantly in local grey ware (Keely 1986, 173). A similar though less pronounced pattern of selective marketing can be seen at Fosse Lane. BB1 bowls and dishes were more than twice as common as their grey ware counterparts, but represented only 50% of all the bowls and dishes compared to 70% at the Beeches. As at the Beeches, grey-ware jars were more common than BB1 jars, representing 54% as compared to 43% of all jars used, although jars were still the most common BB1 form represented.

Severn Valley wares are known to have been produced at Shepton Mallet in the late first to second century (Scarth 1865–6; P. Webster 1976). The potters are thought to have

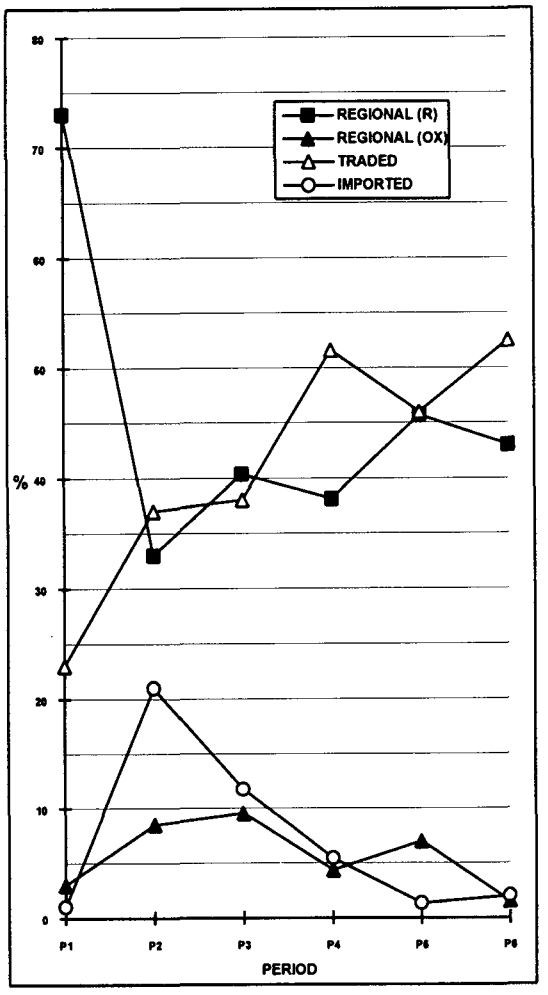


FIG. 47 Roman pottery: sources, quantified relative proportions (% weight)

specialised in the production of mortaria and, like the potters from another peripheral Severn Valley production site near Birmingham, tankards (P. Webster 1976, 38). Tankards are one of the most widely traded Severn Valley forms and the main type traded to Hadrian's Wall (ibid., 38). The Fosse Way is thought to have been the principal route for marketing Shepton Mallet tankards and mortaria (Hodder 1974, 346, fig. 6). The evidence from Fosse Lane may indicate that specialist marketing of the Shepton Mallet tankard generally by-passed the local population. They are not common at Fosse Lane, where they never represent more than 4% of any period assemblage.

Early non-local suppliers included the Savernake industry, supplying jars perhaps as containers for another commodity, and the Brockley Hill/Verulamium industries which supplied small quantities of mortaria. A range of other mortaria producers provided small quantities at later stages: Caerleon some time from the mid- to late second century to the mid- to late third century, and kilns in the Thames or Oxfordshire area around the mid-third century. A few sherds of New Forest mortaria were also recovered and a single sherd from Mancetter Hartshill. Shepton Mallet mortaria dominated the supply in Period 2 (FIG. 45). The main supplier, however, was the Oxfordshire industry (FIG. 33b) which appears to have supplied the settlement throughout its occupation (FIG. 45).

The Oxford and New Forest industries in general supplied pottery in fairly small, near-equal quantities; comparable in relative proportions, but not overall percentages, to Lamyatt Beacon (Leech 1986, 285). The relative proportions varied however from Ilchester, where Oxfordshire wares were nearly twice as common (Leach 1982, 143), and Bradley Hill, where the proportion was even higher (Leech 1981, 238). It was only in the fourth century that significant amounts of pottery were supplied by either industry. After Period 4 the proportion of Oxfordshire wares increases as the proportion of New Forest wares declines

(TABLE 4; FIG. 45). The Oxfordshire potters supplied mainly bowls and, as already noted, mortaria, while the New Forest potters supplied mainly enclosed forms, in particular beakers (FIG. 33a). A similar pattern was noted at Ilchester (Leach 1982, 140–1) and Worberry Gate (J. Evans forthcoming). It is possible that much of the miscellaneous white ware also came from Oxfordshire, given that white-ware mortaria were coming from this source, although some at least was more likely produced in Hampshire (FIG. 42, B27.1).

A single sherd was recovered in shell-tempered or 'calcite-gritted' ware (FIG. 42, J5.32), probably originating from Harrold in Bedfordshire (Brown 1994). Calcite-gritted wares are never common in the South West, but their representation increases north of Fosse Lane, e.g. at Bath (Green and Young 1985, fig. 84), Uley (Woodward and Leach 1993, fig. 162) and at Gloucester (Ireland 1983, 99).

Apart from a very small quantity of Rhenish ware, amphorae and samian were the only imported wares reaching the site. The imported wares are similar to most contemporary Romano-British assemblages, both in the range of sources represented and the proportion of pottery each supplied.

Status/function

It is possible that some indication of the status of settlements can be gained by comparing the proportions of fine wares represented, although more quantified data from a variety of site types is required before the reliability of this approach can be assessed. Samian provided the evidence for the early Roman period. The quality and quantity from Fosse Lane was not great, but was comparable with the assemblage from Ilchester (Dickinson, above). For the later Roman period the fine wares comprise New Forest and Oxfordshire wares. The percentage of New Forest ware at Fosse Lane (TABLE 3) was broadly the same as at Ilchester (Leach 1982, 141) and Bradley Hill (Leech 1981, 238, table 18), but lower than at Lamyatt Beacon (Leech 1986, 285). The percentage of Oxfordshire ware at Fosse Lane was, however, relatively lower than at all three sites to the south. A wider range of fine wares was noted at Ilchester (Leach 1982, 138), which presumably reflects the higher status of the *civitas* capital.

Analysis of the functional composition of the assemblage based on vessel class places Fosse Lane somewhere between the rural site at Worberry Gate (J. Evans forthcoming) and Ilchester (Leach 1982, 148). Fosse Lane produced a wider range of vessels than the rural sites, with jars consequently representing a relatively lower proportion of the assemblage. A similar range of forms was noted at Ilchester, but the proportions of jars by period were consistently lower than at Fosse Lane.

It was difficult to assess chronological trends in the pattern of fine ware supply and use on the site because of the small quantity of stratified material and the presence of residual pottery. Comparing the distribution of samian in Periods 1/2 and New Forest and Oxfordshire wares in Periods 3/4, however, fine wares do seem to be more common in the later periods (Biswell *et al.* 1995, figs 20.5 and 20.9).

Repair of broken pots may indicate the degree to which economies were necessary. A total of 49 sherds showed evidence of repair, including seven with rivets attached, and a number of lead rivets were noted amongst the metalwork (Ferris, 3.3). The proportion of repaired pots is similar to that at the rural site of Worberry Gate (J. Evans forthcoming) and is greater than Romanized assemblages from large towns, but less than sites in Wales at the limits of Roman influence (Jeremy Evans pers. comm.). As might be expected the majority of repairs were on samian, 30 sherds representing sixteen vessels (Dickinson, above). Repairs were also noted on Dressel 20 amphorae (Williams, above), and on early fine wares. More surprisingly perhaps, repairs were evident on vessels in BB1 (eight sherds) and local BB1 copies (three sherds) which one would expect to have been more easily replaceable.

Turning to the status of individual structures, analysis of the plots for coins, samian and other wares showed that the former two tended to be associated with stone-built structures,

rather than the timber structures indicated by other pottery clusters. While the samian and coin evidence could be used to suggest the differing status of the stone buildings (Biswell *et al.* 1995, figs 20.5 and 20.6), other pottery plots were less informative. Variations in the status of the occupants could perhaps have been displayed by the types of food consumed, but this was not evident in the pottery. Similar ranges of vessels associated with food preparation (mortaria and BB1 cooking pots, dishes and bowls) clustered near both stone and timber structures (ibid., fig. 20.7). Plotting the pottery alongside other finds suggested some division between domestic activities, concentrated more to the north, and non-domestic activities, including smithing and burial, mainly to the south, at least in the latest periods of occupation (ibid., 283).

Analysis of forms and fabrics from the key group assemblages indicated functional variations, particularly where comparison could be made between structures of the same period (FIG. 46). The presence of residual forms, however, must distort the evidence.

In Period 1, Area VII followed the pattern for the period as a whole. A fairly wide range of forms was represented. Jars were the most common class of vessel (57.5%), amongst which cooking pots were the most common variety (24.5%).

Building VII in Period 2 also broadly reflected the pattern for the period as a whole. A wide range of vessel types was present and jars made up 56% of the assemblage. There were differences between assemblages from individual rooms. However, Room B at least contained material which must have been residual by the end of this period so these differences may not be entirely functional. Room C produced 731 sherds representing a wide range of forms: beakers, cups, flagons, tankards, lids, bowls, dishes and jars (63%), amongst which cooking pots were most common (41%). BB1 was the second most common fabric after local grey ware SANDMC and a reasonable proportion of Central Gaulish samian was included (28%, 30% and 5% by weight respectively). The smaller Room B assemblage (167 sherds) was quite distinct. The room may have been used as a store. The assemblage contained no cooking pots, remarkably little BB1 (0.2% by weight), and no fine wares. It comprised mainly storage vessels, jars being the most common vessel at 73% and dishes being the only other form represented. Savernake ware was the most common fabric (45% by weight) followed by local grey wares, and sherds of Dressel 20 amphorae were also present. Room A (341 sherds) produced an assemblage intermediate in character between Rooms B and C. There was a fair range of forms: beakers, lids, bowls, dishes, mortaria and jars (46%), with fewer cooking pots than Room C (25%). The proportion of BB1 was similar to Room C, but there were also significant quantities of Dressel 20 amphorae (51% by weight).

The Building X group differed from that in Building VII, though derived from a much smaller excavated sample. A fairly narrow range of vessel types was present including beakers, tankards, cups, bowls, dishes and jars (36%). Tankards were almost as common as cooking pots (22% and 23% respectively). There was a high proportion of fine wares, in particular Antonine Central Gaulish samian (Dickinson, above), and the assemblage also produced Dressel 20 amphorae (26% by weight). The bias towards tablewares rather than cooking vessels suggests a more specialised function. Tankards may have been used as drinking vessels, like the beakers and cups, or may have been measures for other commodities stored in the building.

In Period 3 the Building IX assemblage, derived mainly from one room, was less distinct. It contained a wide range of vessel types amongst which jars were proportionately less common (40%) and beakers proportionately more common (13%), and there was also a relatively high proportion of Severn Valley ware.

The three Period 4 key groups were all very different. Buildings I and IX produced restricted ranges of vessels, but this may well be a reflection of the small size of the assemblages. In Building I there was a high proportion of liquid containers (57%) including flagons and more particularly beakers, the latter accounting for the high representation of New Forest ware. Bowls/dishes was the second most common category, while cooking pots, and jars in general, represented a remarkably low 8%.

The Building IX assemblage differed both from this and, interestingly, from its own Period 3 assemblage. It suggested a bias towards storage and food preparation, perhaps associated with the large oven. Cooking pots and jars dominated the assemblage (66%) while a significant quantity of Dressel 20 amphorae was also noted (38% by weight). Bowls and dishes were the only other class represented, there being no liquid containers.

The much larger Building VIII group also showed a bias towards food preparation, perhaps associated with the kiln or oven noted within the building. A fairly wide range of vessels was represented. The proportion of cooking pots was particularly high (50%), other jars accounting for only 8%, as a consequence of which BB1 was well represented (55%). The Area IV assemblage lay somewhere in between; cook pots being the most common type, but flagons, mainly grey ware type F5.11, occurring in higher than usual proportions.

In Period 5 the assemblages from Buildings I and VIII had broadly similar proportions of jars, bowls and dishes. The Area IV assemblage, however, had a low proportion of bowls and dishes, a higher proportion of jars and a relatively high proportion of flagons, grey ware type F5.11 once again being the most common type. Buildings I and VIII also produced a higher proportion of fine wares than Area IV.

Rubbish disposal and site formation processes

The plots of pottery and other artifacts provided useful indications of rubbish disposal and site formation processes.

Many classes of artifact clustered in areas adjacent to structures, indicating their abandonment near to areas of more intense activity where objects would most likely be used and thus lost or broken. The distribution of pottery from Periods 1/2 and 4/5 demonstrated a number of clear associations with surviving buildings and highlighted a number of concentrations associated with undated cobble spreads without known structures (Biswell *et al.* 1995, fig 20.4). The pottery may therefore, as noted above, indicate the location of timber structures. Further low artifact densities coincided in some cases with tracks and could perhaps be used to suggest paths and boundaries that were not otherwise evident (ibid., 283).

The average sherd weight for the assemblage as a whole was 13 g although there was much variation when the pottery from specific sources was quantified. Surprisingly the average for excavated contexts was lower than for plotted finds (TABLE 1), but this must reflect the poor recovery of smaller sherds by surface plotting. Variations occurred between different buildings (TABLE 2), the most-broken pottery came from Period 2 Building X (average weight 7 g) and the least-broken from Period 4 Building IX (17 g). The significance of this is uncertain. It could perhaps reflect the suspected destruction of Building X at the end of Period 2, or it could simply reflect differing levels of residuality.

Heavily broken pottery was noted where the pottery could be confidently assumed to be residual, for example in the fill of post-holes (average weight 7 g), beam slots (9 g) and graves (8 g). There was much variation between other feature types. As would be expected, low average weights came from deposits that would have suffered badly from trampling, for example tracks/paths (6 g) and floors (7 g), although the average for surfaces with cobbling was surprisingly high (15 g). Higher-than-average weights came from boundary ditches (20 g) and pits (21 g), including the well pit (14 g), all of which could have been used as rubbish dumps. High averages also came from hearths (25 g) and ovens (21 g).

The heavy fragmentation suffered by much of the pottery, together with the constraints of time and space, limited the recording of cross-context joins to only the most obvious examples. Analysis of these generally showed movement of pottery up the stratigraphic sequence as a result of later disturbance, or joins within buildings between contemporary contexts.

Review of methodology

The methodology for recording finds generally is summarised in Section 3.1 above and a detailed review of the GIS applications has been published elsewhere (Biswell *et al.* 1995). A number of points relate to the analysis of pottery.

A fundamental consideration must be the time and cost implications of undertaking detailed spatial analysis, both recording data on site and during post-excavation analysis. For the latter it was generally possible to rapidly process excavated context groups whereas it proved far more time consuming recording plotted pottery, represented by thousands of small bags containing only a few sherds. The average rate for recording small plotted groups was broadly between 250 and 330 sherds a day, whereas for the context assemblages it was possible to record from 330 to as many as 720 sherds a day. While it may be difficult to improve on this processing rate, there is clearly scope for a more efficient standardised collection and recording system on site. Employing survey (OS or site specific) grid-based collection modules of an appropriate size would provide an alternative to EDM plotting of all finds from the first-definition cleaning process. Effectively, this material would then also be collected by context (identified by grid co-ordinates) but retain much of its value in terms of spatial distribution.

The pottery plots were best studied in conjunction with plots of other artifacts for the analysis of broad trends. They were of limited use for analysing more detailed data; for example attempting to define the chronology of fabrics, many of which occurred in small quantities; and of even less use for studying the chronology or function of individual forms. The overall dating evidence was divided into three broad periods for plotting. Much of the pottery, however, could not be closely dated and the ceramic evidence sometimes overlapped these periods. The early Roman period, first to mid-third centuries, was indicated in the pottery assemblage by samian, Savernake ware, Brockley Hill/Verulamium mortaria, and characteristically earlier BB1 and local forms. The late third to early fourth centuries were indicated by the presence of Oxfordshire and New Forest wares and specific forms such as Young C44/45 dated A.D. 270–350/400+ (Young 1977, 158, fig. 57/8), together with a few characteristically later BB1 and local forms. The ceramic evidence for the later Roman period, early fourth century to early fifth century, was particularly poor, relying largely on Oxfordshire forms such as Young C75, C78 and C82 (ibid.) and New Forest forms such as Fulford type 18 (Fulford 1975, 48, fig. 11).

Biswell *et al.* note that little or no pottery was recorded from significant areas of the site (Biswell *et al.* 1995, 283). This in part reflects biases during recovery, emphasising the need for sampling strategies to include areas of sites with little evidence of activity, as well as those with obvious features. The need for more detailed fabric analysis has already been discussed. So too has the relative paucity of stratified pottery from Fosse Lane and the implications this has on the dating of local forms. The final point that should be considered relates to inter-site analysis. Comparison of pottery supply patterns between different sites would be greatly facilitated by volumetric analysis of pottery data, which does not require prohibitively time-consuming recording on site.

Appendix 1 Occurrence of regional forms by fabric

Regional grey wares

SANDRF: Wide-mouthed jars JW1.12, JW2.22, JW2.23, JW2.31, JW2.32, JW2.33, JW3.31 JW4.21, JW2.32; Bowls B1.11, B4.22, B7.12, B9.14, B9.42, B10.21, B10.25, B10.26, B13.11, B13.21, B14.11, B16.32, B20.11, B20.13, B20.14, B20.21, B21.11, B22.11, B22.21, B23.21; Dishes or shallow bowls B2.11, B3.11, B3.21, B4.11, B22.22; Jars/cook pots JC2.1, JC1, JC2.14, JC3.1, JC3.22, JC3.31, JC3.4, JC4.11, JC5.11; Jars J3.11, J3.12, J5.12, J5.31, J5.41, J5.52, J5.53, J6.12, J6.21, J8.24, J8.25, J9.12, J9.13, J9.22, J10.11, J10.12, J10.14, J10.21, J10.31, J10.32, J10.42, J12.11, J14.13, J14.31, J14.51, J16.12; Beakers BK1.1, BK2.11, BK3.12, BK2.31, BK3.31, BK3.41, BK3.42, BK3.43, BK3.52, BK3.53, BK3.92, BK5.11, BK5.14; Flagons F3.31, F4.1, F5.11, F5.12, F5.21, F5.22, F5.32, F5.34, F6.11, F6.22, F6.31; Dishes D1.12, D1.13, D1.14, D4.11, D5.11, D6.31, D6.32, D6.41, Dishes/platters D7.13, D7.21, D9.11, D9.21; Lids L2.11, L2.21, L3.11, L3.12, L5.22, L5.23 and Tankards T1.11, T2.1

SANDBRF: Wide-mouthed jars JW2.2, JW2.21, JW2.31, JW2.33; Bowls/dishes B1.12, B1.13, B1.31, B14.11; Beakers BK5.32; Jars/cook pots JC2.15, JC3.14, JC3.22, JC4.11; Flagons F4.1; Bowls B2.21, B23.41; Lids L2.11, L5.22; Jars J10.21; Dishes/platters D7.13; Platters P1.11

SANDRM: Jars J1.13, J1.14, J1.41, J2.22, J3.14, J3.15, J3.17, J5.12, J5.32, J5.41, J5.51, J5.53, J6.11, J6.13, J6.21, J6.22, J7.11, J8.11, J8.21, J8.22, J8.23, J8.24, J8.26, J8.27, J9.11, J9.12, J9.13, J9.14, J9.22, J10.11, J10.12, J10.13, J10.14, J10.15, J10.21, J10.31, J10.33, J10.34, J10.35, J12.21, J12.22, J13.21, J14.11, J14.12, J14.21, J14.31, J14.51, J14.52, J16.13, J16.14; Jars/cook pots JC1, JC2.1, JC3.1, JC3.22, JC3.31, JC3.4, JC4.11, JC4.21, JC4.24; Flagons F4.4, F4.1, F5.11, F5.31, F6.21, F6.24, F6.31, F6.32; Wide-mouthed jars JW1.12, JW2.2, JW2.35, JW2.36, JW3.21, JW3.22, JW3.31, JW4.14, JW4.21, JW4.31; Beakers BK1.1, BK2.21, BK3.2, BK3.43, BK3.53, BK3.64, BK3.81, BK3.93, BK5.14; Bowls B4.21, B11.12, B15.11, B16.21, B20.11, B20.21, B21.11, B22.11, B22.21, B23.41, B24.13 Bowls/Dishes B6.21; Tankards T2.1, T3.11; Lids L2.11, L5.15, L5.25; Platters P2.11, Dishes D1.13, D4.11, D5.11, D6.2, Dishes/platters D7.11; Bowls/jars B1.21. Also included a single body sherd from a face pot, form MS3.113.

SANDMC: Jars/cook pots JC2.1, JC3.1, JC3.22, JC3.31, JC4.11; Jars J1.11, J2.22, J4.22, J5.12, J5.53, J6.11, J8.24, J8.25, J8.26, J9.13, J9.15, J9.22, J10.21, J10.31, J10.35, J11.21, J13.12, J14.11, J14.22, J14.31, J14.32, J14.5, J16.11; Wide-mouthed jars JW2.11, JW2.2, JW2.31, JW2.35, JW3.11, JW3.21, JW4.13; Beakers BK1.1, BK2.11, BK3.51, BK3.95, BK5.11, BK5.12, BK5.14; Dishes D1.13, D1.14, D4.11 Dishes/platters D7.21; Bowls B4.21, B4.22, B20.21, B22.23, B24.13; Flagons F4.1, F4.4, F5.11; Lids L4.11, L5.14

SANDRC: Jars J1.32, J2.11, J2.21, J2.22, J3.11, J4.21, J5.12, J5.21, J5.32, J5.41, J6.11, J6.13, J6.21, J6.22, J6.23, J8.11, J8.12, J8.21, J8.22, J8.23, J8.25, J9.12, J9.13, J9.14, J9.21, J9.22, J9.31, J10.13, J10.14, J10.15, J10.21, J10.31, J10.32, J10.33, J10.35, J11.11, J12.12, J12.31, J13.21, J13.12, J14.11, J14.21, J14.31, J14.52; Jars/cook pots JC1, JC2.1, JC3.1, JC3.22, JC3.4, JC4.11, JC4.21; Wide-mouthed jars JW2.11, JW2.12, JW2.2, JW2.31, JW2.33, JW2.34, JW2.35, JW2.36, JW3.21, JW4.22; Beakers BK2.11, BK3.21, BK3.31, BK3.42, BK3.43, BK3.53, BK3.95, BK5.14; Bowls B4.21, B9.31, B9.51, B17.13, B20.21, B24.11 Bowls/dishes B6.21, B22.22, B24.13, B24.31; Flagons F5.11, F5.12, F6.11, F6.24, Dishes D1.13, D1.14, D3.21, D4.11, D5.11; Lids L5.11, L5.15, L5.25

BBC: Jars/cook pots JC2.1, JC2.14, JC3.1, JC3.22, JC3.25 waster, JC3.31, JC3.4, JC4.11, JC4.21, JC4.22; Jars J1, J3.13, J5.11, J6.13, J6.22w, J8.23, J8.25, J9.12, J9.13, J9.21, J9.22, J9.31, J10.11, J10.32, J10.33; Dishes D1.13, D1.14, D4.11, D5.11, D6.32, Dishes/platters 9.21; Flagons F2.41, F3.12, F4.1, F5.41, F6.23, F6.24, F6.31; Bowls B4.11, B4.21, B7.13, B17.12, B20.21, B22.21, B23.1, B23.311, B24.11, B24.13, B24.14, B24.21, B24.31; Wide-mouthed jars JW1.12, JW2.2, JW2.31, JW2.33, JW3.21, JW4.11, JW4.21; Beakers BK2.11, BK2.33, BK3.21, BK3.43, BK3.51, BK5.14 and Beakers/jars BK1.11; Lids L1.11, L1.21, L2.12, L5.11, L5.22; Tankards T2.1. More unusual forms noted were a spout, MS4.11, and a perforated pedestal base, MS5.11 (not illustrated)

Severn Valley wares

SVOXG: These two variants were not recorded separately during analysis, the forms cannot therefore be listed separately. Forms: Bowls B3.31 Dwg 92, B3.32, B3.33, B4.23, B6.22, B7.11, B7.12, B7.13, B7.21, B8.12, B9.11, B9.12, B9.13, B9.22, B10.12, B10.21, B10.22, B10.23, B10.24, B10.28, B10.31, B11.12, B14.11, B16.11, B16.12, B16.13, B16.14, B16.31, B20.11, B21.11, B21.21; Dishes/bowls D8.11, D8.13; Bowl/cup C1.11; Tankards T1.11, T1.12, T1.13w, T2.11, T2.12, T2.13, T2.14; Beakers BK1.12, BK3.11, BK3.53, BK3.61, BK3.63, BK3.64, BK3.75, BK3.76, BK3.77, BK3.78, BK3.79, BK3.96, BK4.21, BK4.22, BK5.12, BK5.13, BK5.15, BK5.21, BK6.11, BK6.21; Flagons F1.2, F8.11; Jars J10.12, JC3.14; Dishes D4.12, D9.12, and Dishes/platters D7.12, D7.22; Lids L1.31, L2.11, L5.11, L5.12; and a spout MS4.21

SVOXORG: Jars J10.15

SVOXGR: Beakers BK2.7, BK3.12, BK3.51, BK3.95, BK5.12, BK5.14; Wide-mouthed jars JW2.2, JW2.31, JW2.36, JW4.12; Jars J10.15; Jars/cookpots JC2.13; Flagons F3.11, Tankards T1.11; Bowls/dishes B1.31, B3.21; Bowls B4.21, B20.21, B20.31, B20.32; Lids L2.11, L5.22

SVOXGM: Mortaria M2.21, M2.22, M2.31, M4.11, M4.12, M4.13, M4.14, M4.15, M4.16, M4.17, M4.18, M5.41

Miscellaneous red wares

SANDOXF: Beakers/jars face pot BK1.41; Jars/cook pots JC2.1; Jars J5.32, J5.53, J9.14, J9.16, J9.21; Wide-mouthed jars JW2.13, JW2.2, JW4.14; Beakers BK3.21, BK3.52, BK5.12, BK5.33; Flagons F4.1; Lids L5.14; Dishes/platters 9.21; Bowls B9.42
SANDOX: Flagons F3.31; Beakers BK3.95; Bowls B17.11, Jars/cooking pots JC3.4, Lids L5.11

SANDOXCCW: Flagons F1.3, F4.1, F4.2, F4.3

SANDOXC: JC2.14, JC3.31, J6.22, J9.11, J10.15, J10.21; Flagons F5.33

SANDOXG: Jars J8.11, J8.26, J14.41; Beakers/jars BK1.11

MISCCR: Beakers BK1.54, BK3.14, BK3.51, BK3.63, BK3.65, BK3.66, BK3.72, BK3.73, BK3.74, BK3.75, BK3.77, BK4.11, BK4.21, BK4.11, BK4.21, BK4.23, BK4.24, BK5.31; Bowls B8.13, B9.12; Dishes/bowls D8.12; Tankards T1.11

Appendix 2 The Samian

2A Number of decorated bowls and potters stamps on plain ware by date range

Decorated bowls		**Potters' stamps on plain ware**	
Trajanic			
X–13	2		
Trajanic–Hadrianic			
Libertus ii	1		
Hadrianic			
X–13	1		
Hadrianic or early Antonine			
Arcanus or Geminus ii	2	Albinus iv	1
Butrio	1	Sacrapus	1
The Quintilianus i group	1	Paullus iv	1
The Sacer i group	1	Tritaucus	1
X–6 or Mapillus	1		
Early to mid-Antonine			
The Cerialis ii-Cinnamus ii group	3		
Cettus	1		
Criciro v	1		
Docilis i	1		
A.D. 150–180			
Cinnamus ii	?4	Draucus ii	1
A.D. 160–200			
Advocisus	1		
Casurius ii	3	Genitor ii	1
?Catussa	1		
Do(v)eccus i	1	Do(v)eccus i	1
Mercator iv	1		
The Paternus v group	1	Saturninus ii	1

2B Numbers of vessels by period and vessel date

Period	1	2	3	4	5	6	Unph.	Total
C1	-	1	-	1	-	-	1	3
CN	-	-	-	-	-	-	1	1
N	-	-	-	-	-	-	1	1
NEF	1	2	-	-	-	-	5	8
NF	1	-	3	-	-	-	-	4
F	3	4	-	1	1	-	8	17
FFT	-	3	3	-	-	-	1	7
FT	2	3	3	1	1	-	1	11
T	?1	1	3	2	-	-	12	18 + ?1
TH	-	1	-	-	-	-	1	2
H	?1	2	1	1	3	-	7	14 + ?1
HEA	2	25	9	3	7	-	21	67
HA	-	2	1	-	-	-	-	3
H or A	-	3	5	2	3	-	17	30
EMA	-	3	3	1	1	-	8	16
MA	-	-	5	-	-	-	1	6
MLA	-	4	9	8	2	2	42	67
LA	-	-	-	?1	-	-	5	5 + ?1
A	-	9	20	4	6	2	77	118
L23	1	-	1	1 + ?1	2	3	30	38 + ?1
C3	-	-	-	5	-	-	-	5
Total	10+?2	63	66	30 + ?2	26	7	239	441 + ?4

2C Numbers of sherds by date range

Date range	% by count
C1	0.4
CN	0.1
N	0.1
NEF	1.3
NF	0.7
F	2.6
FFT	1.4
FT	2.0
T	3.4
TH	0.4
H	4.7
HEA	18.8
HA	0.4
H or A	12.4
EA	0.2
EMA	3.6
MA	1.9
MLA	13.9
A	22.0
LA	0.7
L2–3	9.0
C3	0.6
Total sherds	874

KEY

The following abbreviations are used:

C1	first century
CN	Claudio-Neronian
N	Neronian
NEF	Neronian or early Flavian
NF	Neronian-Flavian
F	Flavian
FFT	Flavian or Flavian-Trajanic
FT	Flavian-Trajanic
T	Trajanic
TH	Trajanic-Hadrianic
H	Hadrianic
HEA	Hadrianic or early Antonine
HA	Hadrianic-Antonine
H or A	Hadrianic or Antonine
EMA	early to mid-Antonine
MLA	mid- to late Antonine
LA	late Antonine
A	Antonine
L2–3	late second or first half of the third century
C3	third century

Appendix 3 Summary of forms by key group (% by rim EVE)

Forms first occurring in a period are highlighted by an asterisk. Unidentified forms are not included.

Period 1, Area VII: BB1 JC2.1 (3.7%), JC3.2 (6%), JC3.4 (6%), JC4.1 (5.2%), *JC4.2 (2.5%), *B22.2 (0.8%), D1.1 (0.8%), D4.1 (1%). Other fabrics *F3.31 (0.8%), Fragmentary flagons. (2.3%), *BK2.11 (4.6%), *BK3.78 (2.5%), *BK3.81 (3.7%), *BK5.14 (3.7%), J9.11 (0.8%), J9.13 (2.1%), *J10.12 (2.5%), JW1.11 (2.7%), JW2.2 (14.5%), JW2.31 (1%), *JW5.11 (4.4%), *B1.11 (1.5%), *B1.31 (4.4%), B20.1 (0.8%), B21.1 (2.7%), B21.2 (2.7%), T2 (4.8%)

Period 2, Building VII: BB1 JC2.1 (6.6%), *JC3.1 (5.5%), *JC3.31 (0.5%), JC3.2 (15.6%), JC3.4 (2.1%), JC4.1 (0.3%), B23.2 (diameter not measurable), *B24.1 (3.5%), *D1.1 (3.5%), *D3.11 (diameter not measurable), D4.1 (1.1%), *D5.1 (0.8%). Other fabrics *F5.11 (0.2%), *F6.31 (0.5%), *BK1.12 (0.7%), *BK1.4 (0.4%), BK2.11 (1.2%), *BK3.13 (0.6%), BK3.51 (0.8%) *BK3.53 (0.8%), *BK3.93 (0.7%), BK3.95 (0.4%), Miscellaneous fragmentary beakers (3%), *J5.3 (0.8%), *J6.12 (0.7%), *J6.22 (2.9%), J6.23 (0.4%), *J8.11 (0.7%), *J8.24 (0.9%), J9.13 (0.4%), *J9.21 (1.5%), *J10.35 (0.3%), *J12.21 (0.3%), JW2.2 (8.4%), JW2.31 (2.1%), *JW2.36 (3.8%), *JW3.21 (1%), JW5.11 (0.8%), *B1.12 (0.3%), *B4.21 (0.5%), B8.11 (0.6%), *B10.21 (1.2%), *B10.31 (0.5%), *B14.1 (0.3%), B20.1 (0.8%), B20.2 (1.8%), B21.1 (0.4%), D23.2 (0.2%), *M3.1 (0.5%), T1.1 (0.9%), *T2.31 (3.6%), *L2.11 (0.3%), *L4.11 (1%), *L5.11 (0.3%), L5.22 (0.5%)

Period 2, Building X: BB1 JC3.2 (19.2%), JC3.4 (3.5%), D1.1 (13.6%), D4.1 (1.5%). Other fabrics *BK3.66 (8.1%), JW2.2 (13.6%), *B14.1 (4%), *B16.41 (3.5%), B20.1 (2%), B22.1 (5%), T1.1 (21.7%)

Period 3, Building IX: BB1 JC2.1 (2.3%), JC3.1 (1.6%), JC3.2 (11.6%), JC3.4 (10.9%), JC4.1 (1.4%), JC4.2 (0.2%), D1.1 (2.2%), D3.11 (diameter not measurable) D4.1 (0.6%), B22 (0.9%), B23.2 (0.3%), B24.1 (0.7%). Other fabrics *F5.33 (0.4%), *F8.11 (1.7%), *BK2.21 (1.6%), *BK2.31 (0.5%), BK3.21 (1.2%), BK3.53 (0.4%), *BK3.61 (1.3%), BK3.63 (0.6%), *BK3.74 (0.5%), *BK3.75 ((0.2%), *BK3.81 (1%), BK4.21 (0.7%), *BK4.22 (0.6%), *BK6.11 (1%), Fragmentary beakers (4.1%), C1.11 (0.5%), J5.12 (0.3%), J6.2 (0.4%), *J14.5 (1.5%), *JW2.1 (0.7%), JW2.2 (6.1%), JW4.21 (0.4%), JW5.11 (1.5%), *B1.21 (1.1%), B3.21 (0.3%), B9.3 (0.4%), B9.52 (0.5%), B10.21 (1.8%), B10.31 (0.6%), B16.1 (0.2%), B20.1 (0.9%), B20.2 (0.6%), B21.1 (2%), B21.1 (1.8%), B21.21 (0.6%), *D7.1 (0.4%), *D9.1 (2.3%), T1 (3.2%), T2 (3%), L2.11 (0.2%), *L3.12 (0.3%), L5.12 (1.1%), *L5.13 (0.4%), L5.14 (0.4%), L5.22 (0.2), *L5.25 (0.3%), *L6.11 (0.5%)

Period 4, Building VIII: BB1 JC2.1 (8.3%), JC3.1 (3.8%), JC3.2 (4.7%), JC3.4 (16%), JC4.1 (10.8%), JC4.2 (5.9%), B23.1 (1.1%), B23.2 (3.1%), B23.3 (0.8%), B24.1 (12.8%), D4.1 (11.5%), D5.1 (0.7%). Oxfordshire ware Young C75 (0.8%). Other fabrics F5.11 (0.8%), BK2.11 (0.7%), BK1.4 (2.4%), BK5.11 (1.2%), *J5.3 (0.5%), J8.23 (0.4%), *J9.12 (0.5%), *J10.33 (1.2%), *JW4.14 (1.4%), JW4.21 (0.6%), B4.1 (1.2%), *B6.21 (0.8%), B12.11 (0.8%), T2 (1%)

Period 4, Building I: BB1 JC3.2 (3.4%), JC3.4 (4.3%), B24 (3.4%), D4.1 (4.4%). Other fabrics *F6.23 (12%), *BK1.4 (24.8%), *BK3.6 (3.4%), *BK4.1 (17.1%), B20.2 (2.6%)

Period 4, Building IX: BB1 JC3.2 (2.3%), JC3.4 (2.3%), JC4.1 (21%), JC4.2 (8.3%), B23.2 (10.5%), B24 (12%), Fragmentary beakers (3.8%). Other fabrics *J5.41 (16.5%), *J9.14 (6%), *J10.15 (9.8%), B6.21 (7.5%)

Period 4, Area IV: BB1 JC2.1 (1.9%), JC3.1 (2.6%), JC3.2 (1.5%), JC3.4 (8.1%), JC4.1 (20.4%), JC4.2 (1.7%), B23.3 (1.1%), B24.1 (5.4%), D1.1 (1.5%), D4.1 (3.9%). Oxfordshire ware Young M22 (2.4%). Other fabrics F5.11 (16.7%), *F6.1 (1.9%), *BK5.17 (1.3%), J5.12 (1.9%), J9.13 (3.4%), J10.14 (3%), JW4.21 (2.6%), B8.11 (3.9%), B9.21 (6.6%), D9.2 (4.9%)

Period 5, Building VIII: BB1 JC2.1 (6.3%), JC3.2 (5.3%), JC3.4 (7.4%), JC4.1 (9.5%), JC4.2 (4.2%), B24.1 (12.9%), D4.1 (13.4%), D5.1 (1.3%). Oxfordshire ware Young C51 (2.1%), C44/45 (3.4%), C97 (4.2%). Other fabrics *F3.21 (2.6%), *F5.41 (5.2%), J5.41 (5%), J10.33 (1.8%), JW4.21 (1%), B8.11 (2.1%), *B9.12 (3.4%), *B9.22 (2.6%), B20.2 (2.6%), B27 (3.1%)

Period 5, Building I: BB1 JC3.2 (7.7%), JC3.4 (6.6%), JC4.1 (20.2%), D1.1 (1.1%), D4.1 (17.8%), D5.1 (2.4%), B24 (14%), Oxfordshire ware Young C44/45 (0.6%), *C75 (2.9%), *WC7 (1.6%). Other fabrics F5.41 (5%), *J4.12 (2.6%), *J5.11 (2.2%), *J5.53 (2.9%), J8.23 (6.7%), J13.12 (0.5%), B4.21 (1.4%), *L1.11 (0.8%), *L2.12 (2.9%)

Period 5, Area IV: BB1 JC2.1 (5.5%), JC3.2 (14%), JC3.4 (5.9%), JC4.1 (6.4%), JC4.2 (2.3%), B23.3 (1.1%), B24 4.6%), D1.1 (1.8%), D4.1 (0.9%), D5.1 (1.1%). Oxfordshire wares M18 (1.1%), C97 (0.7%). Other fabrics F5.11 (12.8%), *F5.41 ((4.1%), *BK1.21 (1.8%), BK3.53 (3.2%), Miscellaneous fragmentary beakers (3%), J5.3 (4.6%), J8.11 (2.3%), J8.25 (2.3%), *J9.12 (3.9%), J10.31 (1.8%), J10.35 (0.9%), *J16.11 (4.6%), JW2.2 (2.7%), B9.3 (0.7%), L5.14 (1.1%), *M3.1 (0.9%)

GLASS VESSELS

by Jennifer Price and Sally Cottam

Introduction

The 199 fragments of Roman glass from Fosse Lane supply evidence for glass use from the mid-first to the late fourth or early fifth centuries. Within this time, there do not appear to be any long periods when glass was not used at the site. The assemblage is small when compared to the extensive area excavated, but the presence of tiny fragments indicates that the recovery level was high. In most cases, vessels are represented by just one fragment each, and the average size of individual fragments is small. This raises the possibility that broken vessels and windows were collected by the occupants to be re-used as cullet. The presence of a relatively large collection of beads and other small objects, which would have been less visible, may be further evidence that this practice took place and that the original amount of vessel and window glass was larger.

A full catalogue of the material is in archive, where each piece is identified with a catalogue number, in addition to site contextual information. These catalogue numbers are quoted in brackets after the Accession number in the index of illustrated pieces, below.

The glass from the site is not exceptional, and the occupants seem to have possessed the sorts of vessels which were in common use elsewhere in Roman Britain. The Claudian/early Flavian glass (FIG. 48.1, 13) is of good quality, and although these forms have been noted on many military sites of the period, it is difficult to be more specific as to the nature of the site on the basis of the glass alone. The later first- to fourth-century glass is typical of small occupation sites of the Roman period though it is rare that the fragments are as small as they are at Fosse Lane. The presence of very small fragments was noted at the ritual sites at Uley (Price 1993, 210) and Thistleton (unpublished), but not enough information exists to be certain that these features are characteristic of ritual sites. It may be that the small size of the Fosse Lane fragments is simply a reflection of the nature of the first-definition layers.

First- and early second-century tablewares

The first two vessels described belong to the earliest Roman occupation at the site, and can be compared with vessels from the Claudian/Neronian phases at Colchester, Gloucester, Exeter and other southern British sites. A dark-blue pillar-moulded bowl is represented by fragments which may all be from the same vessel (FIG. 48.1). The complete vessel was a deep hemispherical bowl with prominent vertical ribs on the outside surface. The interior surface has distinctive heavy wheel-polishing, whilst the outside has a shiny, fire-polished surface, a result of the sagging method by which these bowls were probably produced (Cummings 1980, 26–9).

Deep and shallow pillar-moulded bowls were made in polychrome, and strongly coloured and natural blue/green monochrome glass. They are very commonly found in first-century contexts in many parts of the Roman world, particularly the western provinces (Isings 1957, form 3). The Fosse Lane vessel is likely to have been manufactured in Italy, or possibly Gaul. Blue/green pillar-moulded bowls are very much more common than other colours, so it is slightly unusual that the only fragments of these vessels from Fosse Lane should be dark blue.

Blue/green pillar-moulded bowls continued in use throughout the later first century, but polychrome and strongly coloured bowls are rarely found after the Neronian/early Flavian period, and are most numerous in Britain on early post-Conquest sites. At Colchester, for example, at least four dark-blue bowls have been found in Claudian and Neronian contexts (Harden 1947, 302, no. 65; Charlesworth 1985, M3:F7, no. 44, fig. 81; Cool and Price 1995, 18, nos 18–19). In south-western England, dark-blue examples, although often only occurring

as single vessels in assemblages, are known from many sites with early military activity, such as Kingsholm, Gloucester (Price and Cool 1985, 45, fig. 17.2), Usk (Price 1995, 467, fig. 42.7), Exeter (Harden 1952, 93, no. 2), Cirencester (Charlesworth 1971, 85, fig. 11.1; 1982, MF.D13, fig. 68.283; Shepherd 1986, 117, no. 288) and Caerleon (Allen 1986, 99–100, no. 6; Nash-Williams 1929, 257, fig. 18.1) as well as smaller sites, such as Whitton, south Wales (Price 1981, 152–3, fig. 66.3), Brandon Camp (Price 1987a, 74, no. 2), Witcombe villa, Gloucestershire (Price and Cottam 1998, 78, no. 1), South Cadbury and Dorchester (both unpublished).

Also represented was a small, blown, convex cup (FIG. 48.13). These are contemporary with pillar-moulded bowls and have a similar pattern of distribution, although unlike blue/green pillar-moulded bowls, they are unusual in the last quarter of the first century (Isings 1957, form 12). They were the most common small glass drinking vessel of the period, and are often called 'Hofheim' cups, as several well-preserved examples were noted at that site (Ritterling 1912/13, 365–6, forms 1–2, abb. 93). The rim is sometimes uneven, as on the illustrated example, but is always carefully ground. The body is convex and decorated with horizontal wheel-cut or abraded lines. A wide wheel-cut line below the rim edge is a common feature. The base is small and either flattened or slightly concave, sometimes having a very high central kick.

Again, the largest numbers of these vessels come from sites such as Colchester (Harden 1947, 303, pl. LXXXVI.68–76; Charlesworth 1985, MF 3 F7, nos 48–52, fig. 81, and F9, nos 82–4, fig. 82; Cool and Price 1995, 64–8, nos 279–331, fig. 5.2), Kingsholm, Gloucester (Price and Cool 1985, nos 21–23c, 41 and 42–45b, figs 18–19) and Fishbourne (Harden and Price 1971, 345–6, nos 46–52, fig. 139). In the South West, two cups come from Ilchester (Price 1982, 228, no. 10), four are known from Dorchester (Cool and Price 1993, 151, 160, 162, nos 28, 91–2 figs 85–6), several come from Usk (Price 1995, 159–62, nos 37–45, fig. 43), and an unusual blue/green ribbed cup from a pit containing Neronian–early Flavian material is one of several examples from Exeter (*JRS* 1953, 124, pl. XXIII; Charlesworth 1979, 223, no. 6; Allen 1991, 222, nos 9–13, fig. 93).

A total of eleven fragments comes from a series of jars and jugs which are found very frequently on sites occupied during the last third of the first century A.D., and which continued in use into the early second century. One rim fragment in yellow/brown glass (FIG. 48.6) came from a jar which would have had an ovoid or convex body and an open pushed-in base ring. The type often has decorative vertical ribs, but it is not possible to tell whether this example was decorated. The rim can be compared with a jar from Exeter (Charlesworth 1979, 276, fig. 70.23), a rim fragment from the Neronian assemblage at Kingsholm (Price and Cool 1985, 50, no. 50, fig. 19) and examples from Usk (Price 1995, 169–71, nos 71–5, fig. 45) and elsewhere in the south and west. Yellow/brown glass is not common after the early Flavian period, but some strongly coloured jars continued in use until after the end of the first century. These jars have a distinct distribution which is concentrated in the north-western provinces (Price 1978, 74, fig. 57). They are occasionally found intact in burials and well-preserved yellow/brown examples are known from Colchester (Thorpe 1935, 29, pl. IIIb) and Shefford, Bedfordshire (Kemett 1969–71).

There are at least four first- to mid-second-century jugs in the assemblage, one yellow/brown (FIG. 48.2), one yellow/green (FIG. 48.3) and two blue/green (including FIG. 48.4) belonging to forms comparable with the jars described above in colour, distribution and decoration (Isings 1957, forms 52 and 55). Like the jars, they were produced both in strong colours and in blue/green glass. Dark-blue and dark-yellow/brown jugs are also uncommon after the early Flavian period, so the first jug (FIG. 48.2) may possibly be contemporary with the pillar-moulded bowl and Hofheim cup described above. Yellow/green and yellow/brown examples have also been found in later contexts, some even as late as the second half of the second century as at Harlow, Towcester and Alcester, where jugs of these colours were found in association with Antonine samian (Price 1987b, 204, no. 20, fig. 3; Price 1980, 65–6, fig. 15; Price and Cottam 1994, 224 no. 9 fig. 109). Blue/green jugs continue in use

during the early–mid-second century. Although the fragments from Fosse Lane may represent only two blue/green jugs, the original number may have been greater, as blue/green jugs are always more common than the strongly coloured examples.

These jugs had angular ribbon handles (FIG. 48.3) usually with a prominent central rib (FIG. 48.4), together with small folded rims and cylindrical necks (not illustrated). They had conical, globular or sometimes discoid bodies, and either simple concave bases or open tubular base rings. Only conical-bodied jugs were recognised with certainty in the assemblage. Three body fragments demonstrate two forms of ribbed decoration. One type has narrow vertical ribs produced either by tooling or by optic blowing (FIG. 48.2). The illustrated piece can be compared with a conical ribbed jug from a burial containing Flavian pottery at Radnage, Buckinghamshire (Skilbeck 1923, 334, pl. XXXV, fig. 2c; Harden *et al.* 1987, 140, no. 68). The other type (not illustrated) has close-set, shallow diagonal ribs which may have continued the full length of the body, as on a jug from Turriff, Aberdeenshire (Thorpe 1933–4, 439–44), or may have had a sudden change of direction, becoming vertical on the lower body, as on a fragmentary yellow/green jug from Usk (Price 1995, 179, no. 100, fig. 46).

Also present is a fragment of yellow/brown glass from a horizontal shoulder, curving at the edge towards the body. The fragment is too small for the vessel to be identified, but yellow/green cylindrical bottles, similar to the blue/green bottles described below, are very occasionally noted on Neronian–Flavian sites in Britain and elsewhere, including Usk (Price 1995, 185, no. 122, fig. 48), Ribchester and Castleford (both unpublished).

Later second- and third-century tablewares

The minimum number of nine tableware vessels were in use at Fosse Lane between the mid-first and the early second century. A similar minimum number of nine vessels has been identified for the rather longer period from the early second century to the mid- to late third century, although some overlap between the periods is possible as some of the vessels described in the first section may also have been in use during the second period. The second group includes five drinking vessels (FIG. 48.5), one possible flask and a jug (not illustrated).

There are three colourless and two blue/green drinking vessels. Colourless glass was first used extensively in the later first century, and during the second and third centuries it was the dominant colour for good-quality glass vessels. In the first two-thirds of the second century the most common forms of colourless drinking cup had carefully ground curved rims, convex or straight-sided bodies with horizontal wheel-cutting, and a variety of base types. Quite frequently the vessels had a separately blown foot, an example of which was recorded in the Fosse Lane assemblage (not illustrated). A number of substantially preserved examples with this base type are known from Roman Britain, including one from Hardknott Fort, Cumbria (Charlesworth 1959, 37–8, fig. 3) and others from Antonine contexts at Harlow (Price 1987b, 202–3, nos 8–10, fig. 2) and Alcester (Price and Cottam 1994, 224, no. 11 fig. 109). So little remains of the Fosse Lane vessel, however, that the alternative possibility of it coming from a late second- to third-century footed vessel, such as a tall beaker or flask, cannot be discounted. A straight-sided, colourless body fragment (not illustrated) may come from a biconical cup of this type, but the thickness of the glass is more typical of a second- to third-century colourless cylindrical bottle, such as a complete example from Hauxton, Cambridgeshire (Harden 1958, 13, fig. 6).

The most common drinking cup of the later second and third centuries is the colourless cylindrical cup with a vertical fire-rounded rim, a straight-sided body, a horizontal lower body and a double-trailed base ring (Isings 1957, form 85b). This is represented by only one fragment (FIG. 48.5), although the very much less common blue/green variety is also present in the assemblage (not illustrated). The outer base ring on the illustrated fragment is applied, but tubular base rings are more common on this type of cup and a possible example of this type was also noted (not illustrated). These cups are found in quantity in large assemblages throughout Roman Britain, as at Caerwent (Boon 1972–3, 121, nos 40a–c, fig. 4), Dorchester,

Dorset (Cool and Price 1993, 162, nos 63–4, fig. 85) and Caerleon (Allen 1986, 111, nos 69–74, fig. 43; Zienkiewicz 1992, 6–7, nos 18–19, fig. 2), and even the smaller assemblages of the period usually produce a few examples.

The diameter of a very tiny rim fragment in blue/green glass, perhaps with a slightly out-turned rim (not illustrated), suggests that it comes from a cup. Nothing can be said about the shape of the body or the form of the base, but the colour and rim finishing suggest that it is a second- to third-century vessel, although pale blue/green beakers with fire-rounded rims are occasionally noted in fourth-century contexts.

There is only one fragment from a second- or third-century jug (not illustrated). Although the piece is heat-distorted and no indication of the body shape remains, the colour (blue/green), the rolled-in rim edge and the pinched thumb-rest are typical of small jugs of the period. Pinched thumb-rests are present, for example, on a globular spouted jug from Bath (Scarth 1864, 96–7, pl. XLIV), and on a blue/green jug from Verulamium (Charlesworth 1984, 166, no. 238, fig. 67, no. 100).

There was also a puzzling fragment from the rim of a blue/green vessel (not illustrated) which, on the basis of the colour and quality of the glass, belongs to the first–third centuries. The exact appearance of the rim cannot be determined, but the edge appears to have been folded out, down and in to produce a wide horizontal rim.

Bottles

Thirty fragments come from blue/green bottles of the first and second centuries. Two square or rectangular bottles and three cylindrical bottles can be recognised with certainty. The remaining body fragments are straight-sided, and therefore come from some form of prismatic bottle, whilst the rim, shoulder and handle fragments could come from bottles of any form.

Bottles are almost always the most numerous vessel on first- and second-century sites. They were used as general storage vessels to contain large quantities of liquids, semi-liquids and possibly small dry items. All bottles usually have folded rims (FIG. 48.7), short cylindrical necks, horizontal shoulders and angular handles, which are usually reeded. In the first century, both cylindrical and prismatic bottles were very common. The bodies were either tall or short and often have evidence for vertical scratching on the body, probably a result of being lifted in and out of boxes or baskets. The broken edges of a fragment from Building VII (not illustrated) have been worn smooth by the re-use of the fragment as a tool. Cylindrical bottles had gone out of general use by the early second century, but prismatic bottles continued in use until the late second or early third century. For a wide range of both forms see Colchester (Cool and Price 1995, 179–99, nos. 1834–2332, figs 11.7–11.12).

Prismatic bottles were blown into a mould to form the body and base of the vessel. The mould was usually square, but hexagonal and more occasionally rectangular bottles are also known. On the base of the mould was a design which appeared in relief on the bottle base, and usually consisted of concentric circles or other geometric motifs, although lettering and very occasionally pictures are also known. Three base fragments from Fosse Lane have raised designs, one of which shows a common design consisting of concentric circles with a central round pellet (FIG. 48.12). The complete designs of the other bases cannot be reconstructed, but both appear to have simple geometric patterns (FIG. 48.8).

Bottles appear to be sparsely but evenly distributed over the site. As with all the glass, there is a tendency for fragments to occur in the north-eastern, eastern and southern areas, but there is perhaps a significant cluster (seven fragments) in the area of Building VII, which is interesting considering the number of pottery storage vessels recorded in the same building.

Late Roman glass

Fourth-century glass comprises the largest group from the site, with a minimum total of 21

vessels, but with many, greenish and yellow/green bubbly body fragments characteristic of the period which cannot be identified. Although the vessel total is greater than those of each of the preceding centuries at the site, the range of forms is less varied. The late Roman glass assemblage is dominated by drinking vessels, and in particular by conical beakers. The assemblage includes at least thirteen of these beakers (including FIG. 48.9, 10, 14 and 15) as well as two conical beakers or bowls (not illustrated), an indented bowl (not illustrated), four jugs/bottles/flasks (including FIG. 48.11) and several miscellaneous bases which are unlikely to relate to any of the identified forms.

Conical beakers are one of the most common forms of fourth-century drinking vessel. Another common form, the hemispherical cup, has not been identified with certainty at Fosse Lane, although four convex lower body and base fragments might come from cups (not illustrated). Conical beakers with cracked-off rims, straight-sided bodies and small concave bases appear to be present throughout most of the fourth century. Amongst the earliest examples from Roman Britain is an example from a pit at Portchester Castle, Hampshire containing coins dated at latest A.D. 308–317 (Harden 1975, 371, fig. 198.11). Sometimes they are found in very large numbers, as at Winchester where there were at least 23 examples from sites within the city (unpublished). Other urban and rural sites in the region where they occur include Frocester Court villa (Price 1979, 41, fig. 16.8–11), Bath (Shepherd 1985, 162–3, fig. 92.1–16), Cirencester (Shepherd 1986, 120, figs 86–7.625, 632 and 641), Ilchester (Price 1982, 231, fig. 112.30), Catsgore (Price 1984, 30–1, fig. 14.1–2), and Dorchester, Dorset (Cool and Price 1993, 166, fig. 87.141–4).

The three beakers with fire-rounded rim edges (including FIG. 48.15) indicate glass use in the mid- to late fourth century at Fosse Lane, and belong to a form which probably continued in use into the early fifth century. These beakers had either small concave bases (FIG. 48.9), the illustrated example having a pontil scar indicating where the beaker was held whilst the rim edge was finished, or diagonal tubular bases (FIG. 48.10). Similar beakers were found in mid-fourth-century contexts at the Alchester Road suburb, Towcester (Price and Cool 1983, 122, fig. 47.40–4), and beakers with both base types were present in the late Roman glass hoard at Burgh Castle, though they are there dated to the early fifth century (Harden 1983, 82–3, fig. 37,85–9).

One certain conical bowl, indented and truncated, was noted, together with two further possible examples (none of which is illustrated). Dated conical bowls are not common in Britain, but finds from elsewhere suggest that they were in use in the mid- to late fourth century (Isings 1957, form 117). Indented decoration, sometimes accompanied by horizontal abrasion on the upper body, is a common feature of these bowls. One of the best examples of the form comes from Hucclecote villa, Gloucestershire (Clifford 1933, 334, fig. 10), and other bowls are known from Gloucester (Charlesworth 1974, fig. 29.14), Ilchester (Price 1982, 231, fig. 112.29) and elsewhere.

Also present was a base fragment with a narrow applied base ring perhaps from a drinking vessel (not illustrated). Although no precise identification of the fragment can be attempted, applied bases are known on some late Roman cups, as on two one-handled cups from mid- to late fourth-century burials at Lankhills cemetery, Winchester (Harden 1979, 216, fig. 27.117 and 508).

Rim and handle fragments are frequently the only parts of late Roman jugs or bottles to be firmly identified on occupation sites The assemblage included two such handle fragments, one pale green (FIG. 48.11) and one yellow/green (not illustrated). The illustrated piece comes from the handle and shoulder of a mould-blown cylindrical bottle (FIG. 48.11), a form often called a 'Frontinus' bottle (Isings 1957, form 89). These had one or two angular ribbed handles, and are quite frequently found in pale-green and yellow/green glass on late Roman sites in Britain and the north-western provinces. In the south and west of Britain, fragments are known from Dorchester, Dorset (Cool and Price 1993, 164, fig. 87.134), Silchester (Boon 1974, fig. 36.13) and Chilgrove villa and the Cattle Market, Chichester (Down 1979, 163, fig.

56.4; Price and Cool 1989, 140, no. CM56, fig. 19.3). A further handle (not illustrated) cannot be firmly identified, but appears to have vertical ribs, a feature noted on 'Frontinus' bottles and several forms of jug such as the two, one ovoid and one globular, from the Butt Road cemetery, Colchester (Cool and Price 1995, 204–6, no. 1161, fig. 11.17).

Two small colourless fragments (not illustrated) come from vessels with funnel mouths, probably flasks. The poor quality of the glass suggests that they may be late Roman vessels, and one has evidence of a trail. Many late third- to fourth-century jugs, flasks and bottles have funnel mouths decorated with horizontal trails, including the jugs and mould-blown bottles mentioned in connection with FIG. 48.11. Both fragments can also be compared with late Roman colourless cylindrical flasks with funnel mouths, such as examples from York (Harden 1962, 140, figs 89–90, H.13, H.G.146.3–4), Gravel Hill, Cambridgeshire (Liversidge 1977, 15–16, pl. 2) and elsewhere.

Catalogue of illustrated pieces (FIG. 48)

1. Dark-blue body fragment from pillar-moulded bowl; convex body with parts of two vertical ribs; the outside surface is fire polished, while the inside surface is wheel polished and has two horizontal abraded bands; small–medium bubbles. 4–6 mm thick.*1369, Area IV (015 081)* (Acc. no. 609; Cat. no. 001)
2. Yellow-brown body fragment from a jug, with a slightly convex body and three narrow vertical ribs. 2–4 mm thick. *1158, Area III (075 045)* (Acc. no. 610; Cat. no. 004a)
3. Neck and handle fragment, yellow/green jug or bottle, showing a trace of the cylindrical neck and angular ribbon handle; folded upper attachment and narrow return trail extending onto the handle; elongated bubbles, black specks, tooling marks. *4809, Area VII (060 144)* (Acc. no. 611; Cat. no. 005)
4. Handle fragment, blue-green jug; the narrow ribbon handle has a prominent central rib; elongated bubbles. *4508, Area II (089 068)* (Acc. no. 612; Cat. no. 016)
5. Colourless lower body and base fragment from a cup; trace of carination, horizontal lower body; applied base ring and central coiled trail, pontil scar; base edge worn, strain cracks; occasional bubbles. Base diameter 30 mm. *C1121, Area II, Period 4* (Acc. no. 613; Cat. no. 007)
6. Rim fragment, yellow-brown jar, with a vertical tubular rim, the edge of which is turned in, then bent out and down; trace of upper body; lightly worn. Rim diameter 100 mm; 1 mm thick. *1990, Area V (012 040)* (Acc. no. 614; Cat. no. 004)
7. Rim fragment, blue-green bottle; slightly diagonal folded rim, edge bent out, then up, then in and flattened; trace of cylindrical neck; surfaces scratched, strain cracks. Rim diameter 100 mm. *3759, Area VI (061 125)* (Acc. no. 615; Cat. no. 021)
8. Lower body and base fragment, blue-green prismatic bottle; part of one straight side and flat base; raised base design, single curving line extending towards centre from edge of base; lightly worn; small bubbles. *3686, Area VII (069 137)* (Acc. no. 616; Cat. no. 025)
9. Lower body and base fragment, late Roman yellow/green beaker; trace of straight-sided lower body and small concave base with low, slightly off-centre kick; circular pontil scar; tiny bubbles and specks, streaky weathering. Base diameter 20 mm. *4305, Area I (096 089)* (Acc. no. 617; Cat. no. 041)
10. Two base fragments, late Roman yellow/green ?jug or beaker; edge of lower body, diagonal tubular base ring, concave base; base edge worn, light weathering. Base diameter 90 mm. *1328, Area IV (018 080)* (Acc. no. 618; Cat. no. 052)
11. Handle and shoulder fragment, pale-green late Roman barrel jug; lower part of ribbed ribbon handle with wide central rib and narrow edge rib applied to horizontal shoulder; trace of cylindrical upper body; many tiny bubbles. *757, Area III (070 046)* (Acc. no. 619; Cat. no. 027)
12. Two joining base fragments, pale blue/green prismatic bottle; concave base with raised design; central round pellet, parts of two concentric circles and trace of third; tiny specks and bubbles, strain cracks. *803, Area V (073 038)* (Acc. no. 620; Cat. no. 026)
13. Rim and upper body fragment, blue/green cup; slightly in-turned rim, uneven edge ground smooth; straight-sided upper body; wide, horizontal wheel-cut line and band of abrasion below rim; streaky weathering. *4564, Area V (067 047)* (Acc. no. 621; Cat. no. 009)
14. Decorated rim and upper body fragment, late Roman yellow/green beaker; curved rim, edge cracked-off but not smoothed; straight-sided upper body; horizontal band of light abrasion below rim, further horizontal band on upper body. Rim diameter 80 mm. *3446, Area VI (004 125)* (Acc. no. 622; Cat. no. 028)
15. Rim and upper body fragment, pale-green late Roman beaker; out-turned rim, edge fire rounded; straight-sided upper body tapering in; small and medium bubbles, horizontally elongated in rim; black specks, strain cracks. Rim diameter 80 mm. *C1564, Building VIII, Period 6* (Acc. no. 623; Cat. no. 038)

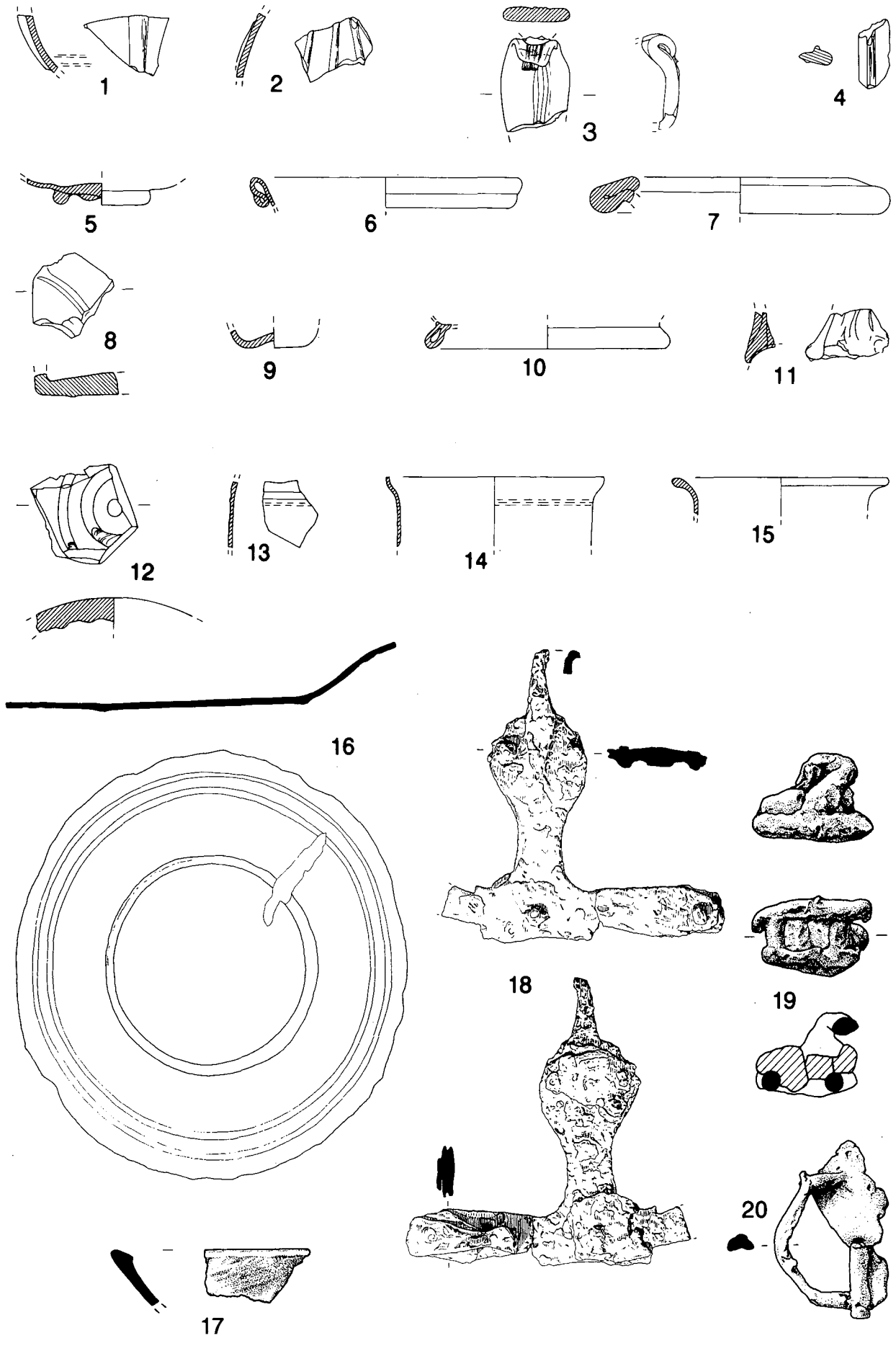


FIG. 48 Glass vessels, nos 1–15; metal vessels, nos 16–17; bucket mount, no. 18; pot rivets, nos 19–20; scale 1:1

METAL VESSELS

by Julie Smith

Three metal vessels were represented in the assemblage, one in pewter and two in copper alloy. Given the location of the site, the pewter vessel is not an unexpected site find; there is evidence for their manufacture at Camerton (Wedlake 1958, 82–93). Vessels in copper alloy are relatively common in Roman Britain. The rim fragment of one small vessel (not illustrated) appeared to have been tinned, and conservation analysis detected a surface coat of leaded bronze with traces of arsenic and nickel. All the vessels are small and may have served some specialised function.

Catalogue (FIG. 48)

16. Pewter. Small plate or shallow bowl, now flattened. Three pairs of concentric circles form decoration on the inside of the vessel. Diameter 150 mm. *u/s, Fosse Lane service trench*
17. Copper alloy. Rim fragment from small vessel, with bevelled inner edge bearing decorative incisions. Diameter *c.* 240 mm. *u/s, metal detector find*

BUCKET MOUNT

by Derek Moscrop

Catalogue (FIG. 48)

18. Iron. Part of bucket handle mount, made of iron sheets riveted together. Although the object is plain its curving shape makes it both a decorative and a functional object. Would have been one of a pair. Length 106 mm. Maximum width 58 mm. *3689, Area IX (063 198)* (Acc. no. 12)

POT RIVETS AND CRAMPS

by Iain Ferris

Ten complete or fragmentary lead pot rivets or cramps were recovered, two (not illustrated, Acc. nos 599, 604) with fragments of pottery still *in situ.* These vary greatly in size and form and this should be seen as a reflection of the custom-made nature of such objects.

Catalogue of illustrated examples (FIG. 48)

19. Lead. 10 mm wide strip and 22 mm wide plate forming a cramp held together by two circular-sectioned ties. A fragment of pottery remains *in situ.* Length 40 mm. *3877, Area V (010 041)* (Acc. no. 597)
20. Lead. Strip and plate linked by two ties to form a cramp; now bent out of shape and flattened. Length 65 mm. *5164, Area IX (051 194)* (Acc. no. 600)

STONE MORTARS

by Fiona Roe

The two illustrated mortar fragments both come from late contexts. Purbeck Marble mortars (FIG. 49.2) are relatively common on Roman sites (Dunning 1968, 108), having been recorded for instance from Poundbury, Dorset (C. Green 1987, 105) and Kingscote, Glos. (Gutiérrez and Roe 1998, 176). In contrast parallels for this use of Kentish Rag, brought in from near Maidstone (FIG. 49.1), appear to be uncommon, although it was used for two mortars at Richborough (Dunning 1968, 108). Its occurrence at Fosse Lane is not altogether surprising however as there are six whetstones from the site made from the same material.

There are also two small fragments (not illustrated), possibly from the same bowl or mortar though from different areas (*1421, Area IV (010 097)* and *1955, Area V (018 038)*), made of White Lias from the Radstock area. This material was also used for gaming counters and spindlewhorls at Fosse Lane.

Catalogue (FIG. 49)

1. Part of a flat-based vessel which, on macroscopic examination, appears to be made from Kentish Rag. *6021, Building IX, Room F, Period 5* (Acc. no. 544)
2. A shallow and well-worn bowl in Purbeck Marble. *F30, 1023, Area III enclosure ditch, Period 5* (Acc. no. 543)

SHALE BOWL

by Julie Smith

Catalogue (FIG. 49)

3. Base of a small, shallow, plain bowl. Irregular, turned Kimmeridge Shale, probably from Purbeck, Dorset. Diameter >90 mm, footring 48 mm. *F351, Building VIII, Period 4* (Acc. no. 1760)

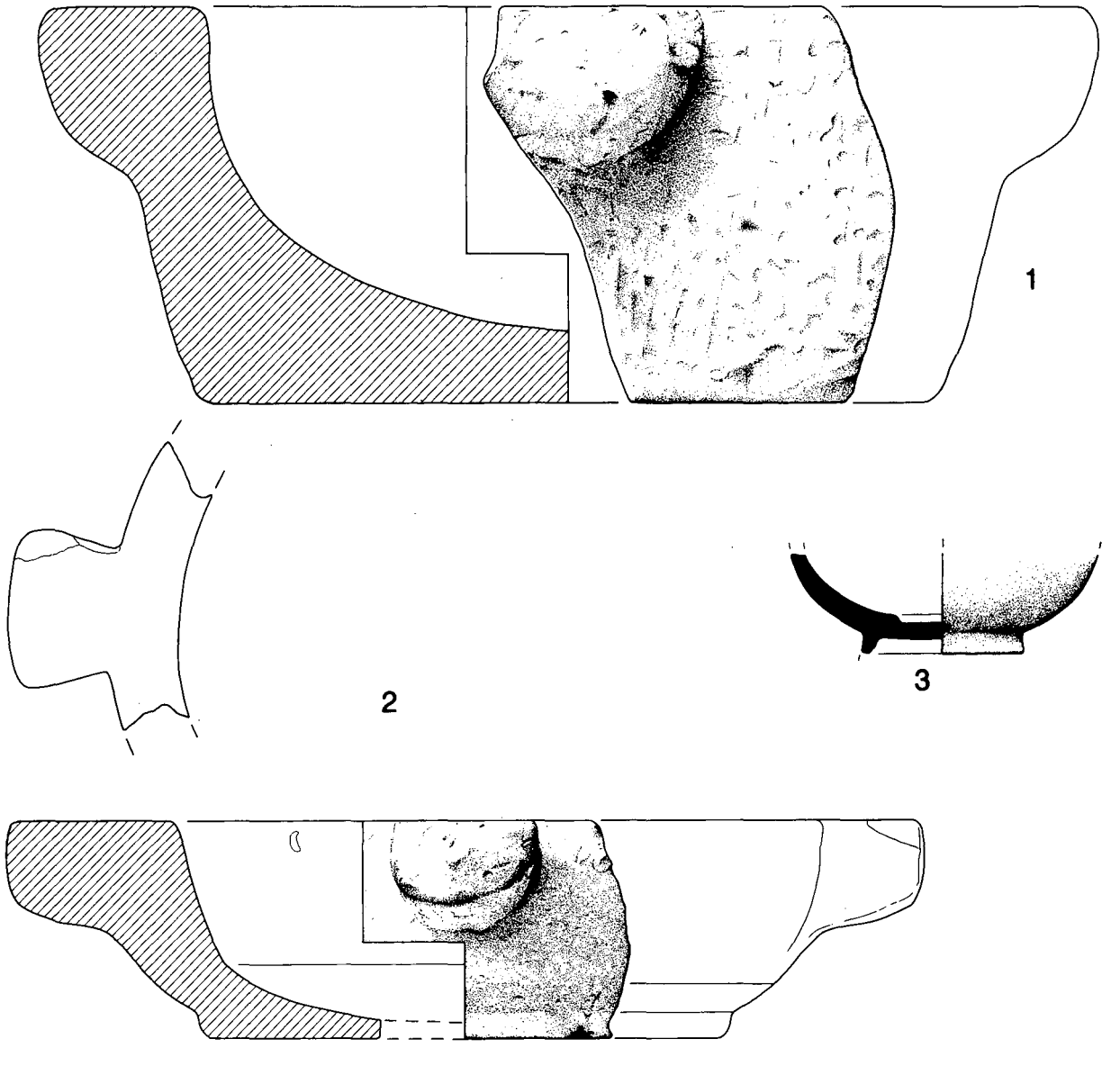


FIG. 49 Stone mortars, nos 1–2; scale 1:1; shale bowl, no. 3; scale 1:2

3.4: PERSONAL OBJECTS

BROOCHES

by Donald Mackreth

Introduction

All are made from a copper alloy, unless otherwise stated. The following report combines the brooches from excavation in 1990 and subsequent field work (including metal detector finds) with the collection in Shepton Mallet Museum. Items from the latter are identified by SHPMM/A. Where brooches have been grouped under a single number, the writer has added a lower case suffix to distinguish between the different brooches.

The basic periodisation of the site has demonstrated that occupation runs mainly from the late first century to the late fourth and probably into the fifth century. What will be immediately clear from looking at the dates given in the brooch report is that, not only are the brooches more restricted in date, but many are anterior to Period 1. The limited period for all brooches merely shows that brooch-wearing amongst the ordinary native population had largely ceased by the end of the second century. However, the early brooches are another matter.

A feature of archaeological collections is the two major classes into which virtually all material can be divided: basically static and essentially mobile. Pottery and building remains and fittings are essentially static. Brooches, on the other hand, are highly mobile and, because of heavy use, are apt to be lost away from base. A single brooch of itself indicates little about its find spot, it needs supporting evidence before its date can be pressed into service, and usually that evidence is more substantial and useful in its character than a single small find. This means that, if the 'early' brooches are to be put into context, a consistent picture must emerge from their study, and here this can only mean their distribution on this site. Fortunately, there are sufficient for casual loss unconnected with the site to be safely ruled out. They are here because somewhere close by there is an earlier core to the site.

First, we need to establish which brooches are involved and what their general date-range is. They are 3, 18, 24, 62–74, 81–6 and 91. Of these, only 62–74, 81–6 and 91 are good indicators of occupation pre-dating Period 1, their overall date-range running from the second quarter to the beginning of the last quarter of the first century. The other brooches may have been survivors-in-use from elsewhere, but there is no reason, in the light of the others, to deny them a place in this earlier period.

The site was not totally excavated and the lowest deposits were not fully examined. What follows is a trial exercise based on the assumption that the bulk of the brooches recovered were residual and that many deposits are, in effect, redeposition of material from close by. It cannot be demonstrated that this was so, much may have been brought in, just as much may have been taken away, but soil from cleaning ditches and the like probably remained on site. If this premise cannot be allowed, there is little point in studying any distribution on the site. If, however, it can be shown that there is something specific about the distribution, the validity of the assumption would be improved as free and random transportation of materials should have given rise to a basic uniformity in distribution.

Unfortunately, of the 93 items studied here, 29 come from the museum and a further 25 were found by users of metal detectors. This leaves 39 brooches. In the two main early groups, the Strip and the Aucissa–Hod Hill, the excavation finds in the first number six out of thirteen, and only two out of five in the second. However, if they really do represent an earlier period, they can be put together and may point to where on the current site the other early items in the museum may have been found; although the majority are suspected to have derived from the area of the building discovered in 1887, west of the Fosse Way. As a

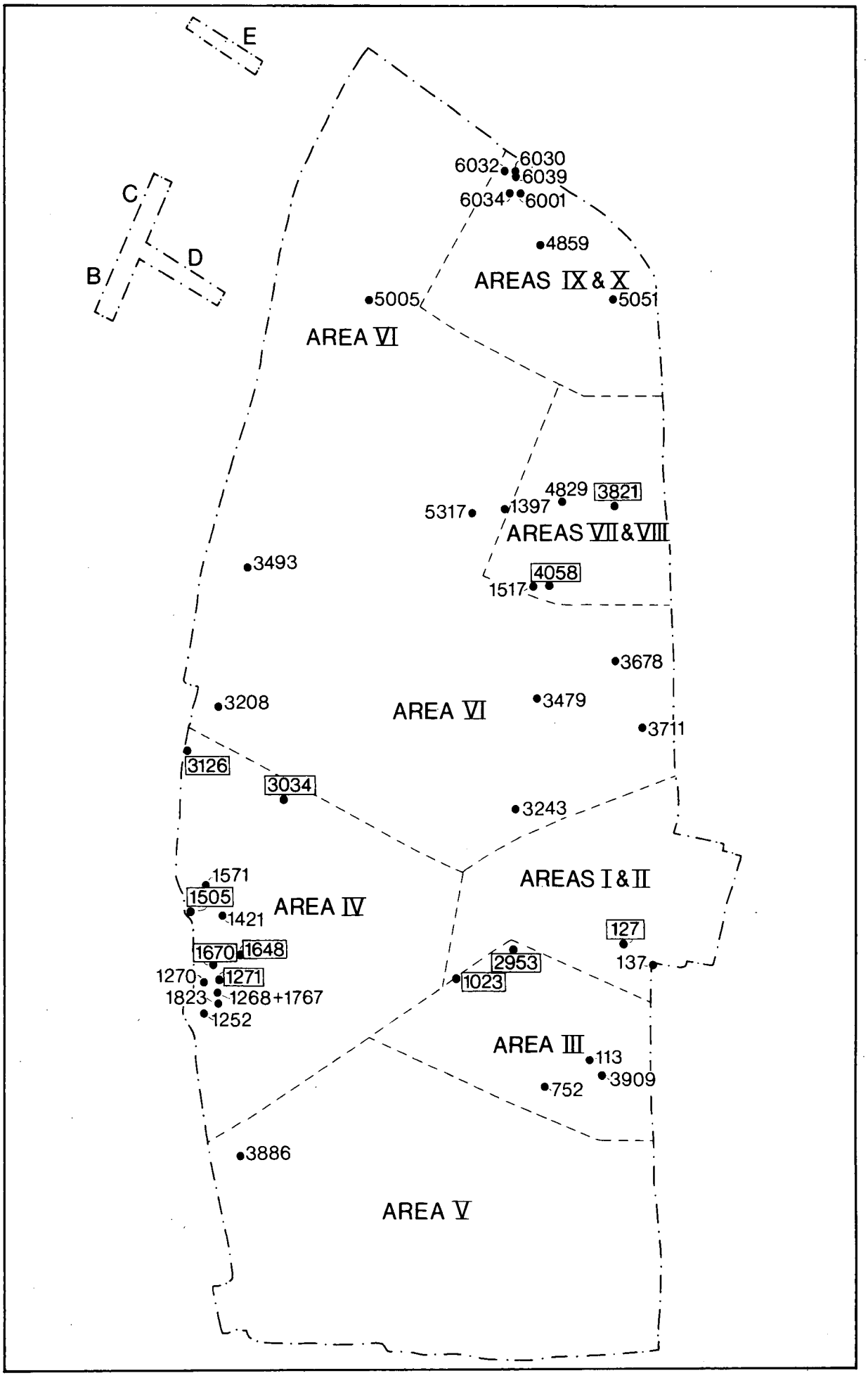


FIG. 50 Brooches, site distribution plot (pre-A.D. 75 brooches boxed)

control, one needs to look at the distribution of the Colchester Derivatives dating later than *c.* A.D. 75: if Period 1 activity was generally uniform, then these brooches should not show any particular concentration, other than the degree of intensive excavation in selected areas on the site.

Firstly, a general comment is necessary on the distribution of all types of brooch (FIG. 50). Not surprisingly, most came from the more intensively examined areas. Even so, looked at in isolation, only Area V seems to have been deficient in brooches and only one concentration appears: in the western part of IV. If only Colchester Derivatives are looked at, there is a much more even spread with a possible concentration of a sort in Areas VII–VIII and with three close together in the same area as before in Area IV. On the whole, this suggests that any particular bias showing in any other type of brooch probably has a real basis. As it happens, only the earlier groups have enough examples for this to be looked for. These reveal that Areas IV–VI bordering the Fosse Way yield all of these brooches. The brooches, therefore, may have something to say about the Fosse Way, not so much in terms of when it was laid out, but about when major occupation began next to it. The question which cannot be answered here is whether that occupation was purely military, purely civilian or a mixture of the two: at this date, brooches were not specific to either peasant or soldier.

Catalogue (FIGS 51–54)

Colchester derivatives

Brooches 1 and 2 both have their springs mounted in the Harlow manner: an axis bar through the coils runs through the lower of two holes in a plate behind the head of the bow, the chord passing through the upper.

1. Each wing has a groove at its end. The bow is plain, apart from a crest at the top formed by the top of the plate behind the head, and tapers to a pointed foot. SHPMM/A233

The spring-fixing system is so much at home in eastern England, where its dating is such that it is almost inconceivable that the earliest examples do not date to before the arrival of the Roman armies (Jackson and Potter 1996, 306–13), that to find examples outside that region almost demands an explanation. Only five out of over 200 recorded by the writer come from the lands west of Hampshire and south of Gloucestershire and even in these areas the family is rare. Two of the five come from Exeter (Hildyard Collection 206; excavations, site code BSE/80, F73, sf. 139) and should have arrived with the army. The other three are from Wiltshire (Rotherley, Pitt Rivers 1888, 118, pl. 97.7; Mildenhall, Devizes Museum, 22 B.C.; Amesbury, Hildyard Collection 23). None of the next main group (e.g., Meates 1987, 65, fig. 24.60) occurs in the area. Although there are occasional occurrences of other designs using the spring-fixing system within the South West, only one relatively large group (e.g. Rawes 1981, 65, fig. 8.1) appears to be exclusively western in its distribution: 50% come from Cirencester and the area immediately around, the bulk of the rest from Wiltshire and Hampshire. The present specimen is closely similar, but lacks the ridge down the upper bow stopped by grooves. Of the Cirencester-centred group only the one from Brockworth (ibid.) came from a published dated context: it was found with a coin of Gratian. Though the present brooch is not a member of that group, it belongs to one which is spatially related. The members are all equally plain with similarly decorated wings and their centre of distribution appears to be Wiltshire. The present piece is the only example recorded by the writer west of there. Dating is little better: Nettleton, three examples, two dated generally from the later first century into the early second (Wedlake 1982, 125, fig. 52.40, 41) and one to the fourth century (ibid., 123, fig. 51.33). The spring-fixing habit had penetrated into Dorset before A.D. 50 as the collection from Hod Hill shows (Brailsford 1962, 7, fig. 6.C10; Richmond 1968, 38, fig. 31, hut 56: 117–19). This is hardly enough to provide a link between eastern England and the South West and the aberration could be due to craftsmen moving west in the wake of the Roman army. This system also occurs on brooches with the moulded decoration found on the upper bow of No. 53.

2. Each wing has at its end a pair of sunken mouldings joined by a flute. The bow is very thin, but the head is expanded by the addition of two mouldings splaying out on each side to end in a boss. The bow ends in a plain blunt foot. The plate behind the head rises as a crest whose forward profile has a concave surface between grooves. SHPMM/A271

The only close parallels for this brooch known to the writer come from Sutton Courtney (Leeds 1927, 68, pl. 6.13) and Woodeaton (Taylor 1917, 108, fig. 7.33), both in Oxfordshire. How the spring was fixed on the first is unknown, the item from Woodeaton, as illustrated, seems to have a Polden Hill system (see below). Apart from

this difference, the three are closely related, the flaring upper bow with its bosses bearing a resemblance to the Aesica, only the obligatory fantail foot being wanting. One variety of Aesicas has a very similar upper bow, a Polden Hill spring system and a fantail foot with dot-and-circle ornament on it (e.g. Mackreth 1989b, 188, fig. 26.1, 67). The distribution, fairly predictably because of the spring system, lies in the west. There is a weighting towards Gloucestershire, but there are really too few specimens for this to be taken to be significant or for any connection between the two designs to be asserted. Only the most general date-range can be proposed: from the later first century to the middle of the second.

Numbers 3–15 all have or had their sprung pins mounted in the Polden Hill manner: an axis bar through the coils is held in a pierced plate at the end of each wing, the chord being secured by either a rearward-facing hook or a pierced crest on the head of the bow.

3. All the sections of this brooch are very thin, but there is little indication that it had been fabricated by forging. Each wing is long with three widely spaced sunken mouldings which had almost certainly been beaded. The ends had been simply bent back to form the end plates necessary for the spring-holding system. The head of the bow is wide and has a groove on each side which runs up to define the edges of the hook. On the head of the bow are the remains of a buried moulding which, also, had almost certainly been beaded. The very thin bow has a pointed foot and the catch-plate once had a large piercing divided by a bar. SHPMM/A234

The type to which this brooch belongs is essentially undated, most of the examples recorded by the writer being unpublished: Derby, first or second century (Mackreth 1985a, 281–3, fig. 123.2); Whitton, Glam., before A.D. 135 (Jarrett and Wrathmell 1981, 167–8, fig. 68.8), early third century to A.D. 300/340 (ibid., 167, fig. 68.6). None of these provides a sure indication of the *floruit*. The distribution runs mainly up the east side of the lower Severn Valley and spreads out into Hampshire and up to Derby. The four at Whitton, however, may show that the type was common in that area, but it may be the incidence of excavation which biases the distribution. If the definitely military sites at Derby, Alcester and Wroxeter are excluded, the emphasis in distribution on the lower Severn and a drift into central southern England is evident.

The origin of the type is less easy to establish, but the very thin sections of the castings suggest a development from a rare group in which the wings at least were made separately and then riveted to the bow. The designs in this group are varied and there is no clear single type. If overtly military sites are again ignored, the distribution is meagre: Hales, Staffs., undated (Goodyear 1969, 114, fig. 4.A). However, the five examples at Gloucester suggest that the technique belongs to the southern Severn Valley. Only one is published (Hurst 1985, 31, fig. 12.4) and came from a medieval or later context. But three of the others come from Kingsholm (sf. 111, 117, and 9/83W–49–15) and should belong on balance to the major military occupation which would suggest that the technique is datable to the 50s in the main. Typologically, the present brooch should be earlier than the group of which No. 4 is a member and this, again, suggests that it is earlier in general than A.D. 60/70.

4. Each wing has two sunken mouldings, the outer one being beaded. The junction of the wings with the bow is masked by a curved and beaded moulding rising from the former. The pierced crest for the chord lies behind the head of the bow and is carried over that as a beaded skeuomorph of the Colchester's hook. There are three cross-cuts at the foot of the bow. The catch-plate has a triangular piercing and a groove across the top of the return. *5005, Area VI (037 187)* (Acc. no. 548)

The associations of this brooch are, for the most part, clear and indicated by the spring-fixing arrangement, the beaded mouldings and the pierced catch-plate. The last two look back towards the type represented by No. 3; the mouldings on each side of the head, the way the latter rises above the wings and the Polden Hill spring system look forward. For those like the present specimen the dating is: Bagendon, Glos., *c.* A.D. 50–60 (Clifford 1961, 173, fig. 31.5); The Lunt, Baginton, Warks., probably before 75 (Hobley 1973, fig. 19.7); Nettleton, first century (Wedlake 1982, 123–5, fig. 52.36A); Camerton, Som., after A.D. 90 (Wedlake 1958, 218, fig. 50.8); Nettleton, second century (Wedlake 1982, 123, fig. 52.36). This is a wide range, but a brooch from Kingsholm, Gloucester (sf. 114, 9.83), should suggest that the Bagendon brooch and the one from The Lunt should both lie within the type's *floruit*.

In the family (see No. 10) which succeeded this type, the spring system is kept, the mouldings on each side of the head become more marked while the head becomes swollen and now rides high above the wings. The core distribution of the family is centred in the Severn Valley and the Welsh Marches, but examples occur in the rest of Roman Britain. There are various decorative types, but the essential integrity of the family is assured by the presence of the chief features given above and by the almost universal presence of the same kind of foot-knob. The chief variation is the hinged pin found in examples centred on the southern Pennines. The dating for the fully developed type is given under No. 10, but it seems that the form, usually plain, without a foot-knob precedes those with one. The dating of those without a foot-knob is significant: The Lunt, Baginton, A.D. 64–70/75 (Hobley 1969, 107, fig. 19.1); Carlisle, late 120s A.D. 150/180 (Mackreth 1990, 104, fig. 100.1). The specimen from The Lunt shows that this stage of development had taken place before A.D. 75. Therefore, the present brooch should not really be later than *c.* A.D. 70. The brooch from Carlisle was in very poor condition,

but the absence of the foot-knob is assured. The earliest occupation there appears to begin in the later 70s and the final dating of brooches without foot-knobs should be given by the earliest examples of brooches belonging to the main run of the type: the late first century (see No. 10).

5. Each wing has a pair of sunken mouldings at its end. The bow is plain apart from a short ridge on the head in the form of a skeuomorph of the Colchester's hook whose upper profile is moulded to form a concave surface between steps. The foot is pointed and there is a small triangular piercing in the catch-plate. *3479, Area VI (068 117)* (Acc. no. 549)

As this brooch belongs to no distinctive family, there is no independent dating. However, the triangular hole in the catch-plate and the skeuomorph hook's shaped profile suggest manufacture in the first century.

6. Each wing has a pair of mouldings at its end. The bow has an incised saltire beneath the crest for the chord. The bow has a step down each side and, below a rudimentary boss, there are four shallow ridges down to a projecting foot of two mouldings. A break in these ridges suggests a faulty mould. The catch-plate is plain, very narrow and tall. *3678, Area VI (083 123)* (Acc. no. 550)

The saltire is most often found on brooches made in the South West (see nos 29 and 32). The boss immediately under it may point to some influence either from a Headstud type (e.g. Pollard 1974, 140, fig. 22.3) or from a clutch of south-western brooch types whose relationship with the Headstud proper is unclear. One of the latter, with a pimple boss like that of the present example, from Exeter is dated *c.* A.D. 75–80 (Mackreth 1991, 233, fig. 100.8). The group to which that belongs has hinged pins, which were preferred in the South West to sprung ones, and with little significance in relation to the present specimen which was made in an area where the Polden Hill was the preferred system. Only a broad date-range can be given: late first into the second century.

7. The pin is forged from rolled or folded sheet metal. Each wing has two ridges divided from each other and the bow by deep flutes. The left-hand wing had two ridges at its end. The pierced crest for the chord has a decorated profile recalling that on No. 5 and ends in a point between steps to form a V. On each side again is an extra moulding. The bow ends in a squared foot. The catch-plate has a small triangular piercing. *5317, Area VII (056 149)* (Acc. no. 551)
8. (not illustrated) The upper bow is lost. At the top of the surviving part is the end of a central ridge and at the bottom, a squared foot like that on the last brooch. The catch-plate has a pin-groove and a circular hole. *752, Area III (070 048)*

The chief features of Brooch 7 are the mouldings running from the wings down the sides of the upper bow. These are specific to brooches made in the South West and occur on brooches with both sprung and hinged pins (e.g. Hattatt 1985, 87, fig. 37.384) and can become elaborate (e.g. Gracie and Price 1979, 26, fig. 12.195). Brooch 8 was almost certainly related to 7 and the dating of that should apply to the other. The dating evidence is meagre and, unfortunately, derives from a wide range of decorative types making the final outcome a little doubtful (PH = Polden Hill spring system; H = hinged pin): Camerton, one PH and one H, A.D. 65–85 (Wedlake 1958, 218, fig. 50.7, 10); Alton, Hants, PH, early Flavian (Millett 1986, 67, fig. 25.2); Verulamium, PH, before the late first century (Lowther 1937, 37, fig. 2.1); Nettleton, PH, late first to early second century (Wedlake 1982, 125, fig. 52.38); Chew, H, late first to early second (Rahtz and Greenfield 1977, fig. 114,3); Ower, Dorset, H, probably before A.D. 125 (Mackreth 1987, 95, fig. 52.210); Camerton, PH, miniature, A.D. 120–140 (Wedlake 1958, 218, fig. 50.6), H, before A.D. 180 (ibid., 219, fig. 50.9); Ilchester, H, before late second century (Mackreth 1982, 243, fig. 115.9), H, third century to after A.D. 400 (ibid., 243, fig. 115.10). The Polden Hills present a clearer picture, *c.* A.D. 65–125, than the hinged-pin examples running as they do from the later first century to near the end of the second: the late one from Ilchester was obviously residual in its context. The Polden Hills tend to display more elaborate wings and piercings in their catch-plates and those dating to perhaps as late as A.D. 125 may well have been long in use. Whether the hinged-pin varieties were essentially later is doubtful: belonging as they do to the deeper South West than the Polden Hill varieties, it may be more a matter of chance that they have not come from better-dated contexts. On the other hand, many of the hinged-pin specimens are much plainer and this could be a sign that they run on later, but much also depends on decorative preferences anyway. See comment after No. 14.

9. The spring had been repaired. Only the wings and the head of the bow survive. Each wing has a triple moulding at the end, the central element being beaded, and a pair in the middle separated from the end and the bow by flutes. The pierced crest appears to be a skeuomorph of the Colchester's hook. The brooch was tinned or silvered. *C6034, Building IX, Period 3* (Acc. no. 552)

Although little survives, the elaborately moulded and beaded wings are more the mark of a first-century brooch than one of later date.

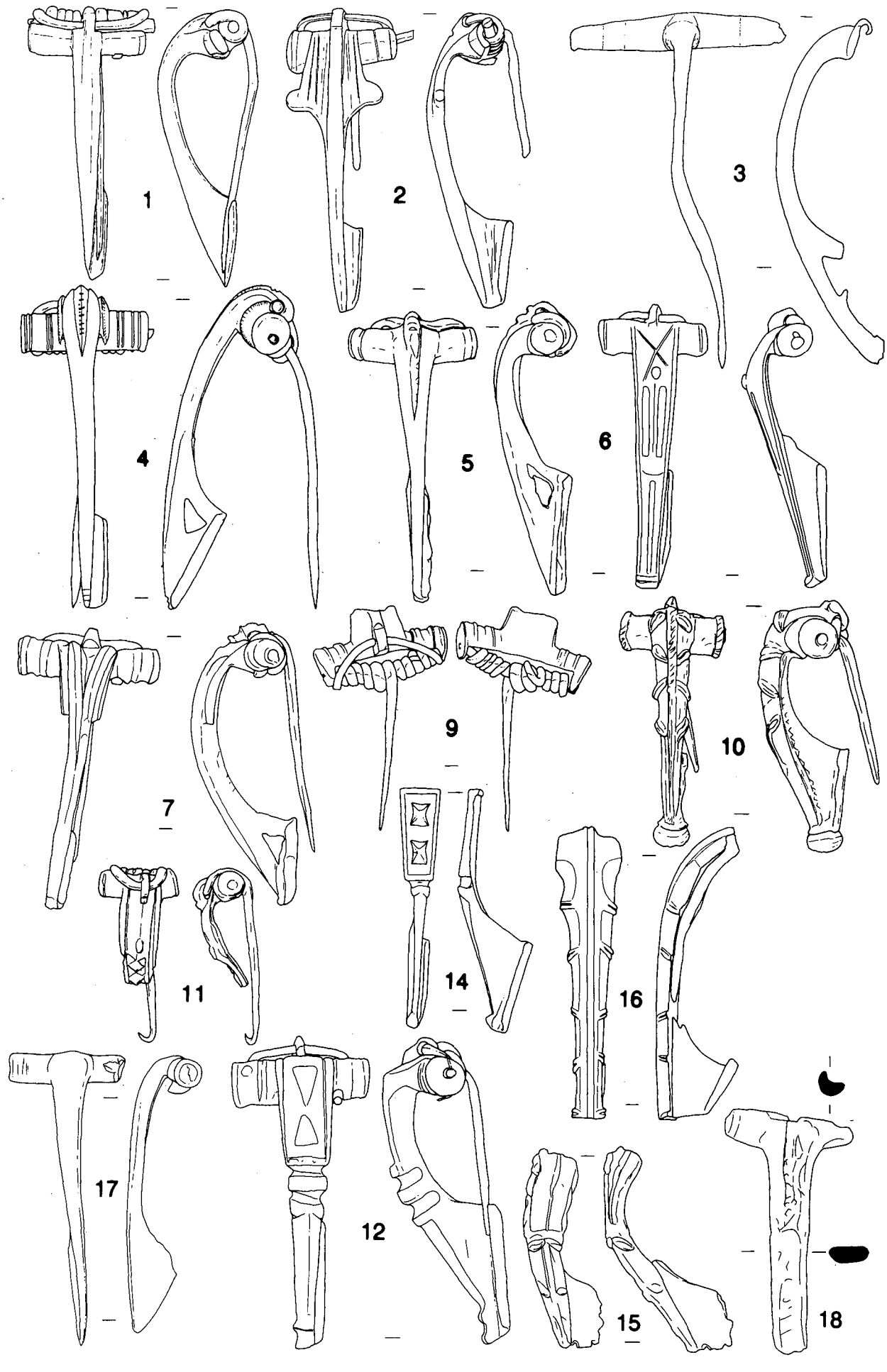


FIG. 51 Brooches, nos 1–7, 9–12, and 14–18; scale 1:1

10. Each wing is short with a beaded ridge at its end, the junction with the bow is masked by a curved moulding rising from the wing. The bow has a beaded ridge down the upper part, continued to the foot by a line of punched dots, flanked by three pairs of divided lenticular bosses arranged diagonally. A fourth pair half way down forms the end of a pair of mouldings running down to the foot. This has a large boss with a cross-moulding above, all below the catch-plate. The junction of that with the bow has a line of rocker-arm ornament next to the bow and there are grooves forming a chevron down the return. *C6032, Building IX, Period 2* (Acc. no. 553)

The origins of this brooch type were dealt with under No. 4. The present design is a combination of one in which diagonal lenticular bosses run down to the foot (e.g. Hume 1863, 72, pl. IV.4) and another which uses various combinations of long ridges ending in such bosses (e.g. Wilmot and Rahtz 1985, 148, fig. 34.2; Fowler and Walthew 1971, 59, fig. 14.B). There should be no chronological significance in the type of decoration, only another example of the mixing of standard elements used by a single school of craftsmen. The dating for the fully developed form with the foot-knob is: Wroxeter, A.D. 80–120 (Bushe-Fox 1916, 23, pl. XV.5); Derby, late first to early second century, two examples, both almost plain (Mackreth 1985a, 283–5, fig. 123.5, fig. 124.10); Croft Ambrey, *c.* A.D. 75–160, three examples (Stanford 1974, 144, fig. 67.2, 4, 5); Verulamium, A.D. 115–130 (Frere 1972, 114, fig. 29.10); Derby, *c.* A.D. 120–150 (Mackreth 1985a, 283–5, fig. 124.8); Wall, Staffs., Hadrianic–early Antonine (Gould 1967, 17, fig. 7.7); Caerleon, Hadrianic–Antonine (Brewer 1986a, 170, fig. 54.5); Derby, A.D. 150–175 (Mackreth 1985a, 283–5, fig. 123.6); Baldock, A.D. 150–180 (Stead and Rigby 1986, 113, fig. 45.83); Whitton, Glam., ?before A.D. 160 (Jarrett and Wrathmell 1981, 169, fig. 69.12); Shakenoak Farm, Wilcote, Oxon., mid-second to mid-third century (Brodribb *et al.* 1971, 100, 118–19, fig. 47.70), a miniature, before A.D. 180 (Brodribb *et al.* 1968, 95, fig. 27.7); Exeter, late second to early third century (Mackreth 1991, 235, fig. 101.20); Prestatyn, late third to early fourth century (Mackreth 1989a, 92, fig. 37.10); Derby, late third to fourth century (Mackreth 1985a, 283–5, fig. 125.11); Gloucester, late fourth century (Hassall and Rhodes 1975, 66, fig. 26.1); Cirencester, A.D. 375–410/420, two examples (Mackreth 1986, 104, fig. 77.1, 2). The trend is clear: the family has its origins in the late first century and, apart from the five which are clearly residual, most could be said to have been deposited by A.D. 160, four of the remaining six had entered the ground by A.D. 175/180 and only one of the other two need be later than then. The manufacturing *floruit* probably runs from the later first century to *c.* A.D. 150/160 with the survivors-in-use carrying on for another twenty years, very few lasting into the early third century. One found with the Polden Hill Hoard (British Museum, 46.3–22.125) has more to say about the dating of the hoard than a study of the ornament on the other items.

11. The complete wing has a groove at the end. The pierced crest has a step in its front. The surviving part of the bow has a step down each side, a lozenge-shaped boss near the top and triangular cells for enamel outlining a line of reserved lozenges. The lower bow and foot are missing. *Bullimore Farm 1991, Trench A, u/s*

This is an example of the most common design to be found in a distinctive group in which some are more elaborately moulded (e.g., Hattatt 1987, 117, fig. 40.934), a few have a raised stud with enamel (Blockley *et al.* 1995) and an even smaller number have a small head (Hull 1967, 62, fig. 24.245). Although widely distributed, examples are most common in the South West. Dating evidence is weak: Caerleon, hinged pin, with abundant Flavian pottery (Wheeler and Wheeler 1928, 162, fig. 13.7); Dorchester-on-Thames, ?pre- Antonine (Frere 1962, 137, fig. 27.6); Shakenoak Farm, Wilcote, Oxon., probably late third century (Brodribb *et al.* 1978, 100–1, fig. 41.245). The one from Caerleon is aberrant, but could be early in the *floruit* which prob- ably runs through the second century up to about A.D. 150/175 when British bow brooches ceased to be made.

12. Each wing has three mouldings at its end, the middle one being broader than the other two. The top of the head is flat with a pierced crest rising from it. The front of the upper bow has a groove down each side and, between, two triangular cells enamelled in pale blue. Beneath is a knop having a prominent central moulding between two slighter ones. The lower bow has a prominent central arris and tapers to a two-part foot-knob. *1823, Area IV (010 063)* (Acc. no. 554)
13. (not illustrated) Each wing has two sunken mouldings at its end. The pierced crest has a step in the front. The panel on the upper bow has a bordering groove and, in the middle, two small triangular cells for enamel. Then comes a 'knop' of two cross-mouldings above a thin tapering lower bow, most of which, with the catch-plate, is missing. *u/s, metal detector find*
14. The head is missing. The upper bow is like the preceding one except that each of the two square cells has concave sides. Under the panel is a narrow waist and then the lower bow, with a central arris and a pair of lenticular bosses at the top, which tapers to a narrow projecting foot. The brooch was tinned or silvered. *u/s, Area III* (Acc. no. 555)
15. The head and foot are missing. The top of the bow has two longitudinal cells for enamel, now missing. Beneath these, the bow has a median ridge and a pair of divided lenticular bosses at the top and another pair half way down. *3243, Area VI (065 097)* (Acc. no. 556)

All four brooches are clearly related, Nos 13 and 14 being more typical than the elaborate wings and knop of 12. Nevertheless, the three-part design of each is generally characteristic, the divided lower bow of No.15 being a major variant, often with a hinged pin serving to show that the pin-fixing arrangement is immaterial. The ambivalence as to which system has priority, noted under No. 8, applies here as well and is mainly to do with the fact that the general design belongs to the South West where the two systems were traditional. The dating is (PH = Polden Hill spring system; H = hinged pin): Gadebridge, PH, ?*c.* A.D. 75–150 (Neal 1974, 125, fig. 54.16); Chew, PH, late first to second century (Rahtz and Greenfield 1977, fig. 114.8); Caerleon, PH, before *c.* A.D. 125 (Wheeler and Wheeler 1928, 162, fig. 13.9); Wroxeter, PH, ?after A.D. 125 (Atkinson 1942, 205, fig. 36.H40); Caerleon, H, A.D. 130–160 (Wheeler and Wheeler 1928, 162, fig. 13.13); Verulamium, H, second century (Stead and Rigby 1989, 17, fig. 11.30); Brockworth, Glos., H, before *c.* A.D. 150 (Rawes 1981, 66, fig. 8.3); Camerton, H, from a third-century level (Wedlake 1958, 221, fig. 55.15A); Shakenoak Farm, Wilcote, Oxon., H, *c.* A.D. 250–350 (Brodribb *et al.* 1968, 94–5, fig. 27.5); Whitton, Glam., H, before A.D. 300/340 (Jarrett and Wrathmell 1981, 173, fig. 70.18); Chew, H, late third to mid-fourth century (Rahtz and Greenfield 1977, fig. 114.10); Chichester, H, late fourth to early fifth century (Mackreth and Butcher 1981, 254–6, fig. 10.1, 3). Two things stand out: firstly, the Polden Hill brooches are mainly later first century to mid-second; secondly, those with hinged pins run on to a later date. Whether they were genuinely made later and so were more liable to become residual in much later deposits than the sprung-pin examples can only be determined when many more dated examples have been published. However, no hinged-pin brooch should have been genuinely in use by the middle of the third century.

16. The head is lost. The bow is hollow behind, no doubt to reduce the weight. Down the centre run a pair of ridges each cross-cut to give a herringbone effect. The top has straight chamfered sides and a bordering groove and then a curved indent below which the bow is essentially straight, but still chamfered. This is interrupted by five pairs of ridges which show a tendency to be diagonal in alternate directions, the bottom pair defining the foot of the bow. SHPMM/A264a

The only parallels known to the writer are three brooches the heads of which splay out to form short, ribbed, wings and which have cast-on loops on pedestals on their heads (e.g. Bishop and Dore 1988, 161, fig. 76.6). Normally, loops are found on hinged-pin brooches, but all three have springs mounted in the Polden Hill manner. Only one is published, it has no date. The similarity with the present specimen is obvious: both have beaded ridges down the bow, both have the same layout of ridges on each side. The only differences being that the Fosse Lane brooch has two beaded ridges and a concave face on each chamfered border, but these are almost certainly due to its greater size. It also has a hollowed back to the bow, unlike the others, but again this would be related to its size: a solid bow would have been very heavy: the vast majority of brooches weigh hardly more than 6–9 g at most. The present piece, incomplete as it is, weighs 6.92 g. The decoration on the sides of the bow occurs in the chief family to which No. 10 belongs. The dating applied to that may also be appropriate here, but a start in the first century is, perhaps, less likely.

Numbers 17–58, except 50, have or had hinged pins.

17. The wings, bow and catch-plate are plain. The foot is pointed. *3819, u/s* (Acc. no. 545)

Plain brooches are hard to date and all that can be offered here is a general range of later first century to *c.* A.D. 150/175 as British bow brooches had passed out of manufacture by *c.* A.D. 175.

18. The wings are plain. The bow has been straightened and has a sunken wavy ridge formed by punching dots alternately along the sides of a straight ridge. The foot is missing. *3821, Area VIII (082 151)* (Acc. no. 546)

The decoration on the bow is unusual on hinged-pin brooches and is seldom found, in any case, away from south-east England. The way in which the ornament is used and the manner of its making have not been noted by the writer on any brooch whose manufacture and use can be dated after A.D. 75.

19. The wings appear to have been closed round the axis bar of the hinged pin. The longer wing has three mouldings at its end, then a flute and a pair of mouldings next to the bow, the nearest one being beaded. The bow is sturdy, forged, heavily worn and has a bold ridge between steps down to a squared foot. The profile of the bow is more an arc of a circle than is usual. The sheet-metal catch-plate was inserted into a saw cut in the back of the bow. *5552, u/s metal detector find*

The curve of the profile and the use of sheet metal catch-plate identify the family to which this brooch belongs. It lies in the relatively deep South West, but spreads out to Dorchester, and occasionally beyond, one even going as far as Vindonissa (Ettlinger 1973, 109, taf. 12, 9). That brooch was made from sheet metal (Wedlake 1958, 219, fig. 51.11A), this being the only family of Colchester Derivatives made both this way and by casting. The pin, when this can be established, is always hinged, even when a spring is fitted. Dating is bad: Camerton,

A.D. 120–150 (Wedlake 1958, 219, fig. 51.11); Exeter, late second to early third century (Mackreth 1991, 232, fig. 100.1), late Antonine — 275/300 (ibid., 232, fig. 100.2). All three may have been residual in their contexts. The use of the spring and of a separately made sheet fitting, incorporating a rearward-facing hook for the chord, riveted through the upper bow (Wedlake 1958, 219, fig. 51.11a) shows that the development of the type, obviously brief, was soon after the Conquest, and the very high proportion with a lot of hand-finished decoration points to the same period. It may be doubted if any survived in use much beyond A.D. 70/80.

20. (not illustrated) The wings are long and each has a broad sunken moulding at its end. The head of the bow is hollow behind. There is a ridge running down the middle to a narrow foot with two thin mouldings. The catch-plate return has a pair of sunken ridges at top and bottom. *u/s, metal detector find*
21. (not illustrated) Each wing has a pair of mouldings at its end. The head of the bow is rounded and set off from the wings by a ridge, otherwise the bow is plain with a pointed foot. *u/s, metal detector find*
22. Similar to the last, the head of the bow is squarer and has a short beaded ridge down it. *1571, Area IV (007 084)* (Acc. no. 547)
23. The stub of the surviving wing is plain. There is a short moulding on each side of the head of the bow which, apart from a central peak at the top, is plain. SHPMM/A263

None of these four brooches has any feature indicating a specific dated group. Ornament is restrained and the fact that the mouldings on the wings lie at their ends could suggest that none is very early. The decoration on the return of the catch-plate of No. 20 should not be expected to be seen on survivors-in-use after *c.* A.D. 125, the other three brooches probably ran on to *c.* A.D. 150/175.

24. Each wing has two widely spaced sunken ridges. The head of the bow rises well above the wings, has a sunken skeuomorph of the Colchester's hook and a short moulding applied to each side. The bow is narrow and has a pointed projecting foot. The catch-plate has a distorted heart-shaped piercing. *3126, Area IV (003 108)* (Acc. no. 557)

Despite the presence of a hinged pin, the mouldings on the wings, the thin section, and the applied moulding of the bow, as well as the shape of the piercing in the catch-plate, all show that the brooch belongs to the same overall family as No. 4. The general relationship with the group to which No. 3 belongs is evident and the shape of the piercing in the catch-plate is typical of that group. For the dating, see under No. 4.

25. Each wing has a sunken ridge at the end and the left-hand one also has a helical groove. The bow has paired ridges forming a V on the head and a median arris below that to the pointed foot. The catch-plate has a circular hole. The brooch was tinned or silvered. *1268, Area IV (010 065)* (Acc. no. 558)
26. Each wing has a sunken broad moulding at its end. The head of the bow has a central sunken ridge and a narrow applied moulding on each side. The rest of the bow is narrow and plain, the foot and catch-plate are missing. *4859, Area IX (068 196)* (Acc. no. 559)
27. The left-hand wing probably has what was the intended decoration and this consists of three mouldings, the wide middle one being beaded. The bow is broad at the top with a V formed by beaded ridges with a swell between. On each side of the head is a pair of additional mouldings, the inner one being beaded. The lower bow is missing. SHPMM/A274

A general review of the use of added mouldings and of V-shaped mouldings on the heads of bows has recently been published (Mackreth 1992, 53–6, figs 1, 2, 9, 15 and 17). The conclusions were that the hinged pin and the use of mouldings on the head were mainly found in Wiltshire, Gloucestershire and Avon. The dating for No. 25 is essentially later first into the second century, the pierced catch-plate possibly indicating a solely first-century date. In the case of No. 26, the dating is broader running from the later first century to *c.* A.D. 150/175, but the beading on No. 27 may point to a date before about A.D. 125.

28. (not illustrated) The head and wings only, the left-hand wing has four narrow buried ridges at its end, the other is damaged. The broad bow is parallel-sided at the top, has a step down each side and, between, paired incised diagonal lines with cross-cuts between forming an inverted V. *u/s, metal detector find*

This brooch could be a member of, or be related to, the family represented by No. 20. The hinged pin would suit this and the mouldings are not out of place, but the decoration on the bow suggests a connection with the stage when the sheet plate gave way to moulded decoration often incorporating skeuomorph studs (e.g. Wedlake 1958, 221, fig. 100.51, 11d), which then devolved into what are, as far as the common forms of decoration are concerned, inconsequential elements (e.g. Hattatt 1985, 90–1, fig. 37, 391A); see the next two brooches. In this case, the present brooch would be late first century in date.

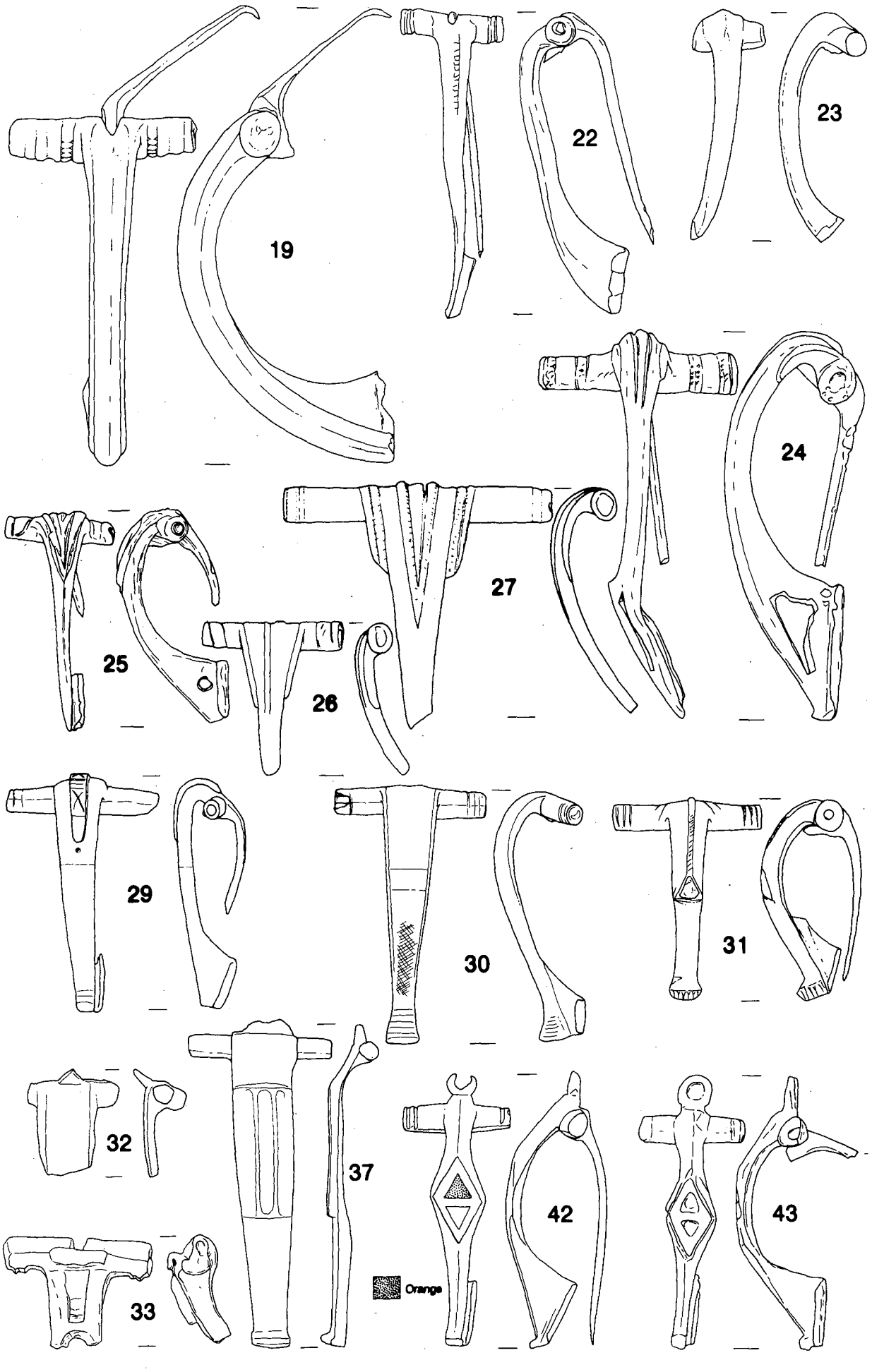


FIG. 52 Brooches, nos 19, 22–7, 29–33, 37, 42–3; scale 1:1

29. The left-hand wing suggests that each probably had two mouldings at its end. The broad head of the bow has a decorated crest ending in a blunted point. At the top end and in the middle are incised saltires separated by a sunken moulding; the decoration at the end is too damaged to recover. The foot has three cross-mouldings, the middle one being wide. SHPMM/A264b
30. The right-hand wing has three mouldings at its end. The bow is heavily worn and this has obscured the lightly incised decoration. On the head can be seen traces of a pair of lines on either side of fine herringbone probably stopped by cross-mouldings. The lower bow has the remains of a fine lattice and the conical foot-knob has five cross-mouldings. The bow has a groove along each side. SHPMM/A270c

The origins of the crest on No. 29 lie in an applied plate, incorporating a hook for the chord of a spring, riveted through the bow. Two examples from Hod Hill (Brailsford 1962, 11, fig. 10.C100, C101; Richmond 1968, 117–19) show that this system had come into being by A.D. 50 and continued in use into the 60s as one from Waddon Hill demonstrates (G. Webster 1960, 97, fig. 7.25), but the plate survived even when the pin became hinged: Barbury Camp, Wilts. (Devizes Museum, 971). The plate ceased to be a skeuomorph when it was trapped under a forward-facing projection on the head (Hattatt 1985, 90, fig. 37.390) and finally it was reduced to an elaborate cast element, as here. The chief difficulty in dealing with what appears to have been a straightforward process of devolution is that the designs of individual brooches are so varied that no single school or workshop tradition could account for all of them. This is demonstrated by No. 30 whose engraved ornament can be seen to derive from the same tradition, but only when all examples belonging to it have been assembled. The most elaborate group are those whose profiles almost conform to arcs of a circle (see No. 19) and these lie much more to the south-west than any other identifiable sub-group, unfortunately, their dating is hardly better than the rest. Dating: Waddon Hill, A.D. 50–60 (G. Webster 1981, 62, fig. 25.16); Holcombe, Dorset, A.D. 70–180 (Pollard 1974, 138, fig. 22.1); Exeter, *c.* A.D. 75–80 (Mackreth 1991, 233, fig. 100.8), early second to early Antonine (ibid., 233, fig. 100.6); Camerton, C, A.D. 120–150 (Wedlake 1958, 219, fig. 51.11), A.D. 150–200 (ibid., 225, fig. 51.21); Exeter, A.D. 160–200 (Mackreth 1991, 233, fig. 101.11), C, late second to early third century (ibid., 232, fig. 100.1), C, late Antonine–A.D. 275/300 (ibid., 232, fig. 100.2); Catsgore, fourth century (Leech 1982a, 105, fig. 76.2). The C indicates those with the markedly curved profile. There is no focus in the dating and the most securely dated item is that from Waddon Hill. Typologically speaking, it may be doubted if any of these should date as late as A.D. 125, but evidence is wanting. There is a large group from South Cadbury and the dating of that site may clarify the overall dating. The dating of fine engraved decoration is in an even worse case: Exeter, late second to early third century (Mackreth 1991, 232, fig. 100.4).

31. Each wing has three thin mouldings at the end. The upper bow is almost straight sided, has a small additional moulding masking the junction of the bow with the wings, and a cross-cut ridge down the middle. The ridge ends in a triangular platform outlined on each side by a groove and with a cell for enamel, mainly a pale blue, but dished for a blob of red in the middle. The blue had either served as a 'glue' for red, now largely missing, or had red in the middle with a blue border showing. The lower bow has a rounded front and tapers to a splayed foot milled round its forward edge. *137, Area I (090 070)* (Acc. no. 560)

The relationship with the previous group is revealed in an example from Nor' Nour (Hull 1967, 38, fig. 15.64). Close parallels come from near Wimborne (Hattatt 1985, 91, fig. 38.395), Claydon Pike, Lechlade (to be published), Nor' Nour (Hull 1967, 34, fig. 13.34) and Ilchester, this one from the same workshop as the present example and dated late second century, possibly later (Leach 1982, 241, fig. 115.3).

32. The wings have been reduced to stubs. There is the cast-on stub of either a tab or the pedestal of a loop on the head. The upper bow, which is all that survives, has a groove down each side and an incised saltire between. SHPMM/A268b
33. Each wing has a flat front face, with a rounded projection behind housing the axis bar of the pin, and at the end a raised surface with a central ridge. The broad bow has a slight taper, a stubby central ridge or crest under a cross-ridge and, at the break, part of a circular hole. The rest of the brooch is missing. *3886, Area V (014 036)* (Acc. no. 561)

The saltire on the head of No. 32 shows that it is at home in the South West and it is just possible that the full form had been that of a local style of Headstud (e.g. Painter and Sax 1970, 161, fig. 2.9; Hull 1967, 42, fig. 17.100, 101), but not enough is present to confirm this. No. 33 is too unusual for comment. Both date to before *c.* A.D. 150/175.

34. (not illustrated) The plain wings look as though they have been carelessly finished. The tall tab on the head had a small circular hole. The bow is broad with a facet down each side. At the top of the main face is a raspberry prunt-like boss beneath which are two cross-cut ridges. The lower bow and catch-plate are missing. *u/s, metal detector find*
35. (not illustrated) The head and foot are missing. The upper part of the fragment has a broad groove with a 'raspberry prunt' boss under. *u/s, metal detector find, Bullimore Farm*

36. (not illustrated) The upper part of a brooch with damaged wings resembling No. 34. The tab is unpierced, the facets on the bow less obvious and the 'raspberry prunt' boss has a broad groove under it. *u/s, metal detector find*

All three brooches obviously belong to the same group. The head of No. 34 represents the common form and all have typical bows: a boss above and below a deep median hollow, sometimes with a cross-cut ridge on each side. The foot tends to be a spreading moulding. The bosses are sometimes replaced by cross-mouldings and flutes (e.g. Leach 1982, 105, fig. 76.12) and small specimens may not have either. The distribution is mainly in Wiltshire and Avon. The dating is: Nettleton, first to second century (Wedlake 1982, 125–7, fig. 53.48); Catsgore, early second (Leech 1982a, 109, fig. 78.28); Exeter, mid-second century (Mackreth 1991, 235, fig.101.19); Catsgore, late second century, and ?later (Leech 1982a, 109, fig. 78.26); Chew, late third to mid-fourth century, two examples (Rahtz and Greenfield 1977, fig. 114.13, 15); Catsgore, late third to fourth century, three examples (Leech 1982a, 104, fig. 76.10–12), after A.D. 335 (ibid., 109, fig. 78.27). The large number belonging to the third and fourth centuries points to a high residual factor on the sites they come from, the actual dating of the type being fixed by the earlier examples. A second-century date seems assured: there is nothing in the type to point to the first century.

37. The wings are thin and plain. On the head is the stub of either a cast-on loop or tab. The wide bow has a slight taper to a projecting foot. Just above the middle of the bow is a raised section which has a flute down the middle, a thin ridge on either side and a line of rocker-arm ornament along the outer edges. SHPMM/A268c
38. (not illustrated) The head is missing. The bow is exceptionally broad and has, on the upper part, six vertical ridges each with an arris and with a V-shaped groove between stopped by a cross-groove at the bottom. The lower bow tapers to a broad boldly projecting foot. *u/s, metal detector find*

The family to which these brooches belong is fairly well established, but is much more varied than the one of which Nos 34–6 are members. There is always a two-part division with vertical elements on the upper part of the bow and a marked break-back to the wings. The bulk of examples lies mainly in Wiltshire and Dorset with examples occurring sporadically in the rest of southern Britain. The dating is weak: Camerton, A.D. 90–200 (Wedlake 1958, 225, fig. 52.23); Catsgore, first to fourth century, two examples (Leech 1982a, 105, fig. 77.13, 14); Chew, second century, an elaborate example (Rahtz and Greenfield 1977, fig. 114.2); Chichester, ?late fourth century (Mackreth 1989b, 185, fig. 26.1, 13); Catsgore, ?late fourth century and later (Leech 1982a, 109, fig. 78.29). The late specimens can be ignored and a second-century date seems assured as there is nothing to point to the first century.

39. (not illustrated) The head is missing. The bow is broad at the fracture, has a curved front face and tapers towards the foot before sweeping out to form that. It has a groove around it. The catch-plate return has an incised saltire between cross-grooves. *u/s, metal detector find*

A brooch from near Cirencester (Hattatt 1985, 94, fig. 40.406) shows the full form of this example. Although not occurring in large numbers, the distribution of the type is in the same general areas as the two previous families, but includes southern Gloucestershire. Dating is sparse: Nettleton, late first into the second century (Wedlake 1982, 127, fig. 53.49); Marshfield, Avon, probably second century (Mackreth 1985b, 145, fig. 45.25). Again, like the last two groups, a second-century date can be proposed. The basic resemblance with one of the Knee brooch types may not be fortuitous (e.g. Mackreth 1990, 109–11, fig. 101.14). As the basic date for that is from *c.* A.D. 125 into the third century (ibid.), the same *floruit* may apply here.

40. (not illustrated) The surviving foot of a bow has a strong central ridge with diagonal cross-cuts. *u/s, metal detector find*
41. (not illustrated) The foot only of a broad bow survives. It has a flat face and a triple moulded foot, the bottom element being more prominent that the others. The catch-plate has a kind of web continuation up the back of the bow. *u/s, metal detector find, Bullimore Farm*

The width of the lower bow and the triple mouldings of the foot suggest a second-century date.

42. Each wing has a sunken angular ridge at its end. On the head is a broken cast-on loop. The central arris down the bow is interrupted by a lozenge-shaped platform bearing two triangular cells in a grooved border. The projecting foot is narrow. The surviving enamel is orange in colour. *4829, C1350, Building VII, Period 2* (Acc. no. 562)
43. A repeat of the last, the tab has a circular hollow, the triangles for the enamel are cruder in form and the whole brooch seems less well finished. The enamel is now greenish and mica-like. *Bullimore Farm 1991, Trench A1*

This type is centred on Wiltshire and spreads into the adjacent counties, but also occurs intermittently over most of southern England. The dating is: Rope Lake Hole, Corfe Castle, late pre-Roman Iron Age (P. Woodward 1987b, 160–1, fig. 85.96); Whitton, Glam., A.D. 55–75 (Jarrett and Wrathmell 1981, 173, fig. 70.20); Gadebridge, up to the middle of the ?second century (Neal 1974, 125, fig. 54.18); Chew, second century (Rahtz and Greenfield 1977, fig. 114.14); Exeter, A.D. 160–200 (Mackreth 1991, 235, fig. 101.18); Catsgore, late second century (Leech 1982a, 105, fig. 76.8); Nettleton, with coin of Carausius (Wedlake 1982, 127, fig. 53.55); Catsgore, after A.D. 335 (Leech 1982a, 105, fig. 76.7). The two earliest can be ignored as this style of brooch cannot be earlier than the latest first century and those dating to the later third and fourth centuries can also be discounted. The remaining three, therefore, represent the true date-range.

44. The surviving wing has two mouldings at its end. The head of the bow has a panel defined by a ridge, a step down each side and the remains of lozenge decoration down the front. Two hollowed lozenges are largely present, with a horizontal arris between. SHPMM/A268d
45. The same, basically, as the last, the panel on the head has no ridge across the bottom, but all three of the usual lozenges are present and the bow tapers to a small boss with two mouldings above. SHPMM/A270b
46. A version of the last, the step on each side of the bow is here a short extra moulding. The lozenges have been reduced to two which no longer touch and which have grooves round the central cell. The foot-knob is now two steps at the foot of the bow. The catch-plate has a circular hole and a pin groove. SHPMM/A262b
47. The front of the upper bow appears to have been filed in antiquity. There seem to have been two mouldings along each edge of the upper bow. The lozenges were once three and the lowest shows that they had been incised with a lattice. The foot is pointed and the catch-plate has a circular hole. SHPMM/A269b
48. There is a cast-on loop on the head. The upper bow has a moulding along each edge and three hollow lozenges down the middle. The foot is fairly wide and has a simple projecting moulding. SHPMM/A270d

While all are related, Nos 46 and 47 perhaps form a distinct sub-type the dating of which is: Exeter, *c.* A.D. 75–80 (Mackreth 1991, 235, fig. 101.17); Caerleon, Hadrianic–Antonine (Brewer 1986a, 170, fig. 54.6); Gadebridge, late second to ?mid-third century (Neal 1974, 125, fig. 54.19). The example from Caerleon has the horizontal arrises found on Nos 44 and 45 here and No. 48 is obviously a variant on the same themes. The dating of the rest is: Shaken- oak Farm Wilcote, Oxon., A.D. 100–180 (Brodribb *et al.* 1968, 94, fig. 27.2); Woodbury, Axminster, Devon, A.D. 225 to mid-fourth century (Silvester and Bidwell 1984, 49, fig. 9.2); Ilchester, late second to fourth century (Leach 1982, 241, fig. 115.2); Catsgore, late second to early fourth century (Leech 1982a, 107, fig. 77.16), late fourth century (ibid., 107, fig. 77.17). That the type or style had developed by the end of the first century seems assured, but it could not have lasted until the fourth century as the rest of the evidence for British bow brooches is that manufacture had ceased at the latest between A.D. 150–175; hardly any should have survived in use as late as A.D. 200.

49. The wing has three bold mouldings at its end. There had been a cast-on loop. The bow has a squared top, a step down each side, and, at the top, a panel with cross-cut borders containing three lozenge-shaped cells between longitudinal ones with serrated outer edges. Under the panel is a D-shaped cell. All the enamel is missing. The lower bow has a median ridge under an oval boss whose worn surface has markings which might represent a face intended to be viewed from the top. There is a triple moulded foot-knob. *5051, Area X (082 187)* (Acc. no. 563)
50. The spring is held in the Polden Hill manner (see No. 3). Each wing has a moulding at its end and a helical groove between that and the bow. The crest on the head through which the chord passes has its profile cut to have a concave hollow between steps. The upper bow is damaged, but seems to have had a line of voided lozenges with infilling triangular cells on each side. In the middle are two cross-mouldings divided by a wide flute. The lower bow has a central arris and a simple projecting foot. The catch-plate has a pin groove. SHPMM/A270a
51. Each wing has two mouldings at its end. On the head is a cast-on loop on a small pedestal. The upper bow has cells forming a lozenge and triangle panel. Traces of orange enamel survive in the top and bottom cells in the central line. Under the panel is a petalled knop like that of the Trumpet type with a pair of cross-mouldings under. The lower bow tapers to a simple projecting foot. The catch-plate has a pin groove. SHPMM/A269a
52. A repeat of the last, there is a taller pedestal under the loop, a single moulding above and below the knop, a groove down each side of the lower bow and no pin groove. SHPMM/A269c

The relationship of the four shows in the design of the upper bow, it is only in the centre and the lower bow that they differ. Numbers 50–2 obviously go together, but there are no easy associations for No. 49. However, its date is unlikely to be significantly different from that of the others. There is a host of minor variations, but all have the two-part design divided by a knop of some kind and there is a cohesion in their distribution, the lands around the estuary of the Severn, which suggests that they form a genuine group. However, in common with

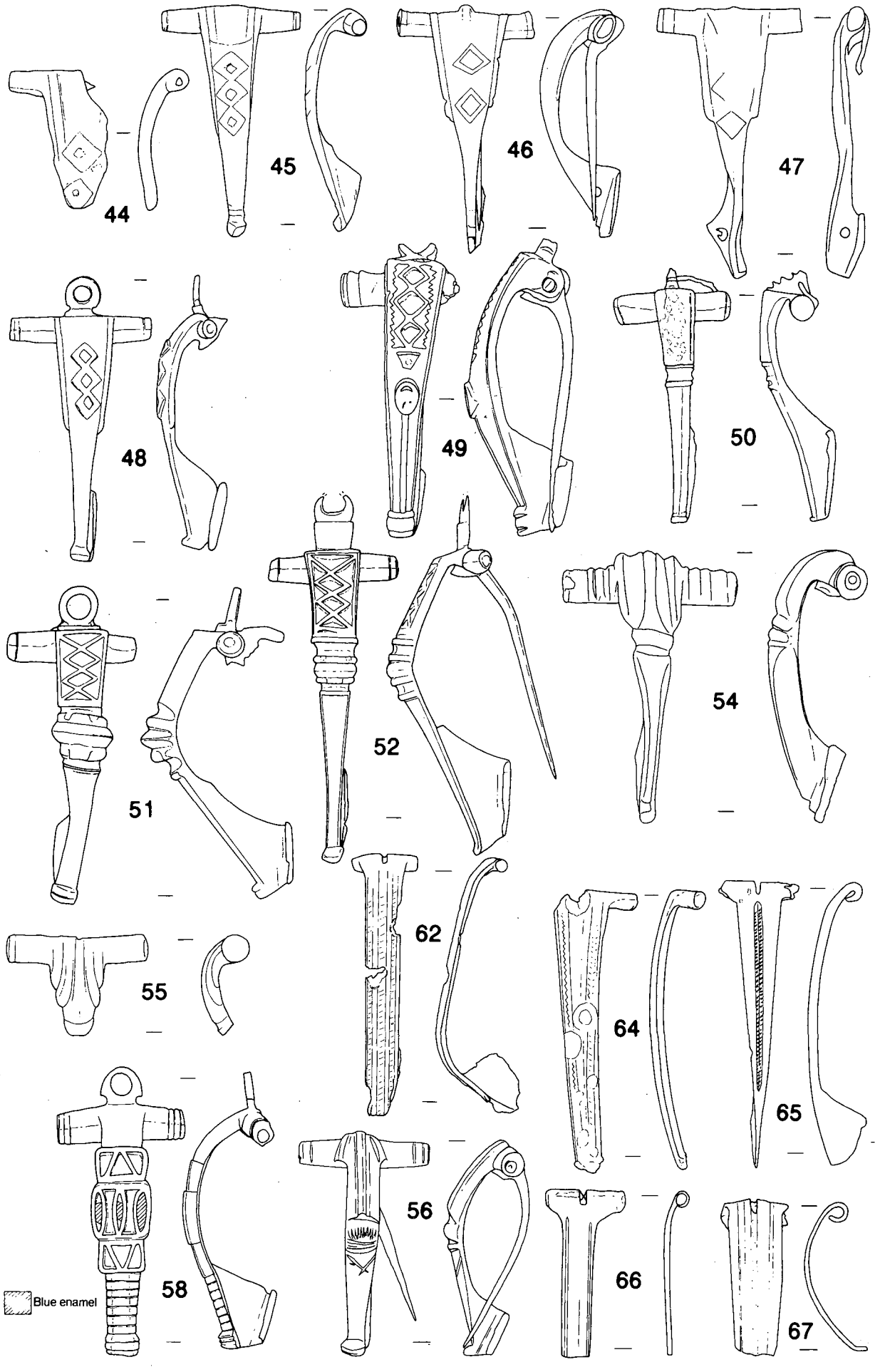


FIG. 53 Brooches, nos 44–52, 54–6, 58, 62, 64–7; scale 1:1

many types whose homeland lies generally in the South West, dating is not good: Gadebridge, Herts., *c.* A.D. 75–150 (Neal 1974, 125, fig. 54.16); Brockworth, Glos., before *c.* A.D. 150 (Rawes 1981, 66, fig. 8.3); Shakenoak Farm, Wilcote, Oxon., A.D. 250–350 (Brodribb *et al.* 1968, 94–5, fig. 27.5); Chew, late third to mid-fourth century (Rahtz and Greenfield 1977, fig. 114.10); Whitton, Glam., before the fourth century (Jarrett and Wrathmell 1981, 173, fig. 70.18). Of these, only the first two lie within the correct *floruit* which is defined at best by the overall life of the Trumpet (Timby 1998, 133–4).

53. (not illustrated) The right-hand wing shows the full form of the mouldings at the end: two pairs of sunken ridges divided by a flute. On the head is a cast-on loop. The bow is divided into three sections. At the top is a sunken central ridge, with punched dots on each side, expanding at the bottom to form a prominent moulding. On each side are three bold diagonal mouldings. In the middle is a version of the Trumpet's petalled knop (see No. 51), punched dots outlining the petals. The lower bow has a large cell for enamel down the middle. The surviving enamel suggests that it had been red marbled with yellow. The large foot-knob has vertical grooves. *u/s, metal detector find, Mendip Business Park*

The distinctive feature here is the upper bow which, while exact parallels are not to be expected, can be united with the knop to identify a small group which seems to belong to Wiltshire and the lands around. There is no useful dating known to the writer: Catsgore, ?late second to A.D. 400 (Leech 1982a, 105, fig. 76.4). The mouldings on the upper bow are found on a very small group which uses the pin-fixing arrangement found on Nos 1 and 2. The dating which these offer is limited: Nettleton, late first century to early second century (Wedlake 1982, 125, fig. 52.43). The group can be broadened to include other, apparently related, brooches (e.g. Hull 1967, 34, fig. 13.35), but it is difficult to know where to draw the line, and no good supplementary dating evidence results in any case. Brooches with Trumpet-style knops should be broadly contemporary with that type: late first century to *c.* A.D. 150/175, the approximate time when all British bow brooches seem to have passed out of manufacture.

54. Each wing has three narrow mouldings separated by wide ones. The upper bow is broad with a central sunken ridge, which spreads out at the bottom, with a deep flute on each side. There is a knop made up of a broad cross-moulding with a narrow one top and bottom. The lower bow has a broad sunken ridge down the middle and tapers to a blunted foot with two cross-cuts. The catch-plate return has an incised chevron along it. *1270, Area IV (007 067)* (Acc. no. 564)
55. A simpler version of the last brooch in which the mouldings on the wings have been reduced to two at the end and the mouldings on the head altered to give two on each side. The lower bow is missing. SHPMM/A268a
56. Each wing has a pair of sunken mouldings at its end. The upper bow has a median ridge and another along the junction with each wing. The knop is a wide sunken cross-moulding with cross-cuts. The lower bow has an incised V at the top, a rounded front face and tapers to a simple projecting foot. *C6030, Building IX, Period 3* (Acc. no. 565)
57. (not illustrated) The surviving wing is long and has narrow mouldings grouped 1, 2 and 2 separated by wider ones. A narrow moulding marks the junction of the wings with the bow which has a pair of ridges down the top, three cross-mouldings in the middle, and a plain lower part ending in a pointed foot. The catch-plate is vestigial and has a small round hole. *u/s, metal detector find, Mendip Business Park*

All four have mouldings across the centre of the bow. The first three would have been further relatives of No. 53, had the argument there been continued. Even so, the broad date offered for 53 is almost certainly applicable to these two for the same reason. The dating evidence for brooches very closely related is even weaker than that for the last two groups: Catsgore, after 150/180 (Leech 1982a, 105, fig. 76.5); Camerton, A.D. 180–350 (Wedlake 1958, 230, fig. 53.46). However, No. 57 is different. The cross-mouldings are not a knop as such and the overall style is more suited to the first century: the mouldings on the wings, the profile of the bow and the hole in the catch-plate. This brooch was almost certainly made in the later first century, but could have survived in use into the second.

58. Each wing has three mouldings at its end. On the head is a cast-on loop, relieved by a cut-out on each side at the bottom. The top of the bow is wide and plain. Most of the front is taken up by three enamelled panels. The top and bottom ones are wider than the bow and each has three triangular cells. The central panel is wider still and has five cells of which the middle one and the those at the ends are vesica-shaped and contain a turquoise enamel. The lower bow is cross-ribbed in seven sections. The projecting foot is divided into three. SHPMM/A265a

No parallels are known to the writer, but the general style is clear: replace the enamelled panels with cross-mouldings or a knop and the brooch would be recognisably related to the previous groups. A brooch with a similar overall design comes from Marshfield, Avon, where it was dated to the late first and second century (Mackreth 1985b, 140, fig. 43.12). The chief difference is that the enamelling was confined to an almost circular

plate just above a reduced knop which, itself, points to the same relationship as that suggested. However, the indicated date can be accepted as being appropriate in the present case.

59. (not illustrated) The fragment consists of the plain lower bow only of a Colchester Derivative which tapers to a pointed foot. *3208, Area VI (009 115)*
60. (not illustrated) The distorted lower bow only is left. It has an arris down the front and ends in a foot-knob made up of two mouldings. *u/s, metal detector find*
61. (not illustrated) The lower bow with a simple projecting foot survives. *u/s, metal detector find*

None has a feature which points to any specific group. They are placed here as it is more likely that they had hinged pins than sprung ones. They are all likely to be earlier than *c.* A.D. 150/175.

Strip brooches

All, except No. 68, have their heads expanded to a greater or lesser extent and rolled under to house the axis bar of the hinged pin.

62. The bow is straight-sided with a slight expansion for the rolled-under head. Down the bow are three grooves each with a line of rocker-arm ornament along it. SHPMM/A266c
63. (not illustrated) Although damaged, the brooch was a repeat of the last, but with rocker-arm decoration along the outer grooves only. *4058, Area VI (070 137)*
64. The grooves, with rocker-arm ornament along each side have a swelled face between. SHPMM/A266d
65. The brooch was forged from rolled or folded sheet metal. The bow tapers to a pointed foot and has, down the middle, a narrow flute with rocker-arm ornament along it. *2953, Area III (064 072)* (Acc. no. 566)
66. The bow is straight-sided with a groove along each border, the lower part, with the catch-plate, is missing. SHPMM/A266a
67. The wings are vestigial. The broad bow has a slight taper to the foot which is missing. Down each side is a wide flute and there is a narrow one down the middle marked by a line of cross-cuts. SHPMM/A266b
68. The head is rolled over to house the axis bar of the hinged pin. The surviving roll has a groove at its end. The bow is complete, straight-sided with a groove across it at the top and bottom. There is a step back to the rolled-over head with a step under that and a cross-moulding under that again. SHPMM/A266e

The rolled-under head for the axis bar of the hinged pin derives from the Alesia (Duval 1974), the parent of the Aucissa series whose initial stages kept the rolled-under head. None of the present brooches derives from the Aucissa sequence, although other brooches in the Strip family do (e.g. Sharples 1991, 155, fig. 130.1; Brailsford 1962, 10, fig. 10.C82–C84, C86, C87). Some have 'eyes' on the head and these had disappeared by the time the Aucissa proper came into being. That the Strip type was heavily influenced by continental late La Tène types can be seen in the copying of the Langton Down, the source for the design of Nos 62–4, 66 and 67, and the Nauheim was the origin of No. 65. Number 68 is less easy to ascribe to a main type and is not considered in the dating list below.

The dating is still a little weak for the earlier part of the *floruit* (A = 'Aucissa', LD = Langton Down, N = Nauheim and U = unclassified): Ower, LD, before *c.* A.D. 25/30 (P. Woodward 1987a, 96, fig. 52.212); Maiden Castle, A, 'Belgic' layer (Wheeler 1943, 261, fig. 84.26), U, LD, two examples, A.D. 25–70 (ibid., 261, fig. 84.23–5); Hod Hill, LD, fourteen examples, A, seven examples, U, seven examples, before A.D. 50 (Brailsford 1962, 8, fig. 7.C30–C42; fig. 10.C81–C87, C89, C90–C94; Richmond 1968, 117–19; Hattatt 1982, 81, fig. 39.40; Hattatt 1985, 70, fig. 29.345); Braughing, U, 45–55 (Olivier 1988, 46, fig. 20.52); Waddon Hill, LD, six examples (one unpublished), A, six examples (three, one with eyes, are unpublished), *c.* A.D. 50–60 (G. Webster 1960, 96–7, fig. 6.9, fig. 7.24, 27–9; G. Webster 1965, 144, fig. 6.3, 4; G. Webster 1981, 61, fig. 25.5); Camerton, LD, mid-first century, A.D. 55–90 (Wedlake 1958, 229, fig. 53.42, 42A); Poundbury, N, mid-first century (Richardson 1940, 441, fig. 4.1); Maiden Castle, N, A.D. 43–70 (Wheeler 1943, 261, fig. 84.17). All later pieces have been ignored as the quoted examples unequivocally demonstrate the dating: the mid-first century marks the end of its period of use and by *c.* A.D. 60–70 all should have either been destroyed or have entered the ground. The initial dating of the type should fall in Augustan times, the fully developed Langton Down and the 'Aucissa' with eyes occurring in the archaeological record on the continent at the end of the first century B.C. (Fingerlin 1972). The single brooch from Ower is about as close as one might reasonably expect to get to this in Britain. Most of those at Hod Hill surely derive from the pre-Conquest occupation. The rolled-over head of No. 68 quite possibly marks the arrival of Roman influence in the form of the Hod Hill, if not of the Aucissa itself. The dating, however, should still fall within the later part of the overall *floruit*.

The next six brooches are of iron, are simple, and each has or had a rolled-under head which is seldom expanded to form short wings. The profiles sweep right round to the return of the catch-plate which is invariably small.

69. Iron. Complete. *1670, Area IV (009 070)* (Acc. no. 567)
70. (not illustrated) Iron. Complete except for the broken pin. *1271, Area IV (010 067)*
71. (not illustrated) Iron. The pin and catch-plate are partly missing. *u/s, metal detector find*
72. (not illustrated) Iron. The head is missing. *1648, Area IV (014 072)*
73. (not illustrated) Iron. The rolled-under head and top of the pin only. *127, Area I (084 074)*
74. The same as before, but with a slightly concave edge to most of the length of the bow, then a step in on each side with the end of the bow being pointed. SHPMM/A261a

Such simple brooches could have been made for a long time, but iron is hardly ever used for brooches after the Conquest. The dating is: Puckeridge, Skeleton Green, *c.* 10 B.C. to A.D. 20 (Partridge 1981, 135, fig. 67.11); Maiden Castle, before A.D. 43 (Wheeler 1943, 252, fig. 85.35); Puckeridge, Station Road, ?Claudian *c.* A.D. 70 (Partridge 1979, 40, fig. 6.13); Longthorpe, Cambs., Claudian–Neronian (Dannell and Wild 1987, 85, fig. 21.2); Waddon Hill, *c.* A.D. 50–60 (G. Webster 1960, 97, fig. 7.16); Camerton, A.D. 60–90 (Wedlake 1958, 216, fig. 50.4); Nettleton, late first century to early second (Wedlake 1982, 120, fig. 50.2). A terminal date of A.D. 60–70 would suit almost all such brooches. The individual character of No. 74 may owe a lot to the Aucissa.

Headstud

75. The axis bar of the hinged pin is housed in a rounded projection behind the wings which have vertical stepped fronts. On the head is a cast-on loop. The circular stud has an annular groove. Beneath the stud, the bow has a step down each side and two cells for enamel, of which only a green is left, leaving a line of small lozenges reserved down the middle. The foot has two mouldings separated by a waist from two more at the bottom of the bow. *1252, Area IV (007 062)* (Acc. no. 568)
76. The same in every particular as the last brooch, except for there being a cross on the stud. SHPMM/A265b

The line of reserved lozenges down the bows of these examples defines this particular variety of Headstud. Its distribution is south of the Pennines, very few occurring north of the Humber–Dee line. The dating is limited: Doncaster, A.D. 80–90 (Buckland and Magilton 1986, 88, fig. 19.13); Nettleton, late first to early second century (Wedlake 1982, 128, fig. 53.61). These two indicate what is generally known of the dating of Headstuds: the main types begin towards the end of the first century and run on into the second to about A.D. 150/175.

Trumpets

77. The head is missing. The knop is of the usual petalled type. The lower bow has a triple moulding at the top, the central element being beaded, a groove down each side and a median arris. The foot repeats the triple mouldings. *1421, Area IV (010 079)* (Acc. no. 569)
78. (not illustrated) In very poor condition, the spring had been held to the body of the brooch by a single loop behind the head. The rudimentary trumpet has a slight expansion at the top with, apparently, an extra moulding in front of that. The knop is reduced to four cross-mouldings. Only the corroded top of the lower bow survives. *Wolff Construction Site 1991, Find no. 113*

The dating of the Trumpet type has recently been reviewed (Timby 1998, 133–4) and the conclusion was that the *floruit* for all main types ran from *c.* A.D. 80–180, very few dating before or after then. Number 77 is a standard type, No. 78 is not, but should not have a significantly different date-range.

79. (not illustrated) The head is missing. The knop has been replaced by a disc with two annular cells for enamel of which a mid-blue survives in the inner one. The lower bow is broad, has facets down each side and a central face with white metal wash. This occurs as three spots on the side faces and around the border of the disc and was for white metal applied trim. The foot is a prominent moulding under a waist. *u/s, metal detector find, Mendip Business Park*

The complete brooch had a trumpet head and so would normally be dated from the Trumpet type. However, the dating of the use of white metal trim has recently been discussed (Jackson and Potter 1996, 304–5) and the conclusion was clear: the technique dates from *c.* A.D. 125–225. In the present instance, the trumpet head can also be used for dating and it is unlikely that any significant number would have survived later than A.D. 200, most having passed out of use by A.D. 180.

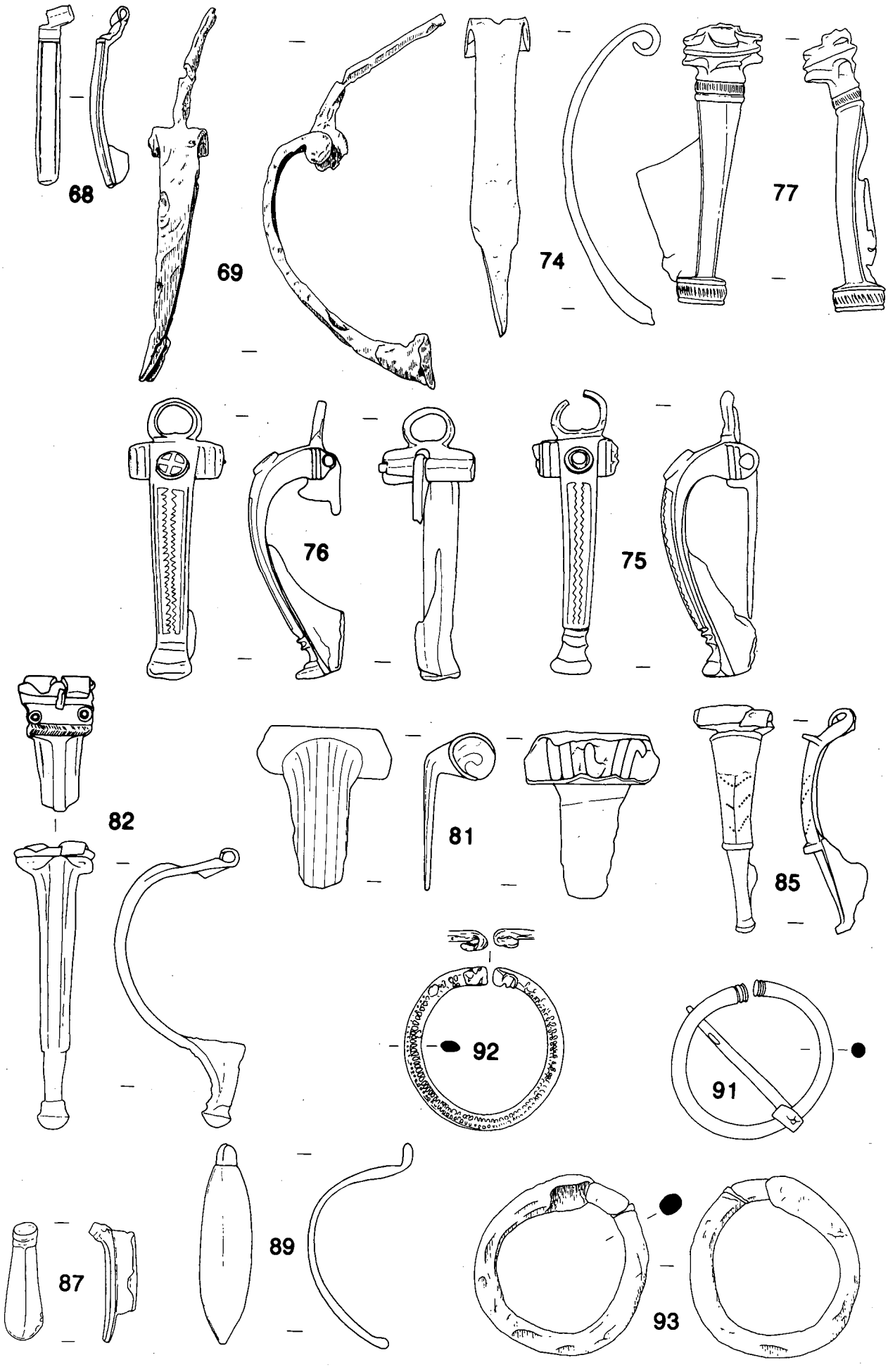


FIG. 54 Brooches, nos 68–9, 74–7, 81–2, 85, 87, 89, 91–3; scale 1:1

Almgren 101

80. (not illustrated) The axis bar for the bilateral spring, with internal chord, housed in the trumpet head is held by pierced lugs on the sides of the head. There is a small cast-on loop. The trumpet, rising from a forward-facing semi-circular flange, has traces of white metal trim indicating a line of four rosettes or twirls across the top between beaded strips all above a double beaded strip down the middle with a large rosette or twirl on each side. The flange had three rosettes or twirls on its upper surface. The foot tapers towards the bottom, which has a slight ridge, and had two large rosettes or twirls down the middle. *u/s, metal detector find, Bullimore Farm*

The period during which white metal trim was popular has been mentioned above. The technique itself is British and, therefore, despite the classification of the brooch as one of Almgren's types, the bulk of the known examples must also be. The commonest form is represented by the present piece, very few having enamel (e.g. Hattatt 1985, 113, fig. 47.447; Hattatt 1987, 142, fig. 47.977) and there are few wildly aberrant forms (e.g. ibid., 144, fig. 47.981), or both (e.g. ibid., 142, fig. 47.978). However, an enamelled sub-type provides one of the few fixed points in the chronology of the main type coming as it does from Dura Europos (Frisch and Toll 1949, 41, pl. IX.9) which was in Roman hands from A.D. 165 to A.D. 256. The brooch itself is close enough to the two British examples recorded by the writer (Leicester, Jewry Wall Museum, 116.1962/406; Sapperton, Lincs., excavations, B. Simmons, to be published) for it also to have been British. The dating of individual specimens is meagre: Chichester, late first to mid/late second century (Mackreth 1989b, 188–9, not illustrated); Camerton, second century (Wedlake 1958, 223, fig. 52.16); Leicester, up to A.D. 220 (Kenyon 1948, 251, fig. 80.15). White metal trim should show that the type should not have developed fully before *c.* A.D. 125, or to have survived much beyond A.D. 225.

Late La Tène

81. Although in relatively poor condition, it seems to be certain that the front of the casing housing the separately made spring was plain. The bow is set off from the case by a plain cross-moulding. The bow itself has three pairs of mouldings with an extra one introduced into the gap between each pair on the expanded head. The lower bow, along with the catch-plate, is missing. SHPMM/A267

This is an example of the standard reeded Langton Down. The chief source for the dating of the Langton Down in Britain is the King Harry Lane cemetery, St Albans (Stead and Rigby 1989). In the analysis which follows, only reeded Langton Downs are listed, B indicating those with beading: Phase 1, G71, B G97, B G287, B G309, G413; Phase 2, B G252, B G361; Phase 3; G41, B G68, G156, G184, B G370. In rough terms, there are as many burials in Phase 1 as there are in Phase 2, but there are nearly twice as many burials in Phase 3 as in either of the other two, Phase 4 is of no consequence in the present case.

The dating of the phases is not entirely secure. While the earliest likely date for the cemetery is admitted to be 15 B.C. (ibid., 83), the authors preferred a more conservative scheme: Phase 1, A.D. 1–40; Phase 2, A.D. 30–55; Phase 3, A.D. 40–60; Phase 4, A.D. 60+ (ibid., 84). Over half the burials should therefore be statistically later than the Roman Conquest. However, the samian report (ibid., 113) contains the comment that it is surprising that there should be only six vessels: three earlier than A.D. 25, none dating to A.D. 25–50, two dating A.D. 45–65 and one of much later date. Looking at the published dating, it is surprising that there is only one Colchester Derivative (G316,4) and no fully formed Hod Hill, both types well represented in Verulamium scarcely 500 m away. If the dating is, however, taken back to 15 B.C. and the dating of the phases eased backwards as a consequence, the embarrassment is largely removed. The following ranges are suggested: Phase 1, 15 B.C.–A.D.30; Phase 2, A.D. 20–40; Phase 3, A.D. 35–50/55; Phase 4, A.D. 45+. Most of the burials would then become pre-Conquest. The end-date of A.D. 50/55 for Phase 3 was arrived at by using general evidence for the dating of Colchesters and is relevant to the present brooches in that they would be subject to the same rules of residuality which govern all material not melted down or otherwise removed from a normal site assemblage. In the case of such a specialised collection as that from King Harry Lane, the writer would be happier with a terminal date for Phase 3 of A.D. 40/45. This should mean an adjustment in the phases before then, but no suggestions are made here.

This would mean that the present piece should be earlier than A.D. 50/55 and the occurrence through the phases of the cemetery of unbeaded Langton Downs suggests that they would, as a matter of course, be commonest in Phase 3 which would give an optimum date-range of *c.* A.D. 30/35–50/55.

'Aucissa' — Hod Hills

All have or had rolled-over heads for the axis bar of the hinged pin.

82. This is a standard Aucissa, except for the head-plate and what seem to be traces of at least two

mouldings down each side of the bow. Each end of the central element of the head-plate has a voided eye within a stamped ring, a finely divided bead-row along the bow side and a plain ridge under the rolled side. The bead-row down the front of the upper bow is much finer than is found on an Aucissa proper. SHPMM/A261b

This is an example of the series leading up to the named variety. The type derives from the Alesia (Duval 1974) and the early ones have a rolled-under head like the parent. The named variety has lost the eyes which are such a feature of earlier stages and which are still fully formed on the present specimen. Early 'Aucissas' are not common in this country and, while it would be excessive to list them here, there is a marked difference between the sites which yield them and those which produce straightforward Aucissas. This, in itself, is enough to show that there is little connection between the two other than the typological one. The detail that those that can be dated come from prominent pre-Conquest sites is a sign again that they are separate from the earliest Roman strand in this country: Baldock, A.D. 1–25 (Stead and Rigby 1986, 113–20, fig. 46.105); Skeleton Green, A.D. 15–25, two examples (Mackreth 1981, 134, fig. 71.50; 140, fig. 72.52); Gussage All Saints, Dorset, A.D. 25–50 (Wainwright 1979, 112, fig. 86.3058); Colchester, A.D. 43/44 (Hawkes and Hull 1947, 322, pl. 97.137); Hod Hill, before A.D. 50 (Brailsford 1962, 8, fig. 8.C49); Skeleton Green, A.D. 43 to *c.* A.D. 50 (Mackreth 1981, 139, fig. 71.51); Ditches, North Cerney, Glos., Claudian (?Claudio–Neronian) (Mackreth 1988, 48, fig. 23.18).

83. (not illustrated) The upper bow has a cross-moulding above and below with, between, a central sunken bead ridge with a flute on each side. Attached to one top corner is a simple boss. The fragment of lower bow shows that it had been flat, broad and tapering to a foot-knob. *u/s, metal detector find*
84. (not illustrated) The head is missing. The upper bow has a broad swell, with a median line of cross-cuts, between beaded ridges. There is a flute down each border. There are small projections at each corner. The remains of the lower bow has a flute narrowing to a thinner section. *u/s, metal detector find, Bullimore Farm*
85. The upper bow has a central arris, with traces of punched dot decoration on each side of that, and a small cross-ridge at top and bottom. The lower bow is narrow and tapers to a simple foot-knob. *1505, Area IV (004 080)* (Acc. no. 570)

No Hod Hill has been published from a convincingly pre-Conquest context: one from Baldock dated to the first quarter of the first century must be wrongly assigned (Stead and Rigby 1986, 120, fig. 47.112) as it would then pre-date its parent. Another from Skeleton Green was not securely sealed under the flood which means that, while it could have been earlier than the Conquest, this cannot be guaranteed (Mackreth 1981, 141–2, fig. 72.53). This was the only Hod Hill from that excavation and is a sign of how soon after the Conquest the whole sequence must close down: hardly later than A.D. 45. The general date-range for the whole of the main Hod Hill family to which these three belong is given by its distribution in Britain. There are few sites north-west of the Fosse Way producing them, and the bulk of those that do have occupation dating to before A.D. 60. As the type is largely absent from the northern lands taken into the province in the earliest 70s, it was passing out of use between A.D. 60 and A.D. 70 and by the latter date most had entered the ground. There is no need to seek dating on the continent as it is the British evidence *par excellence* which dates the whole, except for the very few patterns which carry on to give rise to enamelled versions in the late first century and the early second.

86. (not illustrated) The head only of a bow rolled over to take the axis bar of the hinged pin, there is no decoration on the rudimentary head-plate and nothing is left of the bow itself: probably related to the Aucissa–Hod Hill sequence. *3034, Area IV (021 099)*

Unclassified

87. The remnant of the bow consists of the cross-moulding at its base. The foot has a central arris and sides which neatly curve in to form a point at the bottom. The catch-plate does not run down to the point. *3493, Area VI (014 140)* (Acc. no. 571)

The general brooch type is identifiable: one of a set of types standing close to the beginning of the sequence ending with the fully developed Crossbow. There is little sign here of the bridge section between the foot and the bow and it might be thought that the brooch itself should really be assigned to the late Augenfibel sequence which frequently has a foot and single moulding such as can be seen here. But the catch-plate does not run to the point of the foot and this is a feature found only in later developments. Dating is difficult (F = foot of same form, B = bridge section at the base of the bow is present): Studland, Dorset, B, 120 into earliest third century (Field 1965, 150, fig. 26.8); Chichester, B, Antonine (Down 1978, 286, fig. 10.28, 53); Birdoswald, FB, Severan (Richmond 1931, 132, fig. 4, 4b); Silchester, B, late second to mid-third century (Fulford 1989, 127, fig. 58.2); Carpow fortress, two examples, both FB, early third century (Birley 1963, 206 fig. 11.3, 4); Vindolanda, B, *c.* A.D. 235 (Bidwell 1985, 119, fig. 39.5). Of these, only the one from Chichester suggests a purely second-century

date, the rest point to the late second and early third century. This should be when the various varieties were passing out of use. The shape of the foot seems to be of little moment, and all have a developed bridge section at the base of the bow. If the absence of that is significant, the present brooch would probably belong to the first half, possibly the middle, of the second century.

88. (not illustrated) A fragment of bow only identifiable as such because there is the stub of a catch-plate behind. The bow has a broad, raised strip in the middle with a ridge down that. These mouldings are stopped across the bottom by the remains of two cross-mouldings. *3711A, Area VI (088 111)*

89. Although no direct evidence for either a catch-plate or a spring survives, the shape of the object suggests that both had been present. The bow has a deep arch and is a concave rectangle in section. One end tapers to a narrow stub which should have run on to form the spring, the other also narrows, but becomes a short, wider stub almost at right-angles to the end of the bow. SHPMM/A261c

It is assumed that the object had been a brooch. The latter end should, therefore have been part of the catch for the pin. There is not enough left to tell whether the spring had been either unilateral or bilateral. If the former, it would have been pre-fifth century B.C. On the other hand, none of the brooches belonging to these early types illustrated by Hull and Hawkes (1987, pls 1–22) has a bow resembling the present object. The chances are, therefore, that the item came from a member of the La Tène series, but identification of the variety is not easy. The few which might provide a parallel are members of the La Tène IBc group (ibid., 107–8, pl. 32). In which case, the dating would seem to be fourth century B.C. However, these all have some decoration while the present piece is utterly plain. Not only that, but the arc of the profile of the bow is much higher than the La Tène IBc examples given. It is, in fact, much closer to the profile which would be expected on the pre La Tène series.

Plate

90. (not illustrated) The brooch is round with four projections. The two lateral ones are small, the one at the base is bigger and the top one is rounded with a circular dimple. In the centre of the plate is a shallow cone rising from a base surrounded by an annular hollow. The surface of the cone has five triangular cells for enamel, now reduced to an almost clear micaceous-looking material with traces of red at the bottom. *u/s, metal detector find, 1987*

A variety of a common British brooch which usually has much smaller cells for enamel arranged in two rows (e.g. Bishop and Dore 1988, 163, fig. 77.20). The distribution recorded by the writer is mainly in the southern half of Roman Britain. The dating, despite the numbers of brooches known, is poor: Wroxeter, *c.* A.D. 100 (Bushe-Fox 1913, 26, fig. 10.9); Carlisle, A.D. 105/115–120/130 (Mackreth 1990, 112, fig. 101.22); Harlow temple, *c.* A.D. 120–200 (France and Gobel 1985, 80, fig. 41.82); Ravenglass, *c.* A.D. 130–200 (Potter 1979, 67, fig. 26.2); Strageath, A.D. 142–158 (Frere and Wilkes 1989, 151, fig. 76.57); Canterbury, mid-second century (A. Williams 1947, 14, fig. 9.1); Alchester, third century or later (Hawkes 1927, 181, fig. 11.3); Lincoln, after A.D. 350 (*Lincs Hist and Arch 8*, 1973, 83, fig. 12.12). The last two are clearly residual in their contexts, the rest indicate a beginning in the early second century and an end possibly short of A.D. 200.

Penannulars

The first two brooches were made by forging rolled or folded sheet metal.

91. The ring has a circular section. Each terminal consists of two very narrow mouldings. The pin is almost straight. The ring is poorly finished on the inside. *C1023, F30 Area III, Period 4* (Acc. no. 572)

Such terminals are uncommon and two of the three recorded by the writer are dated: Maiden Castle, *c.* 200 B.C. (Wheeler 1943, 264, fig. 86,1), third to first century B.C. (Sharples 1991, 155, fig. 139,5). The first has a well-arched pin with a flat point projecting beyond the diameter of the ring. The nearly straight pin on the present example should, however, mean that the brooch is not pre-Conquest.

92. The ring has a relatively flat top and a rounded back. The top was stamped using a cutting edge, rounded at one end, pointed at the other and cut across to make a double mark. Each terminal is folded back along the surface of the ring, but not pressed down on to it, and has two cross-cuts. *C6039, Building IX, Period 2* (Acc. no. 573)

The quality of manufacture is too poor for it to be certain that the detail that the cross-cuts on the terminals do not run right across is significant. Nor should the number of cross-cuts be of moment. The intention behind the

stamping on the ring was almost certainly to produce a sunken bead-row. The examination of the dating of the brooch is divided into two, the terminal being considered first, the number of cross-cuts is given: Hod Hill, 1, before A.D. 50 (Brailsford 1962, 12, fig. 11.E11: Richmond 1968, 117–19); Bagendon, 2, A.D. 43/45–47/52 (Clifford 1961, 184, fig. 36.9); Waddon Hill, three examples 2, *c.* A.D. 50–60 (G. Webster 1960, 97, fig. 7.21, 22; G. Webster 1981, 62, fig. 59.13); Longthorpe, Cambs., 3, before A.D. 60/65 (Frere and St Joseph 1974, 46, fig. 24, 14), 3, Claudian–Neronian (Dannell and Wild 1987, 87, fig. 21.12); Prestatyn, 2, 70s–A.D. 160 (Mackreth 1989a, 98, fig. 40.28); Verulamium, 2, A.D. 80–150 (Wheeler and Wheeler 1936, 210, fig. 45.39); Caerleon, 2, Hadrianic–Antonine pottery (Wheeler and Wheeler 1928, 166, fig. 14.23); Bradley Hill, Somerset, 2, fourth century (Leech 1981, 214, fig. 16.7). The date-range for the terminal is from the mid-first century to near the end of the second and none of these had a beaded ring. The dating of that is: Wroxeter, A.D. 80–?120 (Bushe-Fox 1916, 26, pl. XVI.14); Barbrugh Mill, Dumfries, A.D. 142–158, and ?later (Breeze 1974, 160, fig. 8.37); Ilchester, late second century to *c.* A.D. 300 (Leach 1982, 247, fig. 117.32); Chichester, ?mid-fourth century (Mackreth 1981, 259, fig. 10.2, 25); Exeter, fifth century or later (Mackreth 1991, 240, fig. 103.38). Not an impressive list, but one which suggests that the second century was when this pattern was most popular. Therefore, the present brooch should be second century.

93. Iron. The ring has a circular section. The terminals are merely the ends of the ring beaten out flat and, as they appear now, nothing can be seen on them. C1397, *Building VII, Period 2* (Acc. no. 574)

Fragments

94. (not illustrated) Half a spring with the chord and the beginning of the other half all mounted on an axis bar from a Polden Hill Colchester Derivative (see Nos 1–13). *1767, Area IV (010 065)*
95. (not illustrated) A hinged pin with a tongue to bind on the back of the bow. *C1517, Building VII, Period 2*
96. (not illustrated) The pin with the beginning of a broad wrap-round from a Penannular brooch. *C6030, Building IX, Period 3*
97. (not illustrated) A small brooch pin with either the beginning of a spring or a simple wrap-round for use on a penannular brooch. *C6001, Building IX, Period 4*
98 (not illustrated) Iron. A long brooch pin, probably first century. *C6030b, Building IX, Period 3*
99. (not illustrated) A fragment of brooch pin. *3909, Area III (081 050)*

GLASS BEADS AND PENDANT

by Jennifer Price and Sally Cottam

A full catalogue of the beads is in the archive, with each piece identified by a catalogue number in addition to site contextual information. Where beads have been illustrated (FIG. 55) this archive catalogue number is quoted after the accession number in the index below.

Groups of small beads are very often present in glass assemblages, particularly those dating from the third and fourth centuries. The types from Fosse Lane are usually associated with the later Roman period, and are most comparable with beads from the necklaces found in fourth-century burials at Lankhills cemetery, Winchester (Guido 1979), Dorchester, Dorset (Roach Smith 1847, 33–6, pl. IX, figs 4–5) and with groups of small beads from many other occupation sites in southern and western England.

The first type was represented by a bead which, though badly heat-distorted, was clearly dark-yellow/brown and annular with an opaque white meandering trail (FIG. 55.1). Wave-decorated beads, most often noted in dark-blue and opaque white glass, are particularly associated with late pre-Roman and early Roman activity in Britain and continental Europe (Guido 1978, 62–5, group 5). Yellow/brown and white beads are very much more unusual; none were listed by Guido (1978). The context of the Fosse Lane example does not provide any further information on the dating of these beads.

Undecorated globular beads (FIG. 55.2) are difficult to date precisely. They occur in the pre-Roman period, but are also found on Roman sites (Guido 1978, 69–71, group 7). In south-western Britain similar beads come from the legionary bath house at Caerleon (Brewer

1986b, 149, nos 48–51, fig. 48), Barnsley Park villa, Gloucestershire (G. Webster 1982, 107, no. 7, fig. 22), South Cadbury (unpublished), and Brislington villa, Somerset (Guido 1978, 170). A further, very small bead (FIG. 55.3) is included, but this may post-date the Roman period.

Four small beads, three of which are illustrated (FIG. 55.4–6), were produced by winding a narrow thread of glass around a wire which was then withdrawn to form the perforation (Guido 1978, 91–3, fig. 37.1). This type is found either as individual beads or as longer, segmented beads. It is possible that two segmented beads (including FIG. 55.7) which have uneven globular segments were also produced in this manner. They are common on Romano-British sites but are not closely datable.

The quality of segmented beads varies considerably. The two discussed above are poorly made and have irregular segments. Three others (including FIG. 55.8) are broken from beads with more precisely formed globular segments. Segmented beads are found throughout the Roman period, but are most common on third- and fourth-century sites (Guido 1978, 91–3, fig. 37.2–3). A green segmented bead came from South Cadbury, and others are known from Brislington villa, Somerset, Colliton Park, Dorchester, Dorset, and several other sites in south-western England (Guido 1978, 201–3).

There are two common types of cylindrical bead in Roman Britain, and both are present in this assemblage. Both types are most common in the third and fourth centuries (Guido 1978, 94–5, fig. 37.4–5). Two (FIG. 55.9–10) have a greater length than width and are made of translucent glass, whereas five (including FIG. 55.11) are very short opaque beads. The longer beads are made in dark-green, or, more occasionally, blue/green or dark-blue glass. The outside surface often shows longitudinal striations, which Guido suggests may indicate a late Roman date (1978, 94–5). One (FIG. 55.9) has slightly flattened sides, a feature noted on a long cylinder bead from Winterton villa, South Humberside (unpublished). A blue cylindrical bead came from a post-A.D. 275 context at Frocester Court villa, and blue and green beads are known from Barnsley Park villa, Gloucestershire and from the fourth-century cemetery at Lankhills, Winchester (Guido 1979, 207–9).

Three blue square-sectioned beads (not illustrated) belong to a common type found throughout Britain particularly in the later Roman period (Guido 1978, 196, fig. 37.7). They are known on fourth-century necklaces at Verulamium (Guido 1978, 213–14) and Lankhills cemetery, Winchester (Guido 1979, 300, 560) and are frequently found singly or in small groups on occupation sites. Of these, one may, however, be a more unusual form of square-sectioned bead. It appears to have had a central trail, now weathered out, which may have formed a chevron pattern of opaque white and red glass on the outside surface (Guido 1978, 98, fig. 37.15). The red stripes on two beads from Fordington, Dorset, also seem to have weathered away (Guido 1978, 222).

Two biconical beads of different colours and sizes were found. These are amongst the most common bead types of the late Roman period (Guido 1978, 97, fig. 37.12–13). Most are blue and green (FIG. 55.12), but yellow beads (FIG. 55.13) are occasionally noted, as at Witcombe villa (Price and Cottam 1998, 84, no. 14, fig. 23) and on necklaces from Lankhills cemetery and Fordington, Dorset (Guido 1979, 298, 248; 1978, 220).

A single, flat, blue/green, heart-shaped bead was noted (FIG. 55.14). Irregular beads, often triangular or heart-shaped, were made in several colours and are difficult to date precisely, although they were certainly in use during the fourth century. Heart-shaped beads are known from Witcombe villa, Gloucestershire (Price and Cottam 1998, 84, no. 13, fig. 23) from late Roman contexts at Portchester (Guido 1978, 225) and Lankhills cemetery, Winchester (Guido 1979, 299, no. 363) and elsewhere.

The blue, diamond-faceted bead (FIG. 55.15) has been produced from a square-sectioned bead of good quality translucent glass which has been carefully cut and polished at each corner (Guido 1978, 99–100, fig. 37.20). These beads are not common, but have been noted in a late fourth-century burial at Lankhills cemetery, Winchester (Guido 1979, 299, no. 363,

pl. Ia) in fourth- to fifth-century burials at Cirencester and Bradley Hill, Somerset (Guido 1978, 227–8) and elsewhere. On the evidence listed by Guido (ibid.) their distribution seems to be centred on southern Britain.

Finally, a possible bead (FIG. 55.16) with a circular perforation and a biconical profile was produced by winding a gradually narrowing thread of glass upon itself in increasing circles. A similar object from London, however, was published as a spindle whorl. This may have had the same function, although only with very light-weight yarns (H. Young 1962, pl. 11a). Comparable objects in other materials, such as bone and jet are known from Romano-British sites. There are at least two others made of glass from southern England. These come from Rapsley villa, Surrey (Harden 1968, 68 B, fig. 28.j) and from Winchester (unpublished). The dark-blue and opaque white example from Rapsley villa is slightly different in shape from this in that it has a conical profile with one flat side. Like this example, both its surfaces have narrow grooves, but it is decorated with a narrow opaque white trail. Harden describes this object in detail as a disc from the end of a glass stirring rod, and, dating it to the first to early second century, cites other examples from the eastern Mediterranean. The example from Winchester, which cannot be securely dated, is blue/green and has a biconical profile and small central perforation, similar to this example.

Catalogue of illustrated examples (FIG. 55)

1. Annular bead fragment, *c.* 50%; yellow/brown and opaque white; irregular plano-convex section, distorted by heat; opaque white wave, marvered flush with surface in parts; occasional bubbles, one at surface. *489, Area II (077 079)* (Acc. no. 575; Archive no. 01)
2. Complete globular bead; semi-translucent blue; occasional cracks and chips. *5351, Area IX (066 181)* (Acc. no. 576; Archive no. 02)
3. Complete tiny annular bead; opaque blue. *2949, Area II (072 077)* (Acc. no. 577; Archive no. 02a)
4. Complete wound conical bead; blue. *4684, Area III (083 050)* (Acc. no. 578; Archive no. 03)
5. Complete wound conical bead; blue; perforations worn. *5354, Area VIII (083 165)* (Acc. no. 579; Archive no. 04)
6. Complete wound conical bead; blue. *4524, Area VII (097 135)* (Acc. no. 580; Archive no. 05)
7. Two sections and half of a third, segmented bead; green. Uneven globular segments. Streaky weathering. *5096, Area IX (059 195)* (Acc. no. 608; Archive no. 07))
8. One section and trace of a second, segmented bead; green; globular segment. *1575, Area IV (007 085)* (Acc. no. 581; Archive no. 09)
9. Short section, narrow cylindrical bead; mid-blue; longitudinal striations; sides slightly flattened to form squarish section; both ends chipped. *4832, Area VIII (082 159)* (Acc. no. 582; Archive no. 12)
10. Complete short cylindrical bead, slightly flattened at one end; blue; light scratching. *3390, Area VI (007 124)* (Acc. no. 583; Archive no. 13)
11. Short section, cylindrical bead; opaque green; lightly worn at perforations. *1672, Area IV (009 070)* (Acc. no. 584; Archive no. 15)
12. Complete biconical bead, slightly chipped edge; green; radial striations; occasional bubbles. *1257, Area IV (015 048)* (Acc. no. 585; Archive no. 20)
13. Complete small biconical bead; yellow; scratched and pitted. *482, Area I (083 090)* (Acc. no. 586; Archive no. 21)
14. Complete long triangular flattened bead; blue/green; edges rounded; all surfaces scratched. *2708, Area V (060 005)* (Acc. no. 587; Archive No 22)
15. Complete square-sectioned, facet-cut bead; blue; four central diamond-shaped surfaces; four triangular facets at each end of bead. *C6030, Building IX, Period 3* (Acc. no. 588; Archive no. 23)
16. Complete biconical ?bead or spindlewhorl; yellow/brown; spiral track, thick centre, thinning towards edge, wound five times around central perforation; small elongated bubbles aligned with direction of rail; lightly weathered. *877, Area V (060 030)* (Acc. no. 589; Archive no. 24)
17. ?Pendant, dark-yellow/green glass, appearing black; long biconical ?pendant formed from thin uneven wound trail; one end chipped, showing hollow interior, other end wound in decreasing circles to a point; opaque light-blue trail applied to surface, mostly weathered out, but traces remaining in grooves; irregular annular attachment applied at widest part. Length: 26 mm; height: 17 mm. *C1405, Building I, Period 5* (Acc. no. 592; Archive no. 25)

    The presence of a suspension loop suggests that this object was a pendant, but its exact function is not certain. An object similar to it in shape, size and ground colour, but with an opaque yellow trail came from a burial dated A.D. 325 at the Butt Road cemetery, Colchester (Crummy 1983, 35, fig. 37.1504). The Fosse Lane example also comes from a late Roman (or possibly early post-Roman) context.

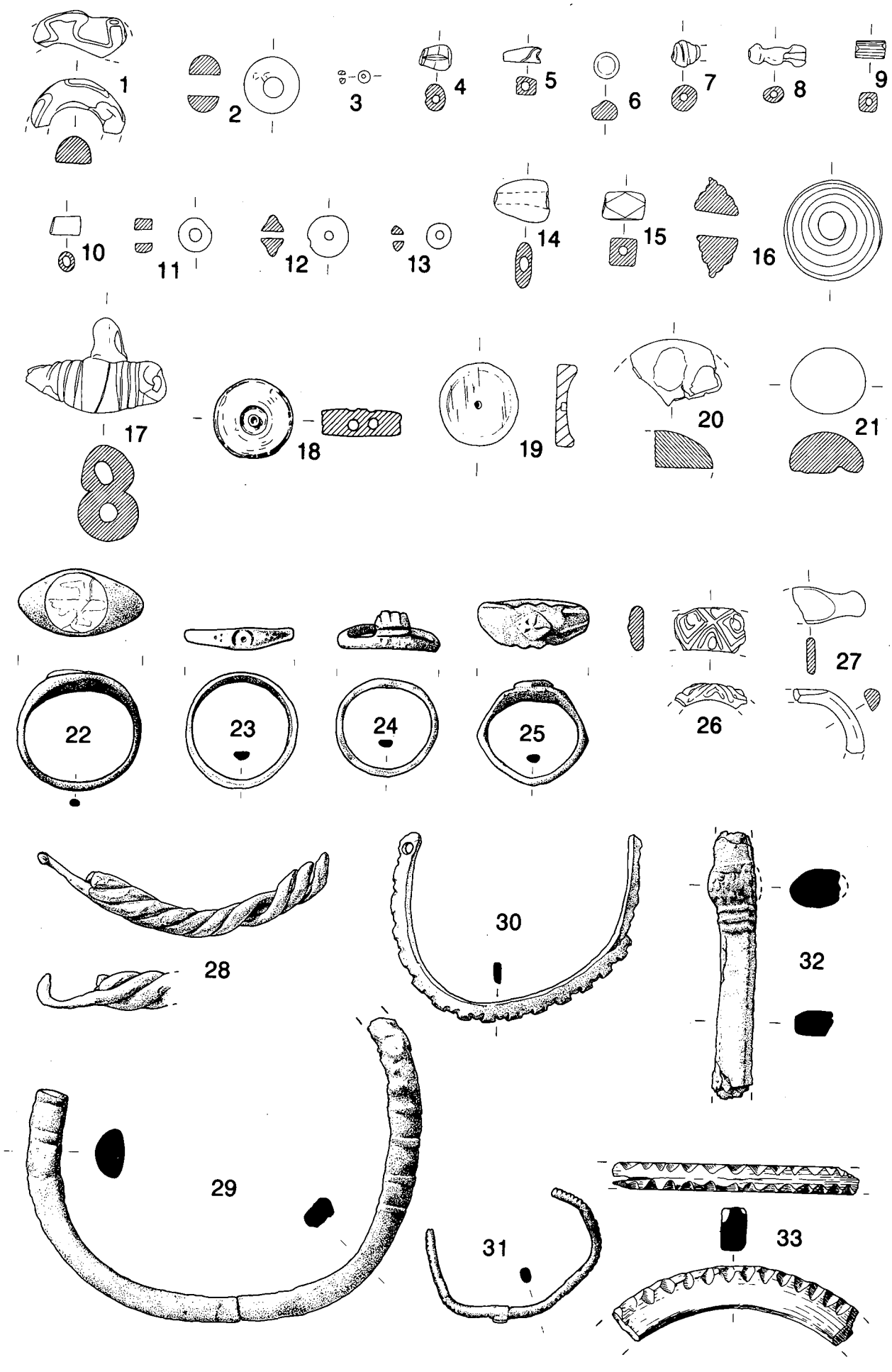


FIG. 55 Beads of glass and jet, glass beads, nos 1–16; glass pendant, no. 17; jet bead, no. 18; bone counter, no. 19; glass counters, nos 20–1; rings, copper alloy nos 22–5; glass, nos 26–7; bracelets, nos 28–33; scale 1:1

JET BEAD

by David Kendrick

Catalogue (FIG. 55)

18. Jet or shale. Small circular spacer bead, pierced through side by two holes. Finish on bead is rough, with some line decoration around the outside and centre of the bead, with a raised area thus created in the middle of the object. *4781, Area VII (063 139)* (Acc. no. 1802)

FINGER-RINGS

by Julie Smith (copper alloy and silver), Martin Henig (intaglio), Jennifer Price and Sally Cottam (glass)

Ten copper-alloy finger-rings or fragments of rings and one of silver were recovered, including one with an intaglio (FIG. 55.22). The rings consisted of a number of types including a three-strand, cable-twist ring which represents the simplest type present. Most of the rings appeared to be of third- or fourth-century date when compared to the type series devised by Cool (1983).

Fragments of two glass finger-rings were found, one dark blue (FIG. 55.27) and one dark green though appearing black (FIG. 55.26). Glass rings are not particularly common in Roman Britain, but have a wide distribution across the Roman world. The dark-green ring is particularly interesting. It does not have a bezel, but is likely to have consisted of a band which has an even thickness around the entire circumference. Rings formed as an even band are known from a few Romano-British sites, but these usually have simple scored decoration. Examples can be cited from the Temple site at Thisleton (unpublished), from Malton (1927–31 excavations, unpublished) and Exeter (Charlesworth 1979, 230 no. 44 fig. 71). Rings which appear black are usually made of dark yellow/brown glass.

The other ring (FIG. 55.27) although a more familiar form is unusual as few of this type have been noted in dark-blue glass. It is very simple in shape, lacking the tooled shoulder found on many Romano-British glass rings with flattened bezels. A ring with a flat oval bezel comes from the late Roman site at Poundbury, Dorchester (Charlesworth and Price 1987, 109, fig. 78.9) and another from Witcombe villa, Gloucestershire (Price and Cottam 1998, 91, no. 4, fig. 26) is from a late third- to fourth-century context and provides some evidence that glass rings are associated with the late Roman period.

Catalogue of illustrated examples (FIG. 55)

22. Martin Henig writes: copper-alloy finger-ring with hoop of flattened D-shaped section widening towards the bezel from 2 mm at the narrowest point to 12 mm at the bezel. The ring has an external width of 22 mm and internal width of 20.5 mm. The ring approximates to Henig form XII (Henig 1978, 35, fig. 1). It contains an intaglio moulded in deep-blue glass, 11 mm in diameter, representing a standing figure with one arm raised and the other lowered. This type of imitation gemstone seems to be virtually confined to Britain (compare especially Henig 1978, nos 539–42) with the exception of one or two examples from Belgium (Kathy Sas pers. comm.) and was almost certainly made in southern England in the third century. *4126, Area I (094 086)* (Acc. no. 1704)
23. Silver. Complete ring; decorated. Decoration consists of incised dot-in-ring central motif, flanked by two triangular 'wings'. This type of ring, similar to Cool (1983) type VI, was most common in the first and second century, though later examples are known. Diameter 18 mm. *u/s, metal detector find*
24. Copper alloy. Complete annular ring, oval in profile with a D-shaped section. A 'crown' design in relief rises laterally from the otherwise plain band; as Cool (1983) type Xa. Diameter 19 mm. *u/s* (Acc. no. 197)
25. Copper alloy. Complete ring, lozenge-shaped in profile, with block, incised, lozenge bezel with triangular shoulders and indentations on either side of the bezel; as Cool (1983) type XIVb. Diameter 19 mm. *2087, Area VI (015 117)* (Acc. no. 196)
26. Glass. Fragment, *c.* 25% of ring; dark-green, appearing black; plano-convex band; outside surface decorated with repeated geometric design in low relief; two concentric diamonds with central diamond-shaped pellet; two opposed V-shaped motifs with central triangular pellets between diamonds. Interior diameter 14 mm. *C6007, Building IX, Period 6* (Acc. no. 590; Archive no. 26)
27. Glass. Fragment, *c.* 30% of ring; dark blue; plano-convex band, narrowing towards flattened oval bezel; bubbly, occasional strain cracks. Interior diameter 14 mm. *2707, Area V (059 005)* (Acc. no. 591; Archive no. 27)

BRACELETS

by Julie Smith

Nineteen bracelets or bracelet fragments were recovered. Three examples were made of shale, two being plain (Acc. nos 606 and 607, not illustrated) and one decorated (FIG. 55. 32). All of the remainder were in copper alloy. Of these, two had applied tinned or soldered bands (FIG. 55.31 and Acc. no. 182, not illustrated). Also in copper alloy were cable-twist bracelets, a type common throughout the Roman period. Amongst these were four examples of a less usual four-strand variety, perhaps hinting at a local source of manufacture or supply for this type. A selection is illustrated and described.

Catalogue of illustrated examples (FIG. 55)

28. Copper alloy. Part of four-strand, cable-twist bracelet with hook terminal formed by continuation and bending over of one strand; Cool (1983) type I.*4567, Area V (070 045)* (Acc. no. 170)
29. Copper alloy. Large fragment of D-sectioned, heavy bracelet with two registers of cordoned decoration. Cool (1983) type VIIIb; a relatively rare type, most numerous in the third to fourth centuries. *1309, Area IV (019 079)* (Acc. no. 174)
30. Copper alloy. Fragment of crenellated, rectangular-sectioned bracelet with small eye socket for attachment of terminal; Cool (1983) type XV, dated to the third and fourth centuries. *1913, Area IV (011 046)* (Acc. no. 173)
31. Copper alloy. Fragment of oval-sectioned bracelet with decoration of bands of incised grooves on the upper surface of the bracelet only; applied bands may have been tinned or silvered; Cool (1983) type XVIIb, which could be late fourth century, if not actually post-Roman in date. *1563, Area IV (009 085)* (Acc. no. 182)
32. Copper alloy. Fragment of rectangular-sectioned, heavy, filled bracelet; decorated with three raised cordons below a bulbous projection bearing what appears to be a grape-cluster motif, with another cordon framing the design; possibly of Cool (1983) type XXXIX, a 'cast rectangular-sectioned penannular' dated to the late Roman period. The design, if the identification of the motif is correct, could betray a Bacchic link. *4843, Area VII (063 148)* (Acc. no. 264)
33 Shale. Fragment of rectangular-sectioned bracelet, decorated with short, V-shaped, opposed notches; turned Kimmeridge shale. *1405, Area IV (012 079)* (Acc. no. 1759)

PINS

by Julie Smith and David Kendrick

Thirty-nine pins or pin fragments either came directly from the excavations or were found by metal detector users on or around the site (FIG. 56). The majority of the pins were either of copper alloy (twenty examples) or bone (eighteen examples), with a single jet or shale pin being present. The bone pins were cut from the sides of limb bones of large ungulates, mostly horse and cattle (Stephanie Pinter-Bellows pers. comm.). One bone pin may have been stained green in imitation of a copper-alloy pin, although the staining is more likely to have arisen incidentally through contact with copper-alloy corrosion products.

The assemblage was catalogued and analysed with reference to the system devised by Cool (1983; 1990), with the majority of the diagnostic examples being of first- and second-century date and six examples being common types throughout the whole Roman period. Only two pins probably date to a period later than the second century.

The only highly decorated example, a bone pin with a 'pine-cone' head, may have held some specific significance in terms of religious belief or ritual action, the pine cone being a motif often associated with belief in the afterlife or with the cult of Bacchus. A small number of the copper-alloy pins were bent, which, if deliberate, raises the possibility of ritual practice. A selection from the full catalogue is illustrated and described.

Catalogue of illustrated examples (FIG. 56)

1. Bone. Almost-complete pin with tip broken off; cross-hatched conical head in the form of a pine-cone,

separated from the shaft by a cordon (as Cool 1990, fig. 4.6); length of shaft suggests a first- or early second-century date (Cool 1983, 105). Length 82 mm. *1349, Area IV (016 080)* (Acc. no. 1735)

2. Copper alloy. Complete pin, with head in the form of a knob on groove; Cool (1983) type Ib; length suggests a first- or early second-century date; possibly from a south-western source. Length 91.5 mm; diameter of head 5 mm. *3869a, Area VIII (085 153)* (Acc. no. 150)
3. Copper alloy. Complete pin (found in two pieces) bent slightly from mid-section of shaft; simple knob-head; as Cool (1983) type Ic, a type common throughout the Roman period, though the length of this particular example suggests an earlier rather than later date. Length 84 mm; diameter of head 5 mm. *883, Area III (075 045)* (Acc. no. 149)
4. Copper alloy. Complete pin, bent from mid-section of shaft; circular bead on reel; Cool (1983) type IIa, in use throughout the Roman period. Length 58 mm; diameter of head 5 mm. *3869b, Area VIII (085 153)* (Acc. no. 151)
5. Copper alloy. Complete pin, bent from towards tip; head in the form of bead, reel-and-spool motif; length suggests a first- or second-century date; Cool (1983) type IIIa. Length 88.5 m. *C6030, Building IX, Period 3* (Acc. no. 147)
6. Bone. Head and part of shaft only; head is conical, on an incised spool; Cool (1983) type IIIa, dating between the second and fourth century. Length 40.5 mm. *5388, Area IX (076 201)* (Acc. no. 1736)
7. Bone. Head and part of shaft only; head consists of flattened knob on reel, spool and double reel; Cool (1983) type IIIa, commonly found in Roman Britain. Length 59 mm. *1552, Area IV (012 088)* (Acc. no. 1737)
8. Copper alloy. Head and part of shaft only; head comprises 'bead and banister' design, as Cool (1983) type IIIb; first to second century. Length 27.5 mm. *4606, Area V (076 044)* (Acc. no. 1800)
9. Jet or shale. Head and part of shaft only; faceted head, thinner along one axis than the other; a common and widespread type, Cool (1983) type XVii, in the third and fourth centuries. Length 32 mm. *C6017, Building IX, Period 3* (Acc. no. 1801)

BUCKLES, BELT AND STRAP FITTINGS

by Julie Smith

Four buckle or buckle fragments were found, two by excavation and two by metal detectorists. Two possible strap ends and a strap tag were also found. All the objects are undecorated and undiagnostic and while they are likely to be Roman in date, they could, nevertheless, be later.

Catalogue of illustrated examples (FIG. 56)

10. Copper alloy. Plain, D-shaped buckle, made of single strip of metal with a D-section. The tongue is missing although there is a grooved seating for a tongue in the upper surface of the buckle. Length 27 mm. Width 22 mm. *u/s metal detector find near Building VII*
11. Copper alloy and iron. Shield-shaped buckle plate, pierced in three places for attachment to leather. A circular-sectioned iron hinge bar is present. While this could be a box fitting it is more likely to be for attachment to leather than to wood given the small size of the rivet holes. Length 36 mm. Width 26 mm. *3709, Area V (072 043)* (Acc. no. 185)

DRESS FASTENER AND ?PENDANT

by David Kendrick

Catalogue (FIG. 56)

12. Partly damaged, but evidently roughly finished bone disc in the form of a poorly cut circle; misplaced central hole through object; Stephanie Pinter-Bellows writes that it could have been cut from a pelvis or scapula; probably a dress fastener or pendant, the object being too thin and light to be a spindle whorl. Diameter 35 mm; thickness 2 mm. *1405, Area IV (012 079)* (Acc. no. 1757)
13. Pierced tooth fastener or pendant; Stephanie Pinter-Bellows writes that it is a right mandibular canine of a dog or wolf. Length 35 mm. *1351, Area IV (016 080)* (Acc. no. 1755)

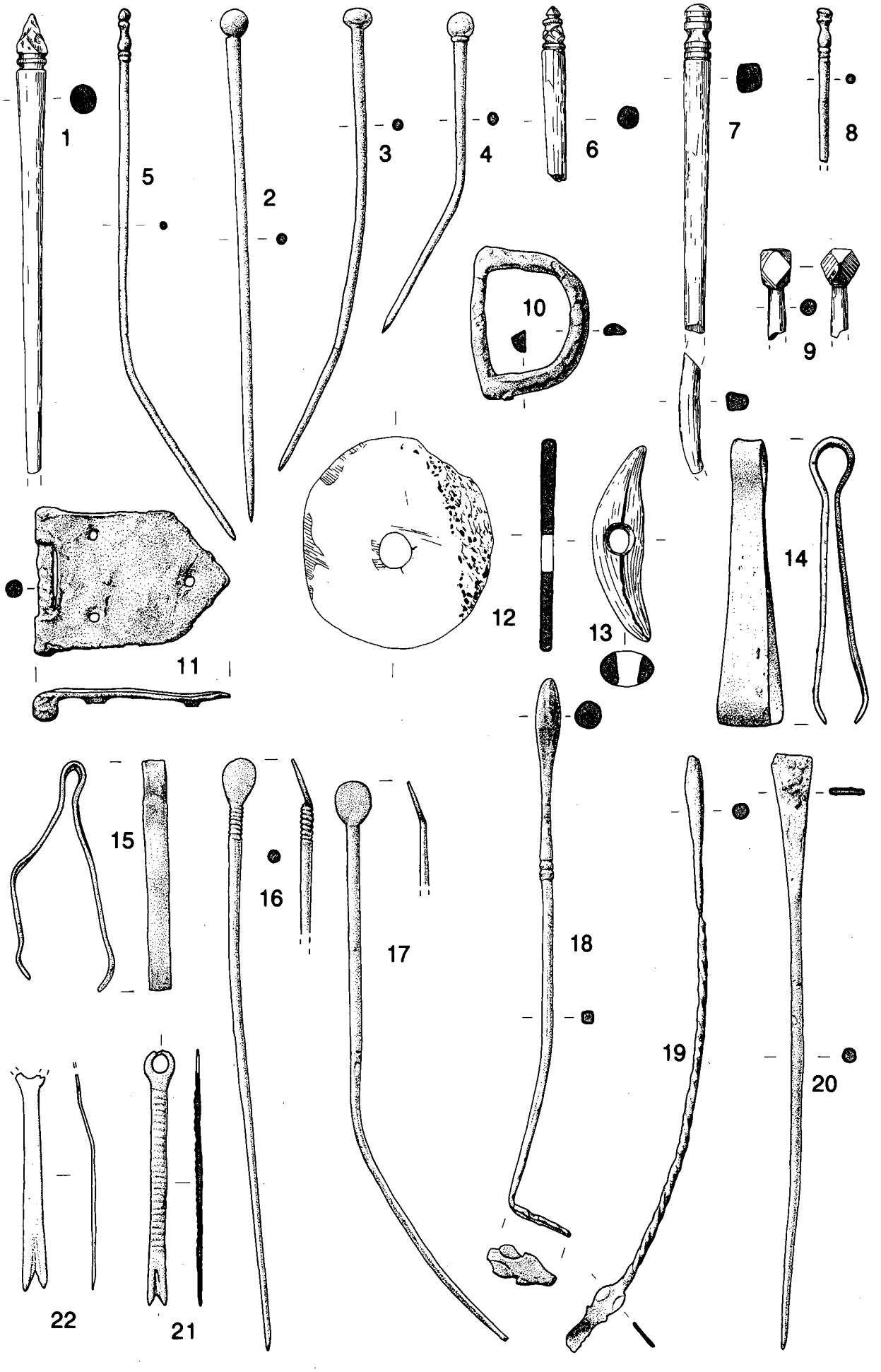


FIG. 56 Pins of bone, jet and copper alloy, nos 1–9; buckle and strap mount, nos 10–11; bone pendants, nos 12–13; implements, nos 14–22; scale 1:1

HOBNAILS

by Olwen Coventry

A total of 331 iron hobnails was recovered from the excavations, including two boot sets from graves F101 (containing HB 8) and F102 (containing HB 9) in Area IV; eleven individual hobnails from grave F126 in Area V and a single hobnail from grave F113 in Area III. None is illustrated.

TOILET INSTRUMENTS

by Julie Smith

This assemblage of twelve objects comprised four pairs of tweezer fragments (FIG. 56.14–15), two nail cleaners (FIG. 56.21–2), two toilet spoons (FIG. 56.16–17), two spoon probes (FIG. 56.18–19) and other miscellaneous toilet instruments. None of these objects is particularly diagnostic or easy to date. A selection from the full catalogue is illustrated and described.

Catalogue of illustrated examples (FIG. 56)

14. Copper alloy. Complete pair of tweezers; flared blades with bevelled inner edges. Length 50 mm; width 11 mm. *3834, Area IX (065 194)* (Acc. no. 1798)
15. Copper alloy. Complete pair of tweezers, now bent out of shape; made from single rectangular strip of metal. Length 42 mm. *868, Area IV (018 069)* (Acc. no. 96)
16. Copper alloy. Complete toilet spoon, with circular-sectioned, tapering shaft, ending in a point; pear-shaped spoon is divided from shaft by a register of incised line decoration. Length 106 mm. *C6042, Building X, Period 2* (Acc. no. 113)
17. Copper alloy. Complete toilet spoon, with circular-sectioned, tapering shaft, which has been bent, ending in a point; pear-shaped spoon. Length 104 mm. *C6032, Building IX, Period 2* (Acc. no. 114)
18. Copper alloy. Almost-complete spoon probe, missing spoon bowl, with decorated spoon/shaft junction, now folded over on itself; the probe end has two cordons at the junction between the square-sectioned shaft and the probe. Length 98 mm. *5380, Area IX (063 210)* (Acc. no. 116)
19. Copper alloy. Almost-complete, though slightly damaged, spoon probe, missing spoon bowl, with twisted shaft and decorated zone at the junction of the shaft with the spoon; now bent. Length 80 mm. *4695, C1329, Building VII, Period 2* (Acc. no. 118)
20. Copper alloy. Complete spatula, with flattened, triangular spatulate end and tapered, round-sectioned, shaft ending in a point; this could be a toilet implement, though it could also be a modelling tool. Length 82 mm. *1387, Area IV (014 079)* (Acc. no. 1704)
21. Copper alloy. Complete nail-cleaner, with oval suspension loop for attachment to a châtelaine, and a shaft decorated with incised lines. Length 46 mm. *2540, Area IV (006 090)* (Acc. no. 682)
22. Copper alloy. Nail-cleaner, with most of suspension loop broken off; plain, undecorated shaft. Length 40 mm. *3372, Area VI (006 121)* (Acc. no. 1797)

PALETTES

by Fiona Roe

Roman palettes were made from assorted materials, sometimes even marbles imported from abroad. It is usually assumed that they were used for mixing cosmetics, but they could have been used for grinding medicaments and rolling pills (Boon 1974, 137) or possibly even as a touchstone (Chris Salter pers. comm.).

Catalogue (FIG. 63)

1. A complete palette, well-preserved, with bevelled edges and a slightly worn working surface. This is made from a fine-grained greenish-grey slate or tuff, possibly from the Lake District or Wales. Greenish slate of a similar description occurs at other sites, as for instance Caerleon (Zienkiewicz 1986, 39),

Silchester (Boon 1974, 137) and elsewhere (Dobson and Jarrett 1958, 121). *3361, Area VIII (086 162)* (Acc. no. 593)

2. A thin slab of Mendip Old Red Sandstone, worn smooth and slightly concave. This appears to have been a multi-purpose implement, with a worn edge, probably from whetting, and with further wear on the underside suggesting use as a smoother or polisher. *3801, Area IX (063 189)* (Acc. no. 594)

Amongst the building stone a re-used fragment of Pennant sandstone roofing tile (not illustrated) had been worn smooth and slightly concave, and retained traces of a red substance. 712, Area V (063 048)

GAMING COUNTERS

by Jane Evans (pottery), David Kendrick (bone), Fiona Roe (stone), and Jennifer Price and Sally Cottam (glass)

Pottery

Twelve ceramic counters were identified, none of which is illustrated. Apart from one example made from a fragment of a Central Gaulish samian 18/31 or 31 bowl, all were re-used body or base sherds in coarse-ware fabrics. In addition to the samian counter a further five were in characteristically first- to second-century fabrics. The counters fell into three broad size ranges. The two smallest, ranging from 14 to 21 mm, were comparable in size with the glass and bone gaming counters discussed below. The majority, which fell into the middle range of 28 to 38 mm, may have been gaming counters while the largest two, ranging from 54 to 59 mm, were perhaps more likely to have been used as stoppers or lids. Seven counters came from stratified deposits. Of these three came from Building IX, Period 3, two from a single context (C6024); two came from Area III, Period 5; and one from Building VIII, Period 6.

Bone

Catalogue (FIG. 55)

19. Small circular bone disc with countersunk obverse surface, possibly a gaming counter. Stephanie Pinter-Bellows writes that it is probably made on a lathe from a cattle or horse long-bone. Diameter 14 mm. *5349, Area IX (065 189)* (Acc. no. 1756)

Stone

Two stone counters (not illustrated), both from Area IV, are made of White Lias, obtainable fairly locally and also used for other artifacts on the site. Counters such as these are of quite common occurrence, and a number were found at Camerton (Wedlake 1958, 248). *1371 (015 080), 1514 (020 085) Area IV.*

Glass

Four plano-convex glass counters or gaming pieces were found, two of which are illustrated (FIG. 55. 20–1). Patches smoothed by use can be seen on the lower surfaces of three of the counters which were complete. The most common type of counter is plano-convex and undecorated. These are found in Roman Britain from the first to fourth centuries. Most are opaque white or made of very dark glass which appears black. Dark-green counters have been found in a fortress-level context at Exeter (Charlesworth 1979, 231, fig. 71.59–64), in early second- and mid-fourth-century contexts at Verulamium (Charlesworth 1984, 171–2, fig. 69.325, 328 and 335), at Corbridge and Lancaster (both unpublished) and elsewhere. Opaque blue counters have also been found in small numbers throughout Britain, occurring at Fishbourne Palace, Sussex (Cunliffe 1971, 150, no. 6 and unpublished), in a second-century context at Verulamium (Charlesworth 1984, 171–2, no. 336), Ribchester, Lancashire (unpublished) and elsewhere.

Both undecorated and decorated counters sometimes occur as sets in burials, but they are usually found singly or in small groups on occupation sites. Monochrome sets are known from cremation burials at Grange Road, Winchester (Biddle 1967, 244–5, fig. 9.36–53), Ospringe, Kent (Whiting 1925, 95, XXXVII), and Old Newton, Suffolk (Low 1907/9, 257), and decorated sets have been found in association with fourth-century inhumations at Lullingstone villa (Cool and Price 1987, 139, fig. 57.391), and Lankhills cemetery, Winchester (G. Clarke 1979, 252–4, 50, grave 51, pl.1b).

Decorated counters are not common, but have been found on a number of late Roman sites. One of the earliest decorated examples from Britain is a counter from a context dated A.D. 200–300 at Winterton villa, South Humberside (unpublished), but most are fourth-century pieces. As No. 20 is only a fragment, it is possible that it was decorated with dots of other colours, now missing. Opaque white counters with dark-blue, turquoise and red dots formed half of the set from Lullingstone villa, but single finds of white counters with these colours are rare.

One other object, a blue glass blob (not illustrated), has a plano-convex section, but is much too small to be a counter. It may be comparable with a glass inset which formed the head of a bronze pin found at Shakenoak villa, Oxfordshire (Harden 1971, 106, no. 152, fig. 45.69). This object, which came from an unsealed deposit of the later third century, was similar in size, was probably dark blue and also had a rounded upper surface. A blue-green glass inset in the head of a bronze pin is also known from Uley (Woodward and Leach 1993, 168, fig. 13i.7)

Catalogue of illustrated examples

20. Fragment of glass counter; plano-convex section; opaque white with applied decoration; one turquoise blob and parts of two dark-blue blobs, marvered flush with surface; heavily weathered and pitted, strain cracks. Height: 6.5 mm; dimensions: 17.5 x 11.5 mm. *4586, C1135, Area III, Period 5*, (Acc. no. 595; Archive no. 28)
21. Complete plano-convex glass counter; semi-translucent blue; uneven lower surface, smoothed in parts by use; upper surface lightly weathered. Height: 7 mm; dimensions: 12 x 14 mm. *2950, Area II (072 081)* (Acc. no. 596; Archive no. 29).

3.5: THE COINS

IRON AGE COIN

by Colin Haselgrove

Description

South-western region, attributed to the *Durotriges*. Silver unit. Mays Durotrigan E; *cf.* Mack (1975) 317; VA 1252ff. Weight 2.92 g, diameter 18 mm. *4957, Area VI (059 126)*

Obv. degraded head of Apollo right, with hair made up of two-branches objects;
Rev. disjointed horse left, composed of pellets, straight lines and crescents, with elliptical ornament behind.

Comment

This coin belongs to the extensive series of uninscribed issues localised in south-west England and attributed to the Durotriges. This coinage was produced to a variety of standards, beginning with base gold staters of good weight and ending with crude cast bronze coins manufactured from a ternary alloy of copper, tin and lead. The earliest coins are reasonably securely dated to the mid-first century B.C., but the date and duration of subsequent issues is open to more doubt, as minting need not have been continuous.

Surface EDXRF-analysis indicates a composition for this coin of about 84% silver and 14% copper; with small amounts of gold (1%), tin (0.5%) and lead (0.5%). There were also traces of antimony. This composition places the Fosse Lane coin in the second phase of the South-Western coinage, a conclusion wholly in keeping with stylistic considerations. Its probable date is therefore later first century B.C.

Shepton Mallet is right on the limits of the main area over which the South-Western series circulated. Coins belonging to the later stages of the series are in any case relatively common finds on Roman sites outside Durotrigan territory, a dispersal which probably owes much to troop movements in the decades immediately following the Conquest.

ROMAN COINS

by Simon Esmonde Cleary

A total of 1,401 Roman coins is considered in this report, all of which come from within the confines of the current Fosse Lane development area. The information status of these coins varies according to method of recovery, and thus they are presented below in a number of separate groups before further discussion. The groups are as follows. SM90 EDM: 573 coins were recovered during the main excavation and recorded by Electronic Distance Measurer (EDM); there are thus precise three-dimensional co-ordinates for each of these coins. SM90 CX: a further 85 coins were recovered during the excavation of contexts and features. Some of these were recorded using an EDM, but in the main the co-ordinates available are those of the context containing the coin. They thus differ slightly, but significantly, in their information status from the SM90 EDM coins. SM90 U/S: 230 coins were recovered by metal-detector or other means and are thus unstratified and lack co-ordinates. MBP: 175 coins were recovered and recorded using an EDM during an evaluation of the Mendip Business Park, to the north of the main SM90 area. TMUS: Mr Stephen Minnitt of the Somerset County Museum Service has kindly furnished details of 341 coins from this area of Shepton Mallet which he has identified at Taunton Museum. To these are added a further fifteen coins from the area reported to the excavators, making a total of 356.

The precise co-ordinates available for the 573 coins from SM90 EDM and the 175 coins from MBP clearly hold great potential for spatial analysis. For reasons of time and space this work will be published separately.

For each of the groups identified above, SM90 EDM, SM90 CX, SM90 U/S, MBP, and TMUS, there follows tabular lists in two formats.

TABLE i in each case (TABLES 6–10) is a conventional list giving: (1) number of coins by reign or other identification, (2) emperor or other identification, (3) denomination (up to the early third century), (4) date, (5) catalogue number or other description.

TABLE ii in each case (TABLES 6–10) displays only those coins which can be identified sufficiently precisely, as numbers and permills for each of the agreed 21 chronological periods of issue (cf. Reece 1991, esp. table II). In these lists numbers of copies are given in brackets for each issue period; copies are assigned to the periods of their originals, so Regular Radiates are in 13, Barbarous Radiates in 14, *Gloria Exercitus, Urbs Roma, Constantinopolis* and *VictoriaeDdAuggQNn* copies in 17, *Fel Temp Reparatio* copies in 18.

Comparing the raw numbers and the permills of the TMUS collection with those from the excavated sites certain differences emerge: (i) there is a higher representation of coins before A.D. 260 in TMUS; (ii) there is a relatively low number of Barbarous Radiates; (iii) there are more Tetrarchic *folles*; (iv) there is a much lower incidence of *Fel Temp Reparatio* copies. Thus the pattern can be seen to differ significantly from those from the other sites (FIG. 57). This may in part be explained by selective recovery by metal detector users and other collectors, with the larger or more valuable coins of (i) and (iii) being preferentially recovered and the smaller, cruder ones of (ii) and (iv) either not being spotted or being

TABLE 6 i SM90 EDM: COINS BY EMPEROR ETC.

No. of coins by reign	Emperor	Denomination (up to the early third century)	Date	Catalogue number or other description
1	Domitian	*as*	81–96	illegible
1	Antoninus Pius	*sestertius*	145–46	RIC 767a
1	Faustina II	*sestertius*	161+	uncertain
2	Caracalla	*denarius*	196–98	RIC 6 (2)
1	Severus Alexander	*denarius*	222	RIC 264
1	Gordian III	*antoninianus*	238–44	RIC 95
1	Philip I	*antoninianus*	244–49	RIC 27b
1	Salonina		253–60	RIC 35
6	Gallienus		260–68	RIC as 180, 182, 193, as 193, as 252, uncertain
6	Claudius II		268–70	RIC as 14, 38, 168, as 265, 266, uncertain
3	Tacitus		275–76	RIC 34, 35, 89
1	Numerian		283–84	RIC 416
1	Carus		283–85	RIC 47
1	Carinus		283–85	RIC 152
4	Victorinus		268–70	RIC as 55, 56, as 100, as 112
7	Tetricus I		270–74	RIC 77, as 79, 80, 130 (3), uncertain
3	Tetricus II		270–74	RIC 241, as 254, as 270
4	Carausius		286–93	RIC as 98, as 718, uncertain, illegible
1	Allectus		293–96	RIC 55
16	Regular Radiate		260–80	reverses: *Laetitia, Libertas, Pax* (3), *Salus* (2), *Spes, Victoria*, uncertain (3), illegible (4)
80	Barbarous Radiate		270–90	reverses: *Aequitas*, Altar (4), *Laetitia, Pax* (17), Phoenix, Pontifical Implements (2), *Providentia* (2), *Salus* (6), *Sol, Spes* (7), uncertain (21), illegible (17)
21	Constantine I		306–37	RIC VI Trier 897, RIC VII London as 6 (2), 89, 290, Trier 200, 209, 305, 429, Arles 252, LRBC I 48, as 48, 48a, as 48a, 62 (2), 67, 72, 73, 351 as 466
4	Crispus		317–26	RIC VII London 291, Trier as 341, 451, Lyon 133
9	Constantine II		317–40	RIC VII London as 292, Trier 433, 463, Lyon 140, LRBC I as 49, 81, as 98, 241, 369
18	Constans		333–50	LRBC I 90 (2), as 108, 110, as 137, 139, 140 (3), 149 (2), 150, 155, 158, as 158, 161, 163, 236, LRBC II 31, as 38
10	Constantius II		323–61	RIC VII Trier 478 (2), LRBC I as 89, as 109, 116, 130, 145, 407, LRBC II 28, as 40
7	Helena		337–41	LRBC I as 104 (3), 112 (2), as 112, 119
7	Theodora		337–41	LRBC I 105 (4), 113, as 113, 129
1	Constantius Gallus		353–54	LRBC II 27
1	Julian		355–60	LRBC II as 258
12	Urbs Roma		330–35	LRBC I 51 (3), as 51 (2), 65 (2), 70 (2), 85, as 164, 556
9	Constantinopolis		330–35	LRBC I as 52 (6), 59, 71, 356
159	House of Constantine		330–48	LRBC I as 48, copy as 48 (15), copy as 51, copy as 52 (10), as 67, as 87 (5), copy as 87 (20), as 98, copy as 104, as 137 (4), copy as 137 (6), as 139 (4), as 143, as 145 (4), as 158, as 161, copy as 180, as 416, copy of 565
			348–64	LRBC II copy as 5 (2), as 25 (2), copy as 25 (75), as 28
1	Magnentius		350–53	LRBC II 62
1	Decentius		350–53	LRBC II 222
1	Jovian	*siliqua*	363	RIC VIII as Arles 329
12	Valentinian I		364–75	LRBC II as 275 (3), as 279 (2), 477, 479, 998, 1011, 1026, as 1380, 1430
15	Valens		364–78	LRBC II as 48, as 276 (6), as 280 (2), as 480, 516, 527, as 968, as 1000, as 1300
15	Gratian		367–83	LRBC II as 133, as 297 (2), 299, 339, 371, 503, as 503, 511, as 517 (3), 529 (3)
1	Valentinian II		383–87	LRBC II 785/6
38	House of Valentinian		364–78	LRBC II as 275 (12), as 276 (18), as 278, as 280 (2), as 295 (2), as 477, as 500, as 708
3	Arcadius		383–95	LRBC II as 162, as 164, 167
15	House of Theodosius		388–402	LRBC II as 162 (15)
3	C1–C2	*asses*		illegible (3)
1	C3	*denarius*		plated copy
30	C3–C4			illegible/uncertain (21), illegible copy (9)
35	C4			illegible/uncertain (30), illegible copy (5)
2				illegible fragments
573				

TABLE 6 ii SM90 EDM: COINS BY ISSUE PERIOD (NUMBERS AND PERMILLS)

502 coins identifiable to period

Period	Numbers (copies in brackets)	Permills
1	0	0
2	0	0
3	0	0
4	1	2
5	0	0
6	0	0
7	1	2
8	1	2
9	0	0
10	2	6
11	0	0
12	3	8
13	24 (16)	81
14	11 (80)	180
15	4	8
16	21	4
17	93 (55)	290
18	9 (80)	175
19	78	155
20	3	6
21	18	5

discarded. It must also be, in part, because of the composition of the other groups discussed here, which have an under-representation of coins pre-A.D. 260, and a consequent over-representation of later third- and fourth-century issues (below). If the TMUS list is added to that from the other collections, a somewhat different overall pattern of coinage will result compared to that with TMUS omitted; nevertheless these coins are from Shepton Mallet and furthermore they may complement the biased assemblage from the other sites where the history of the site has resulted in a pattern leaning towards the later third and fourth centuries. What follows, therefore, (TABLE 11) is a consolidated list of all the coins from the sites and collections under consideration in this report. It is these figures which will form the basis of subsequent discussion comparing Shepton Mallet with other sites.

Discussion

Compared with the overall pattern for Romano-British sites established by Reece (1972, esp. fig. 1) the Shepton Mallet list can be seen to fall within the ranges of values for each of the 21 periods. Nevertheless, it is clear that, though this is technically true, there are very low values for Periods 1 to 12, indeed Periods 1 to 3 each returns a zero. For Periods 13 to 21, therefore, the figures must be high, even though they lie within the acceptable ranges.

In order to examine this further, a technique comparing the rate at which the coins from individual sites accumulate through the 21 periods is employed. The method is taken from Reece (1995), where detailed exposition will be found, and I am most grateful to Richard Reece for allowing me to see the text of this paper in advance, for supplying graphs of comparable sites and for re-working the Shepton Mallet figures in a manner compatible with the sites in the paper (cf. Reece 1991). In his paper, Reece likens the essence of the technique to the rate at which the coins from a site would fill up a compartment of a coin cabinet; some sites starting quickly and slowing down, others starting slowly and speeding up, but all ultimately filling their allotted space.

TABLE 7 i SM90 CX: COINS BY EMPEROR ETC.

No. of coins by reign	Emperor	Denomination (up to the early third century)	Date	Catalogue number or other description
1	Vespasian	*as*	69–79	illegible
1	Salonina		260–68	RIC 5
1	Aurelian		270–75	RIC 248
1	Victorinus		268–70	RIC 116
1	Tetricus I		270–74	RIC 87
6	Barbarous Radiate		270–90	reverses: Altar, *Pax* (2), Pontifical Implements, *Salus*, uncertain
5	Constantine I		306–37	RIC VII London 93, Trier 475, LRBC I 60, 180a, uncertain
1	Crispus		317–26	RIC VII Aquileia 70
2	Constantine II		317–40	RIC VII London 259, LRBC I 187
4	Constans		33–50	LRBC I 138, 140, 160, as 162
4	Constantius II		323–61	LRBC I 57, 182, 435, LRBC II 30
1	Theodora		337–41	LRBC I as 105
1	Urbs Roma		330–35	LRBC I 200
1	Constantinopolis		330–35	LRBC I 1360/9
1	Populus Romanus		341–46	LRBC I 1067
24	House of Constantine		330–48	LRBC I copy as 51, as 87, copy as 87 (7), copy as 137, as 156, copy as 384
			348–64	LRBC II copy as 25 (12)
5	Valentinian I		364–75	LRBC II as 275 (3), as 279, as 479
5	Valens		364–78	LRBC II as 276, as 280, 368, 499, as 527
5	Gratian		367–83	LRBC II as 503 (2), 511, 529 (2)
3	House of Valentinian		364–78	LRBC II as 275 (2), as 280
1	Theodosius I		379–95	LRBC II as 162
1	House of Theodosius		388–402	LRBC II as 796
1	C2	*as*		illegible
3	C3–C4			illegible (3)
6	C4			illegible (3), illegible copy (3)
85				

TABLE 7 ii SM90 CX: COINS BY ISSUE PERIOD ETC. (NUMBERS AND PERMILLS)

75 coins identifiable to period

Period	Numbers (copies in brackets)	Permills
1	0	0
2	0	0
3	0	0
4	1	13
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	4	53
14	0 (6)	80
15	1	13
16	3	40
17	16 (10)	347
18	1 (12)	173
19	18	270
20	0	0
21	2	27

Clearly with such a small total number, the permills here should not be taken too seriously

TABLE 8 i SM90 U/S: COINS BY EMPEROR ETC.

No. of coins by reign	Emperor	Denomination (up to the early third century)	Date	Catalogue number or other description
2	Hadrian	*sestertius*	119–21	RIC 586a
		as	117–38	uncertain
1	Faustina II	*sestertius*	161+	RIC 1628
1	Gallienus		260–68	RIC as 45
1	Claudius II		268–70	RIC 109
2	Victorinus		268–70	RIC 55, uncertain
2	Tetricus I		270–74	RIC as 56, 80
1	Carausius		286–93	RIC 421
3	Regular Radiate		260–80	reverses: *Aeternitas, Pax, Providentia*
28	Barbarous Radiate		270–90	reverses: *Pax* (3), *Pietas, Salus* (2), *Spes* (7), uncertain (10), illegible (5)
7	Constantine I		306–37	RIC VII London 6, Trier as 209, 316, 429, Arles 101, LRBC I 48, 352
6	Constantine II		317–40	RIC VII Arles 191, Rome 156, LRBC I 49, 56, 63, as 186
5	Constans		333–50	LRBC I 133, 143a, 144, 149, 258
5	Constantius II	*siliqua*	323–61	RIC VIII Arles as 258, LRBC II as 25, 26, 253, illegible
1	Fausta		325–6	RIC VII Trier 466
3	Helena		337–41	LRBC I as 104 (3)
4	Urbs Roma		330–35	LRBC I as 51, 190, 195, 376
3	Constantinopolis		330–35	LRBC I as 52 (2), 206
69	House of Constantine		330–48	LRBC I copy as 48 (4), copy as 51 (2), copy as 52 (3) copy as 60, copy as 87 (16), as 137 (2), copy as 137 (7), copy as 141, copy as 145 (2), copy of 149, copy as 151, copy as 156, copy as 158 (2) copy as 161, copy as 165
			348–64	LRBC II copy as 25 (20)
3	Magnentius		350–53	LRBC II as 8, 60
			350–60	LRBC II copy as 5
3	Valentinian I		364–75	LRBC II as 275, as 279, as 281
9	Valens		364–78	LRBC II as 276, as 280 (2), as 282, 303, 480, 968, 985, 987
6	Gratian		367–83	LRBC II as 297, as 298, as 503, as 517 (2), 1062
16	House of Valentinian		364–78	LRBC II as 275 (7), as 276 (6), as 280, as 296 (2)
1	Arcadius		388–402	LRBC II as 798
7	House of Theodosius		388–402	LRBC II as 162 (5), as 389, as 546
1	C1–C2	*as*		illegible
22	C3–C4			illegible (16), illegible copy (6)
18	C4			illegible (13), illegible copy (4), brockage
230				

TABLE 8 ii SM90 U/S: COINS BY ISSUE PERIOD (NUMBERS AND PERMILLS)

188 coins identifiable to period (the relatively high proportion of unidentifiable coins is largely explained by coins recovered and 'treated' by metal detector users)

Period	Numbers (copies in brackets)	Permills
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	2	10
7	1	5
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	6 (3)	48
14	1 (28)	154
15	1	5
16	6	32
17	25 (46)	377
18	7 (20)	144
19	33	181
20	0	0
21	8	42

TABLE 9 i MBP: COINS BY EMPEROR ETC.

No. of coins by reign	Emperor	Denomination (up to the early third century)	Date	Catalogue number or other description
1	Marcus Aurelius	*as*	154–55	RIC (Ant. Pius) 1324a
1	Commodus	*as*	180–92	uncertain
1	Septimius Severus	*sestertius*	195	RIC 693
2	Severus Alexander	*denarius*	227	RIC 67
		denarius	222–35	RIC as 290 plated
1	Gallienus		260–68	RIC 159
1	Victorinus		268–70	RIC as 112
2	Tetricus I		270–74	RIC 87, uncertain
2	Regular Radiate		260–80	reverse: *Salus* (2)
22	Barbarous Radiate		270–90	reverse: Altar (2), *Pax* (3), *Salus* (2), *Spes* (5), uncertain (4), illegible (6)
3	Constantine I		306–37	RIC VII as London 157, Trier 369, LRBC I 367
1	Constantine II		317–40	LRBC I as 532
3	Constans		335–50	LRBC I 138, 148, LRBC II 35
2	Constantius II		323–61	LRBC I 89, LRBC II 455
1	Theodora		337–41	LRBC I 120
2	Urbs Roma		330–35	LRBC I 65, 200
3	Constantinopolis		330–35	LRBC I 52, as 52, 185
57	House of Constantine		330–48	LRBC I as 48, copy as 48, copy as 51 (2), copy as 52 (4), as 87, copy as 87 (15), as 137, copy as 137, copy as 139, copy as 158 (2), copy of 184, copy of 226, as 273
2	Magnentius		350–53	LRBC II as 5
			350–60	LRBC II copy as 8
8	Valentinian I		364–75	LRBC II as 96, as 279, as 290, as 479 (2), as 481, as 512, as 977
13	Valens		364–78	LRBC II 110, as 275, as 276 (2), as 280, as 282 (2), as 303, as 493, 502, 516 (2), as 526
7	Gratian		367–83	LRBC II as 297, as 503 (4), as 517 (2)
22	House of Valentinian		364–78	LRBC II as 275 (8), as 276 (6), as 279 (2), as 280 (2), as 477, as 704, as 971/2, as 967
3	House of Theodosius		388–402	LRBC II as 162, as 796 (2)
2	C1–C2	*as*		illegible
2	C2	*sestertius*		illegible
		as		illegible
1	C3	*denarius*		illegible plated
6	C3–C4			illegible (2), illegible copy (4)
4	C4			illegible (2), illegible copy (2)
175				

TABLE 9 ii MBP: COINS BY ISSUE PERIOD (NUMBERS AND PERMILLS)

161 coins identifiable to period

Period	Numbers (copies in brackets)	Permills
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	1	6
8	0	0
9	1	6
10	1	6
11	1 (1)	12
12	0	0
13	4 (2)	37
14	0 (22)	137
15	0	0
16	2	12
17	15 (28)	267
18	4 (25)	168
19	50	317
20	0	0
21	3	19

TABLE 10 i TMUS: COINS BY EMPEROR ETC.

341 coins, descriptions adapted from identifications by Mr Stephen Minnitt plus fifteen identified by author

No. of coins by reign	Emperor	Denomination (up to the early third century)	Date	Catalogue number or other description
1	Vespasian	*dupondius*	69–79	illegible
1	Domitian	*sestertius*	81–96	illegible
1	Trajan	*dupondius*	103–11	RIC 494
2	Hadrian	*denarius*	134–38	RIC 264d
		sestertius	118	RIC 551a
1	Antoninus Pius	*dupondius*	153–54	RIC 920
2	Marcus Aurelius	*sestertius*	170–71	RIC 1001
			161–80	illegible
1	Lucilla	*sestertius*	164–69	RIC 1736/8
1	Faustina II	*sestertius*	161+	RIC 1706
3	Commodus	*denarius*	190	RIC 212
		sestertius	177–92	illegible (2)
1	Clodius Albinus	*denarius*	193	RIC 2
2	Septimius Severus	*denarius*	194	RIC 37
			197–98	RIC 117
1	Julia Domna	*denarius*	196–211	RIC 548
2	Geta	*denarius*	200–02	RIC 23, plated copy
1	Elagabalus	*denarius*	218–19	RIC 166
1	Julia Paula	*denarius*	219–20	illegible
5	Severus Alexander	*denarius*	223	RIC 32
			227	RIC 61
			229	RIC 91
			228–31	RIC 205
			222–35	illegible copy
1	Saloninus		255–60	RIC 9
7	Gallienus		260–68	RIC 159, as 181 (3), 236, 287, illegible
5	Claudius II		268–70	RIC as 34, as 98, as 162, as 259, illegible
1	Quintillus		270	RIC 25
1	Probus		276–82	RIC 38
3	Postumus		260–68	RIC 67, 80, 89
3	Victorinus		268–70	RIC 57, 118 (2)
4	Tetricus I		270–74	RIC 80, 88, as100
1	Tetricus II		270–74	illegible
3	Carausius		286–93	illegible (3)
4	Allectus		293–96	RIC 22, 36, 55, 128
29	Regular Radiate		260–80	reverse: *Hilaritas, Laetitia, Pax,* illegible (26)
24	Barbarous Radiate		270–90	reverse: Eagle, *Invictus,* Pontifical Implements, *Victoria* (2), *Virtus,* illegible (18)
2	Diocletian		284–305	RIC VI Lyon 27, 175a
4	Maximian		286–305	RIC VI London 15, 21, Trier 170b, Ticinum 29b
3	Maximinus II		305–13	RIC VI London as 55, 209b, Trier 851a
16	Constantine I		306–37	RIC VI London 127, 280, Lyon 310, RIC VII London 157, as London 199, Trier 135, 216, 221, 342, 368, LRBC I as 48, 92, 186, 362
4	Crispus		317–26	RIC VII Trier 372, 431, Lyon 133, uncertain
2	Constantine II		317–40	RIC VII London 287, LRBC I 198
8	Constans		333–50	LRBC I 95, as 137 (2), as 400 (2), as 444, LRBC II as 35 (2)
28	Constantius II		323–61	LRBC I 64, 74, as 75 (5), as 90 (5), as 138 (7), 181, 188, 744, LRBC II as 25 (5), as 46
2	Helena		37–41	LRBC I as 104 (2)
2	Urbs Roma		330–35	LRBC I as 51, 190
2	Constantinopolis		330–35	LRBC I 59, 71
1	Julian	*siliqua*	360–63	RIC VIII Arles 309
36	House of Constantine		330–48	LRBC I copy as 51 (6), copy as 52 (9), copy as 87 (11), copy as 137 (3)
			348–64	LRBC II copy as 25 (7)
5	Magnentius		350–53	LRBC II 11, 23, 112
			350–60	LRBC II copy as 5, copy as 115
1	Decentius		350–60	LRBC II copy as 122
3	Valentinian I		364–75	LRBC II as 275, as 276, 1021
12	Valens	*siliqua*	364–78	RIC IX Lyon 6f, LRBC II as 275, as 276 (7), 340, 521, 1014
12	Gratian		367–75	LRBC II as 150, as 297 (2), as 299 (6), as 503, 523a, 1346
20	House of Valentinian		364–78	LRBC II as 275 (6), as 276 (6), illegible (8)
2	House of Theodosius		388–402	LRBC II as 796, illegible
2	C1–C2	*sestertius*		illegible
		as		illegible
52	C3–C4			illegible
24	C4			illegible
355				

TABLE 10 ii TMUS: COINS BY ISSUE PERIOD AND PERMILLS

277 coins identifiable to period

Period	Numbers (copies in brackets)	Permills
1	0	0
2	0	0
3	0	0
4	2	7
5	1	3.5
6	2	7
7	1	3.5
8	4	14
9	3	10.5
10	7 (1)	28
11	4 (1)	18
12	0	0
13	24 (29)	191
14	8 (24)	115
15	12	43
16	12	43
17	38 (29)	241
18	13 (10)	86
19	46	169
20	1	3.5
21	2	7

TABLE 11 i SHEPTON MALLET: CONSOLIDATED COIN LIST – COINS BY EMPEROR ETC.

No. of coins by reign	Emperor	Denomination (up to the early third century)	Date	Catalogue number or other description
2	Vespasian	*dupondius*	69–79	illegible
		as		illegible
2	Domitian	*sestertius*	81–96	illegible
		as		illegible
1	Trajan	*dupondius*	98–117	RIC 494
4	Hadrian	*denarius*	117–38	RIC 264d
		sestertius		RIC 551a, 586a
		as		uncertain
2	Antoninus Pius	*sestertius*	138–61	RIC 767a
		dupondius		RIC 920
3	Marcus Aurelius	*sestertius*	161–80	RIC 1001, illegible
		as		RIC (Ant. Pius) 1324a
1	Lucilla	*sestertius*	164–69	RIC 1736/8
3	Faustina II	*sestertius*	161+	RIC 1628, 1706, uncertain
3	Commodus	*denarius*	180–92	RIC 212
		sestertius		illegible (2)
1	Clodius Albinus	*denarius*	193–97	RIC 2
3	Septimius Severus	*denarius*	193–211	RIC 37, 117
		sestertius		RIC 693
1	Julia Domna	*denarius*	196–211	RIC 548
2	Caracalla	*denarius*	196–211	RIC 6 (2)
2	Geta	*denarius*	198–211	RIC 23 plated copy
1	Elagabalus	*denarius*	218–22	RIC 166
1	Julia Paula	*denarius*	219–20	illegible
8	Severus Alexander	*denarius*	222–35	RIC 32, 61, 67, 91, 205, 264, as 290 plated copy, illegible copy
1	Gordian III	*antoninianus*	238–44	RIC 95
1	Philip I	*antoninianus*	244–49	RIC 27b
2	Salonina		253–60	RIC 5, 35
1	Saloninus		255–60	RIC 9
15	Gallienus		260–68	RIC as 45, 159 (2), as 180, as 181 (3), 182, 193, as 193, 236, as 252, 287, uncertain, illegible
12	Claudius II		268–70	RIC as 14, as 34, 38, as 98, as 162, 168, 190, as 259, as 265, 266, uncertain, illegible
1	Quintillus		270	RIC 25
1	Aurelian		270–75	RIC 248
3	Tacitus		275–76	RIC 34, 35, 89
1	Probus		276–82	RIC 38
1	Numerian		283–84	RIC 416
1	Carus		283–85	RIC 47
1	Carinus		283–85	RIC 152
3	Postumus		260–68	RIC 67, 80, 89
9	Victorinus		268–70	RIC as 55, 56, 57, as 100, as 112 (2), 116, 118 (2)

TABLE 11 i (CONT) SHEPTON MALLET: CONSOLIDATED COIN LIST – COINS BY EMPEROR ETC.

No. of coins by reign	Emperor	Denomination (up to the early third century)	Date	Catalogue number or other description
14	Tetricus I		270–74	RIC 77, as 79, 80 (2), 87 (2), 88 (2), as 100, 130 (3), uncertain (2)
4	Tetricus II		270–74	RIC 241, as 254, as 270, illegible
7	Carausius		286–93	RIC as 98, as 718, uncertain, illegible (4)
5	Allectus		293–96	RIC 22, 36, 55 (2), 128
47	Regular Radiate		260–80	reverse: *Hilaritas, Laetitia* (2), *Libertas, Pax* (4), *Salus* (4), *Spes, Victoria*, uncertain (3), illegible 30
160	Barbarous Radiate		270–90	reverse: *Aequitas*, Altar (7), Eagle, *Invictus, Laetitia, Pax* (25), Phoenix, *Pietas*, Pontifical Implements (4), *Providentia* (2), *Salus* (11), *Sol, Spes* (19), *Virtus, Victoria* (2), uncertain (36), illegible (46)
2	Diocletian		284–305	RIC VI Lyon 27, 175a
4	Maximian		286–305	RIC VI London 15, 21, Trier 170b, Ticinum 29b
3	Maximinus II		305–13	RIC VI London as 55, 209b, Trier 851a
52	Constantine I		306–37	RIC VI London 127, 280, Trier 897, Lyon 310, RIC VII London 6, as 6 (2), 89, 93, 157, 290, as London 157, 199, Trier 135, 200, 209, as 209, 216, 221, 305, 316, 342, 368, 369, 429 (2), 475, Arles, 101, 252, Rome156, LRBC I 48 (2), as 48, 48a (2), as 48a, 60, 62 (2), 67, 72, 73, 92, 180a, 186, 351, 352, 362, 367, as 466, uncertain
9	Crispus		317–26	RIC VII London 291, Trier as 341, 372, 431, 451, Lyon 133 (2), Aquileia 70, uncertain
19	Constantine II		317–40	RIC VII London 259, 287, as 292, Trier 433, 463, Lyon 140, Arles 191, Rome 156, LRBC I 49, as 49, 56, 63, 81, as 98, as 186, 198, 241, 369, as 532
38	Constans		333–50	LRBC I 90 (2), 95, as 108, 110, 133, as 137 (3), 138 (2), 139, 140 (4), 143a, 144, 148, 149 (3), 150, 155, 158, as 158, 160, 161, as 162, 163, 236, 258, as 400 (2), as 444, LRBC II 35 (3)
49	Constantius II	*siliqua*	323–61	RIC VII Trier 478 (2), RIC VIII Arles as 258, LRBC I 57, 64, 74, as 75 (5), as 89, as 90 (5), as 109, 116, 130, as 138 (7), 145, 181, 182, 188, 189, 407, 435, 744, LRBC II as 25 (6), 26, 28, 30, as 40, as 46, 253, 455, illegible
1	Fausta		325–6	RIC VII Trier 466
12	Helena		337–41	LRBC I as 104 (8), 112 (2), as 112, 119
9	Theodora		337–41	LRBC I as 105 (5), 113, as 113, 120, 129
1	Constantius Gallus		353–54	LRBC II 27
2	Julian	*siliqua*	355–63	RIC VIII Arles 309, LRBC II as 258
21	Urbs Roma		330–35	LRBC I 51 (3), as 51 (4), 65 (3), 70 (2), 85, as 164, 190 (2), 195, 200 (2), 376, 556
18	Constantinopolis		330–35	LRBC I 52, as 52 (9), 59 (2), 71 (2), 185, 206, 356, 1360/9
1	Populus Romanus		341–46	LRBC I 1067
345	House of Constantine		330–48	LRBC I as 48 (2), copy as 48 (20), copy as 51 (12), copy as 52 (26), copy as 60, as 67, as 87 (7), copy as 87 (69), as 98, copy as 104, as 137 (4), copy as 137 (17), as 139 (4), copy as 139, copy as 141, as 143, as 145 (4), copy as 145 (2), copy of 149, copy as 151, as 156, as 158, copy as 158 (4), as 161, copy as 161, copy as 165, copy as 180, copy of 184, copy of 226, as 273, copy as 384, as 416, copy of 565
			348–64	LRBC II copy as 5 (2), as 25 (2), copy as 25 (114), as 28
11	Magnentius		350–53	LRBC II as 5 (2), as 8, 11, 23, 60, 62, 112
			350–60	LRBC II copy as 5 (2), copy as 115
2	Decentius		350–53	LRBC II 222
			350–60	LRBC II copy as 122
1	Jovian	*siliqua*	363	RIC VIII as Arles 329
31	Valentinian I		364–75	LRBC II as 96, as 275 (8), as 279 (6), as 281, as 290, 477, 479, as 479 (3), as 481, as 512, as 977, 998, 1011, 1021, 1026, as 1380, 1430
54	Valens	*siliqua*	364–78	RIC IX Lyon 6f, LRBC II as 48, 110, as 275 (2), as 276 (17), as 280 (6), as 282 (3), 303, as 303, 340, 368, as 480 (2), as 493, 499, 502, 516 (3), 521, as 526, 527, as 527, 968, as 968, 985, 987, as 1000, 1014, as 1300
45	Gratian		367–83	LRBC II as 133, as 150, as 297 (6), as 298, as 299 (7), 339, 371, 503, as 503 (9), 511 (2), as 517 (7), 523a, 529 (5), 1026, 1346

TABLE 11 i (CONT) SHEPTON MALLET: CONSOLIDATED COIN LIST – COINS BY EMPEROR ETC.

No. of coins by reign	Emperor	Denomination (up to the early third century)	Date	Catalogue number or other description
1	Valentinian II		383–87	LRBC II 785/6
99	House of Valentinian		364–78	LRBC II as 275 (35), as 276 (36), as 278, as 279 (2), as 280 (6), as 295 (2), as 296 (2), as 477 (2), as 500, as 704, as 708, as 971/2, as 967, illegible
1	Theodosius I		379–95	LRBC II as 162
4	Arcadius		383–95	LRBC II as 162, as 164, 167, as 798
28	House of Theodosius		388–402	LRBC II as 162 (21), as 389, as 546, as 796 (4), illegible
7	C1–C2	*as*		illegible (7)
2	C2	*sestertius*		illegible
		as		illegible
2	C3	*denarius*		illegible plated copy (2)
113	C3–C4			illegible/uncertain (94), illegible copy (19)
85	C4			illegible/uncertain (72), illegible copy (12), illegible brockage
2				illegible fragments

TABLE 11 ii SHEPTON MALLET: CONSOLIDATED COIN LIST – COINS BY ISSUE PERIOD AND PERMILLS

1193 coins identified to period

Period	Numbers (copies in brackets)	Permills
1	0	0
2	0	0
3	0	0
4	4	3.3
5	1	0.8
6	4	3.3
7	4	3.3
8	5	4.1
9	4	3.3
10	11	9.2
11	7	5.8
12	2	1.6
13	62 (51)	94.7
14	20 (160)	150.8
15	18	15.0
16	44	36.8
17	187 (164)	294.2
18	34 (147)	151.7
19	226	189.4
20	4	3.3
21	33	27.6

TABLE 12 consists of two tables, the first showing the raw figures per period of identifiable coins for each of the Shepton Mallet groups, the second, these figures converted into permills. TABLE 13 consists of two further tables, the first showing the cumulative permills for each group (essentially the rate at which the hypothetical drawer is filling up), the second subtracts the Shepton Mallet figures from those for the mean for British sites to demonstrate how the Shepton Mallet groups deviate from the mean.

On FIG. 57 the behaviour of the means for British sites and of the various Shepton Mallet groups are compared graphically; the *x*-axis represents the British mean, the other lines the Shepton Mallet groups. With the exception of the TMUS collection, all the groups behave in much the same way, showing a markedly slower rate of accumulation than the mean through to Period 15 (A.D. 294–317), from which point there is a pronounced recovery through to Period 21. Thus Shepton Mallet generally has a marked predominance of coins of the fourth century. The exception to this pattern is TMUS, which declines less steeply and recovers earlier, in a manner for which there is no good parallel from other British sites

TABLE 12 COINS: ALL GROUPS BY PERIOD : NUMBERS (LEFT), PERMILLS (RIGHT)

	Numbers						Permills					
Period	EDM	CX	U/S	MBP	TMUS	Total	EDM	CX	U.S	MBP	TMUS	Total
1	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
2	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
3	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
4	1	1	0	0	2	4	2.00	13.51	0.00	0.00	7.30	3.35
5	0	0	0	0	1	1	0.00	0.00	0.00	0.00	3.65	0.84
6	0	0	2	0	2	4	0.00	0.00	10.70	0.00	7.30	3.35
7	1	0	1	1	1	4	2.00	0.00	5.35	6.25	3.65	3.35
8	1	0	0	0	4	5	2.00	0.00	0.00	0.00	14.60	4.18
9	0	0	0	1	3	4	0.00	0.00	0.00	6.25	10.95	3.35
10	2	0	0	1	8	11	4.00	0.00	0.00	6.25	29.20	9.21
11	0	0	0	2	5	7	0.00	0.00	0.00	12.50	18.25	5.86
12	3	0	0	0	0	3	6.00	0.00	0.00	0.00	0.00	2.51
13	40	4	9	6	53	112	80.00	54.05	48.13	37.50	193.43	93.72
14	91	6	29	22	32	180	182.00	81.08	155.08	137.50	116.79	150.63
15	4	1	1	0	12	18	8.00	13.51	5.35	0.00	43.80	15.06
16	21	3	6	2	12	44	42.00	40.54	32.09	12.50	43.80	36.82
17	148	26	71	43	67	355	296.00	351.35	379.68	268.75	244.53	297.07
18	89	13	27	29	23	181	178.00	175.68	144.39	181.25	83.94	151.46
19	78	18	33	50	46	225	156.00	243.24	176.47	312.50	167.88	188.28
20	3	0	0	0	1	4	6.00	0.00	0.00	0.00	3.65	3.35
21	18	2	8	3	2	33	36.00	27.03	42.78	18.75	7.30	27.62
	500	74	187	160	274	1195						

TABLE 13 COINS: ALL GROUPS BY PERIOD: CUMULATIVE PERCENTAGES (LEFT), CUMULATIVE PERCENTAGES SUBTRACTED FROM BRITISH MEAN (RIGHT)

Cumulative percentages								Cumulative % minus average					
Period	All	EDM	CX	U/S	MBP	TMUS	Total	EDM	CX	U.S	MBP	TMUS	Total
1	6.47	0.00	0.00	0.00	0.00	0.00	0.00	-6.47	-6.47	-6.47	-6.47	-6.47	-6.47
2	18.20	0.00	0.00	0.00	0.00	0.00	0.00	-18.20	-18.20	-18.20	-18.20	-18.20	-18.20
3	24.10	0.00	0.00	0.00	0.00	0.00	0.00	-24.10	-24.10	-24.10	-24.10	-24.10	-24.10
4	54.95	2.00	13.51	0.00	0.00	7.30	3.35	-52.95	-41.44	-54.95	-54.95	-47.65	-51.60
5	74.84	2.00	13.51	0.00	0.00	10.95	4.18	-72.84	-61.33	-74.84	-74.84	-63.89	-70.66
6	90.64	2.00	13.51	10.70	0.00	18.25	7.53	-88.64	-77.13	-79.94	-90.64	-72.39	-83.11
7	109.30	4.00	13.51	16.04	6.25	21.90	10.88	-105.30	-95.79	-93.26	-103.05	-87.40	-98.42
8	120.83	6.00	13.51	16.04	6.25	36.50	15.06	-114.83	-107.32	-104.79	-114.58	-84.33	-105.77
9	125.49	6.00	13.51	16.04	12.50	47.45	18.41	-119.49	-111.98	-109.45	-112.99	-78.04	-107.08
10	140.66	10.00	13.51	16.04	18.75	76.64	27.62	-130.66	-127.15	-124.62	-121.91	-64.02	-113.04
11	147.95	10.00	13.51	16.04	31.25	94.89	33.47	-137.95	-134.44	-131.91	-116.70	-53.06	-114.48
12	156.03	16.00	13.51	16.04	31.25	94.89	35.98	-140.03	-142.52	-139.99	-124.78	-61.14	-120.05
13	300.33	96.00	67.57	64.17	68.75	288.32	129.71	-204.33	-232.76	-236.16	-231.58	-12.01	-170.62
14	421.57	278.00	148.65	219.25	206.25	405.11	280.33	-143.57	-272.92	-202.32	-215.32	-16.46	-141.24
15	439.06	286.00	162.16	224.60	206.25	448.91	295.40	-153.06	-276.90	-214.46	-232,81	9.85	-143.66
16	483.19	328.00	202.70	256.68	218.75	492.70	332.22	-155.19	-280.49	-226.51	-264.44	9.51	-150.97
17	728.73	624.00	554.05	636.36	487.50	737.23	629.29	-104.73	-174.68	-92.37	-241.23	8.50	-99.44
18	826.95	802.00	729.73	780.75	668.75	821.17	780.75	-24.95	-97.22	-46.20	-158.20	-5.78	-46.20
19	944.95	958.00	972.97	957.22	981.25	989.05	969.04	13.05	28.02	12.27	36.30	44.10	24.09
20	949.75	964.00	972.97	957.22	981.25	992.07	972.38	14.25	23.22	7.47	31.50	42.95	22.63
21	1000.00	1000.00	1000.00	1000.00	1000.000	1000.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00

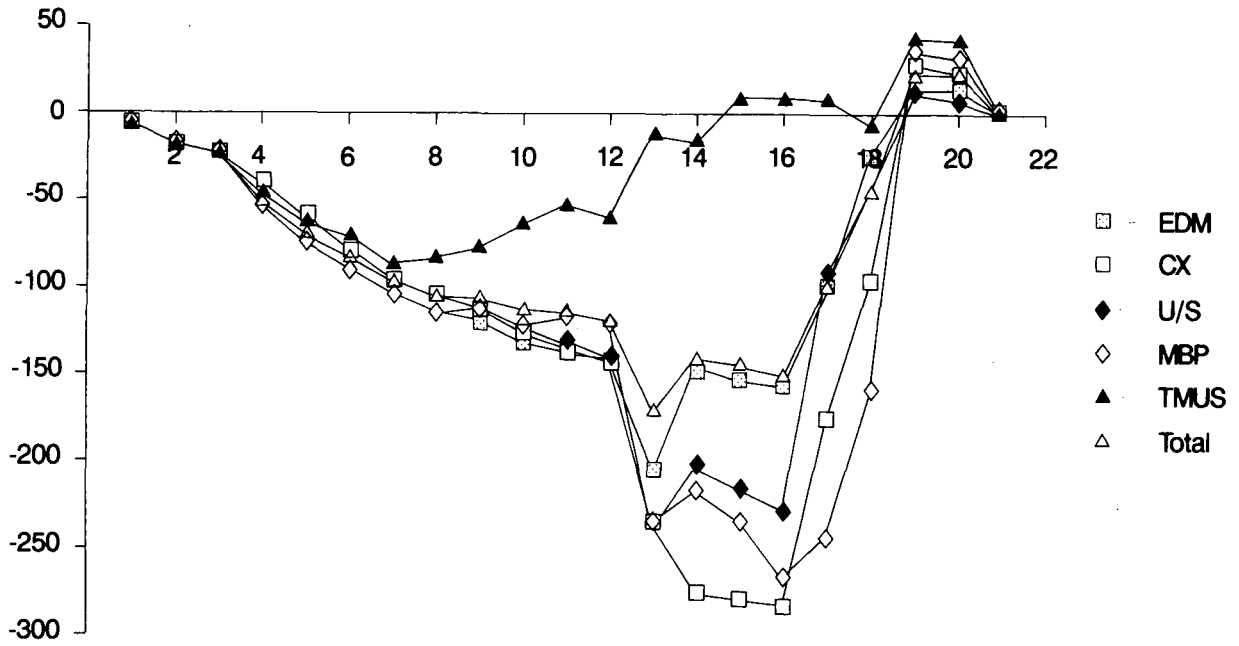


FIG. 57 Coins: all groups; deviation from British mean

(Richard Reece pers. comm.). This peculiar behaviour must be accounted for by the mechanisms of assembly of the Taunton Museum collection as outlined above.

A further step is to isolate the other British sites and coin groups which share the characteristics of the Shepton Mallet groups (less TMUS). FIGURES 58 and 59 show a selection of such groups. A feature which unites the majority of these sites (Atworth, Gatcombe, Lydney, Portchester and Verulamium Theatre) is that they are all sites where the deposition of coins began later in the Roman period, either because the sites only existed in that period (e.g. Gatcombe, Portchester) or because coin-use or coin-loss only began at them in the later Roman period (e.g. Atworth, Verulamium Theatre). The parallels with Shepton Mallet are clear, the 1990 excavations took place in an area of the settlement which was probably only developed in the later Roman period, moreover the excavations concentrated on the upper, later, surviving deposits. FIGURE 60 shows further Romano-British sites with a similar coin profile, but note that the *y*-axis is on a different scale to FIGS 58 and 59. For many of them, such as Barnsley Park, Butt Road, Colchester, Chedworth, Chilgrove and Kingscote, similar observations to those above on the causes of this pattern hold good. Thus, though Shepton Mallet deviates significantly from the British mean, it does so in a manner consonant with a number of other sites and for reasons which are comparable with the reasons for the deviation of those sites also.

Another comparison which can be made between the Shepton Mallet profile and those for other sites is a regional one. Reece (1991, 102–3, table VIII) has demonstrated that it is possible to discriminate between sites by using the ratio of the radiate coins of Periods 13 and 14 (his Phase B) to those of Periods 17 to 21, A.D. 330–402 (his Phase D). On this calculation Shepton Mallet comes out considerably above-average at 2.713. One of its neighbours in this league table is Camerton, and Camerton forms one of a small group of 'small town'/rural sites in the South West: Camerton, Catsgore, Kenchester, Kingscote FW (field walking), which all have above-average B/D ratios. This strengthens the case that there is a regional trend visible here, though at present we cannot interpret it. One must beware though of the point noted more than once above, that the nature of the Shepton Mallet site and of its excavation would over-emphasise the Phase D coins and their recovery.

The coins from Shepton Mallet taken as a group therefore reflect the history of this part of

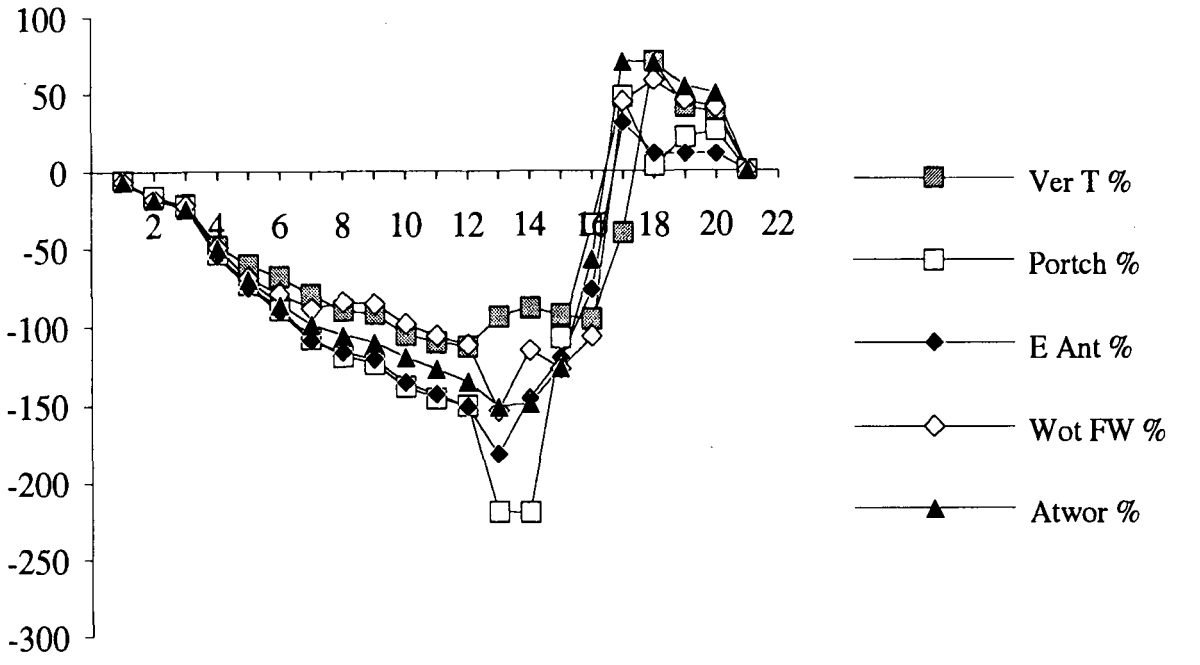


FIG. 58 Coins: sites with similar deviation from British mean to Shepton Mallet (Reece 1995, fig. 21)

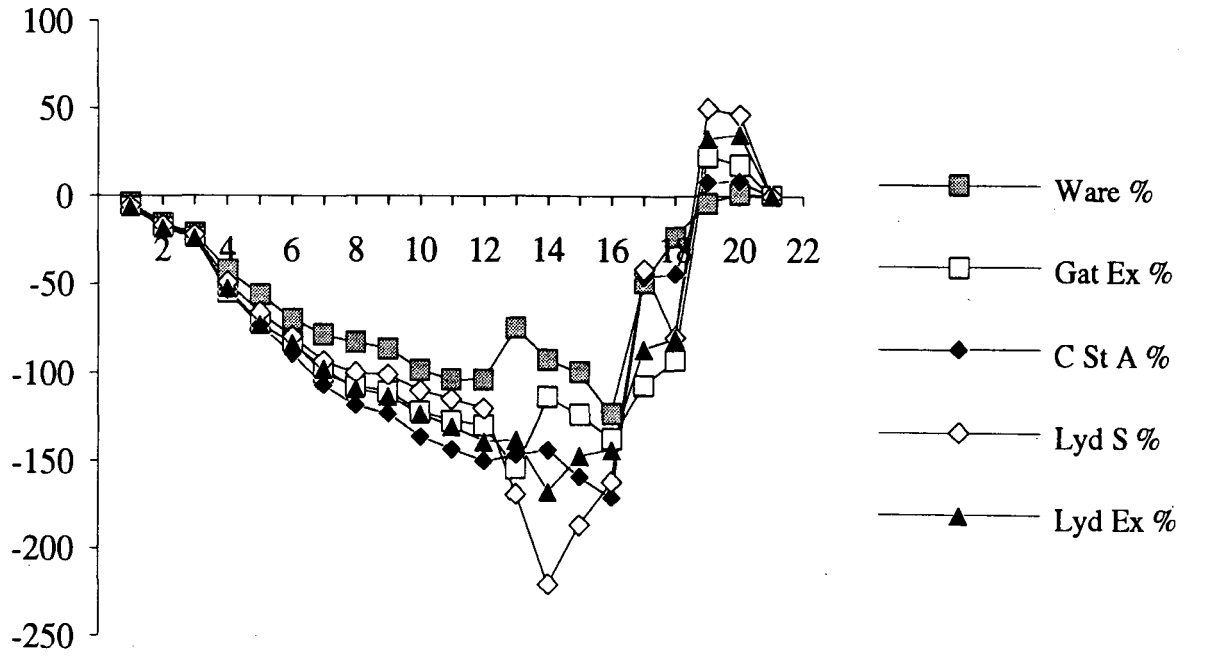


FIG. 59 Coins: sites with similar deviation from British mean to Shepton Mallet (Reece 1995, fig. 22)

the site and the circumstances of excavation. They are comparable with a number of other sites which either did not come into being until the later Roman period or where coin-deposition was a later Roman phenomenon. They may also reflect a regional trend. The particular contribution that this assemblage will be able to make will be through the detailed analysis of patterns of deposition which may throw light on patterns of use/loss/non-recovery of coins.

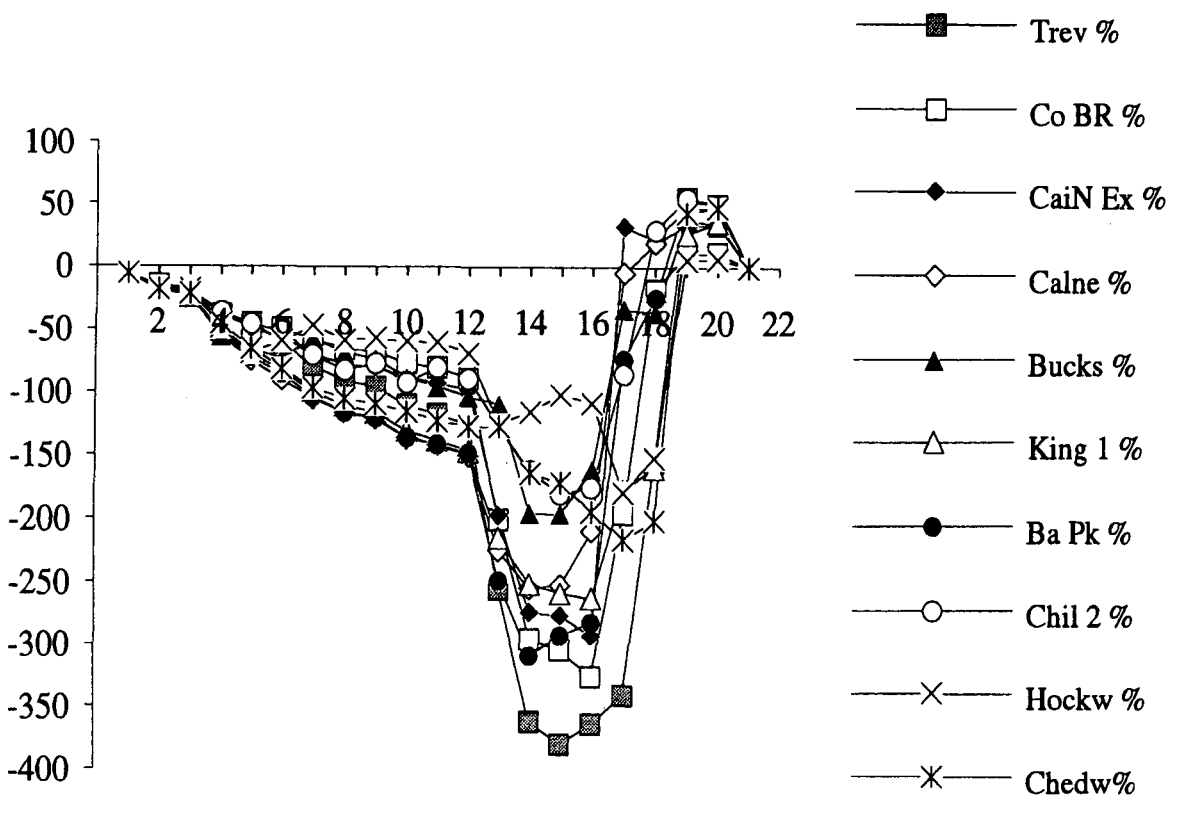


FIG. 60 Coins: sites with similar deviation from British mean to Shepton Mallet (Reece 1995, fig. 20)

3.6: BUILDING MATERIALS, FIXTURES AND FITTINGS

STONE BUILDING MATERIALS

by Fiona Roe

Fosse Lane stands on the Lower (Blue) Lias, and extensive use was made of it for building and foundation material. This probably came from a quarry nearby, and, indeed, evidence for Roman quarrying was recorded on the Persimmon Homes development at the northern margin of the settlement (FIG. 3, no. 5; Hollinrake and Hollinrake 1992). Doulting, Downside and Ham Hill stone were used for the details.

There are virtually no ceramic roof tiles from Fosse Lane, no doubt because local stone roofing materials were readily available. Blue Lias was used for hexagonal tiles and there are 51 fragments (from 28 contexts), some with holes that have survived, including a piece with the nail still intact (C1125, Area III). Finds were widespread over the site (Buildings I, VII and IX, Areas II and III), and phasing indicates that the tiles were in use from Periods 2–5. Lias cannot, however, have been a very durable roofing material, and the preferred stone, brought in from further away, was Pennant Sandstone. There are 77 fragments (from 74 contexts), the main occurrence of finds being in Building I (with others from Buildings VII, IX and Areas III, V and VI). These tiles, of similar hexagonal form to those of Lias, could have been transported from around Temple Cloud, North Somerset, probably a cumbersome journey by ox-cart of eight or nine miles. Again there are some well-preserved pieces, including two complete hexagonal tiles (FIG. 64.7 and 8) reused as lining around a coffin in a grave (F123) in the Area III cemetery, and another large fragment with the remains of a nail

(C1579) from beneath Building VIII in Period 3, as well as a number of fragments from Period 5 contexts. Only one small fragment, from Area III (F30, C1023, Period 5), is identified as actual slate, probably of south-western origin.

Lias and Ham Hill stone were used in Romano-British buildings at Catsgore (Leech 1982a, 131; Ellis 1984, 5) and Ilchester (Leach 1982, 30). Roofing tiles of Lias were used widely in Somerset, including samples from the same two sites (Ellis 1984, 5–6; Leach 1982, 48). Pennant sandstone roofing tiles were widely used near the outcrops in North Somerset (Avon), as at Camerton (Wedlake 1958, 56), but they were also transported as far as Pagan's Hill (Rahtz 1951, 119), Ilchester (Leach 1982, 48), and Bradley Hill (Leech 1981, 248). Devon slate has also been noted from other sites in the region (J. Williams 1971, 107).

Other pieces of building stone at Fosse Lane include part of a possible column base from Building I (F402, C1404) made from a local sandy limestone, the Downside stone. This occurs in and around Shepton Mallet (Green and Welch 1965, 91), and was also used for the coffin described below (Roe, 3.9). Part of a circular slab of Lias (1570, Area IV) is thicker than the roofing tiles, and may have been a paving stone, since others were certainly present *in situ* on the site. Lias slabs were also used for paving at Ilchester (Leach 1982, 26, 30). There are additionally some fragments of Ham stone from Building I (F424; 4988) which was probably used for architectural details. Tufa, also from Building I (F425; 4989), could have been collected near Shepton Mallet itself (Duff *et al.* 1985, 93). The pieces from Fosse Lane are now fragmentary, but dressed blocks were found at Pagan's Hill (Rahtz 1951, 119), and it could have been used for vaulted roofs.

Some of the building materials may have been incorporated into mortar and plaster. Samples of Lias roofing tile were analysed (Morgan, below), while the Downside stone would also have been a suitable material.

FIRED CLAY, BRICK AND TILE

by Lynne Bevan

A small and widely distributed collection of fired clay material can be sub-divided into two main categories; fired clay daub and other miscellaneous material (271 pieces weighing 3277 g), and 95 fragments of brick and tile (weight 3455 g). None is illustrated.

The first group is almost exclusively daub, sometimes with wattle impressions, the bulk of it occurring as relatively small, weathered fragments, both from excavated contexts and as plotted finds. It was widely distributed across the site, and no apparently significant concentrations were observed. Most of the daub must be residual, possibly deriving from structural remains of the earlier periods or from off the site. From its recorded occurrence it cannot be cited as certain evidence for a wattle-and-daub element in any of the structures exposed or sampled by these excavations, although such a possibility can well be imagined. A few other fragments of fired clay are identified variously as hearth lining (C1033, Area III; 356, Area V; and 4043, Area VI), and what may be waste from grey-ware pottery manufacture (716, Area V; 5156 and 5187, Area IX).

All of the brick and tile had survived only as small and well-weathered fragments, and included a few recognisable pieces of *imbrex* and *tegula* roof tile, and at least one box-flue tile with curvilinear keying and traces of mortar (C1413, Building I). The oxidised fabrics represented were coarse, sandy, and often vesicular, with occasional quartz or grog inclusions. Once again, this material was widely distributed across the site, and no particular concentrations or significant groups are apparent. Judging from its condition and occurrence, the brick and tile on this area of the settlement is all residual and could derive from an off-site locality — possibly structures closer to the Fosse Way road frontage.

MORTAR AND PLASTER ANALYSIS

by Graham Morgan

Descriptions

Many excavators' descriptions are incorrect as regards mortar or plaster. In general mortar is a bonding material whilst plaster is a finishing coat, usually being flat and possibly painted. They may otherwise be very similar in composition although mortar may be coarser. All of the mortar and plaster samples from Fosse Lane were lime-based. They were analysed using physical and chemical methods to ascertain the nature of the aggregate and the lime content. The carbonate content was measured on micro samples (= 0.4 g) whilst the 'lime' content (the acid-soluble component) was measured on larger samples. None of the samples produced sufficient material for the 100 g minimum weight recommended for the standard methods of analysis. All results must therefore be considered to be tentative (TABLE 14). The results are compared with a national analytical survey of Romano-British mortars and plasters (Morgan 1992).

The majority of specimens were from Area/Building IX and evidently components of that building. A smaller group of samples from Areas I and II most probably derives from Building I. A few samples identified only as weathered limestone are not listed, and no specimens are illustrated.

'Mortars'

C6000 (Building IX, Room F, north wall, F600). A pale-yellow calcareous ?mortar with straw traces. This may be calcareous daub.

C6021 (Building IX, Room F, F622). As C6000 with traces of pink burnt clay and limestone with some oolites.

C6034 (Building IX, Room F, drain F615). A pale-buff sand-and-gravel mortar with traces of burnt ?clay.

416, Area II (073 071). Pink burnt clay with straw impressions, ?daub.

3941, Area II, C1100, Grave F106. Buff to pink, sand-and-gravel mortar with red to black brick or tile and a flat surface, possibly plaster, 43 mm thick.

4683, Area II (083 089). Pink brick or tile mortar, *opus signinum,* 38 mm thick.

F302, Building VII, south wall. Mud with yellow ?mortar traces, mica and limestone. This is probably decayed limestone and mud.

'Plasters'

5028, Area IX (067 189). Painted, off-white sandy plaster. Several different painted types were present in this collection:

i) A black line, 5 mm wide, on green on burnished red, 0.1 mm thick, on white *intonaco,* 0.25 mm, on coarse, sandy plaster, 11 mm thick (analysis A).

ii) Light green on pale green to white on burnished red, 0.05 mm, on white *intonaco,* 0.5 mm, on sandy plaster, 4+ mm thick (not analysed).

iii) Yellow-buff, 0.05 mm, on white *intonaco,* 0.1–0.2 mm, on sandy plaster with calcite traces, 12 mm thick (not analysed).

iv) Dark red to brown, <0.05 mm, on white *intonaco,* 0.5 mm, on coarse, sandy plaster with chalk or lime lumps, 10 mm thick (not analysed).

v) Pink stripe, 4 mm wide, on burnished red on white *intonaco,* 0.5 mm total, on coarse, sandy plaster with tile traces, 4+ mm thick (not analysed).

vi) A white to green band, 27 mm wide, on red, a black line, 5 mm wide, on dark-red traces all on white *intonaco,* 0.5–0.75 mm, on coarse, sandy plaster with grass or straw traces in two layers 7 mm + 7 mm thick (analysed as 5028 B upper and 5028 C lower).

C6025, Building IX, Room F. Red on white *intonaco,* 0.5 mm, off-white sandy plaster, 6 mm, on coarse, sandy plaster, 6 mm thick. There was traces of a marking-out line under the red paint.

C6023, F620, Building IX, Room F. Burnished red, <0.05 mm, on white traces, on off-white, coarse, sandy plaster with lime lumps, 10 mm thick.

683, Area I (085 091). White *intonaco* traces, 0.75 mm, on coarse sandy plaster, 11 mm thick.

TABLE 14 MORTARS AND PLASTERS: COMPOSITIONS

No.	Gravel	Sand	Silt	Lime	CO_3(micro)	Comments
C6000	0	1	99	59%	47%	?calcareous mud
C6021	0	1	99	60%	52%	calcareous mud
3941	29	42	29	47%	49%	sand and tile
4683	53	20	27	48%	51%	tile with some sand
5028 A	12	68	20	46%	46%	whole section
5028 B	5	72	23	44%		upper layer
5028 C	19	60	21	54%		lower layer
683	5	68	27	36%	37%	whole section
C6023	16	67	17	59%	47%	sandy plaster
C6025					45%	whole section

The graphs, 1–4 (FIGS 61, 62), show the particle size distribution curves for the residues left after acid dissolution. Sizes greater than 2 mm are considered to be coarse sand or gravel; 0.15 mm to 2 mm, sand; and less than 0.15 mm, silt or clay. It can be seen that there are three basic curve groups corresponding to the materials described below (conclusions).

Stone tile

Samples of the lias limestone tile from the site (reported by Fiona Roe, above) were analysed to see if the stone could have been used as a source for the building lime. They were composed of fine grey calcite crystals. The analysis showed a calcium carbonate content of about 98% and a residual grey-brown silt of less than 0.5%. This could well have been used to make a soft lime, but the lack of silt does not compare well with the analyses of mortar and plaster samples. This may be due to the use of calcareous aggregates in the samples giving a high silt level and obscuring any silt derived from the lime.

Egyptian Blue lump

The slightly flattened sintered blue lump, weighing 1.136 g, about 10 mm^2 and about 8 mm thick, was shown by X-ray fluorescence analysis to contain copper, calcium, silicon, tin and lead. This is consistent with the composition of Egyptian Blue — Cu Ca Si_4O_{10}, although the presence of tin and lead is of note. It is a crystalline compound made (according to Pliny, *Natural History* 33, 57) by heating pure copper, sand and 'natron' at about 800°C. Balls of the compound were rounded in the hand and placed in a clay pot for the sintering process. Although this particular sample appears to be composed of three roundish pieces squashed together, they are commonly spheroidal. The slight flattening of this lump shows that it was probably part of such a batch. Other examples of Egyptian Blue examined during the author's survey of Romano-British mortar and plaster (Morgan 1992) also showed the presence of alloying elements of copper, notably tin, lead and zinc. These metals show that scrap copper alloys rather than pure copper were used on occasion. It was the only blue pigment used in wall paintings to have been seen during the above survey. To be used it was crushed and applied as a slurry to the wet plaster. Its presence here does suggest that there may have been wall painting using blue colours on the site. *1570, Area IV (008 084)*

Conclusions

Three main types of mortar or plaster are shown by analysis. These are calcareous mud plaster, coarse sandy plaster and plaster with crushed brick or tile. The sand from the mud

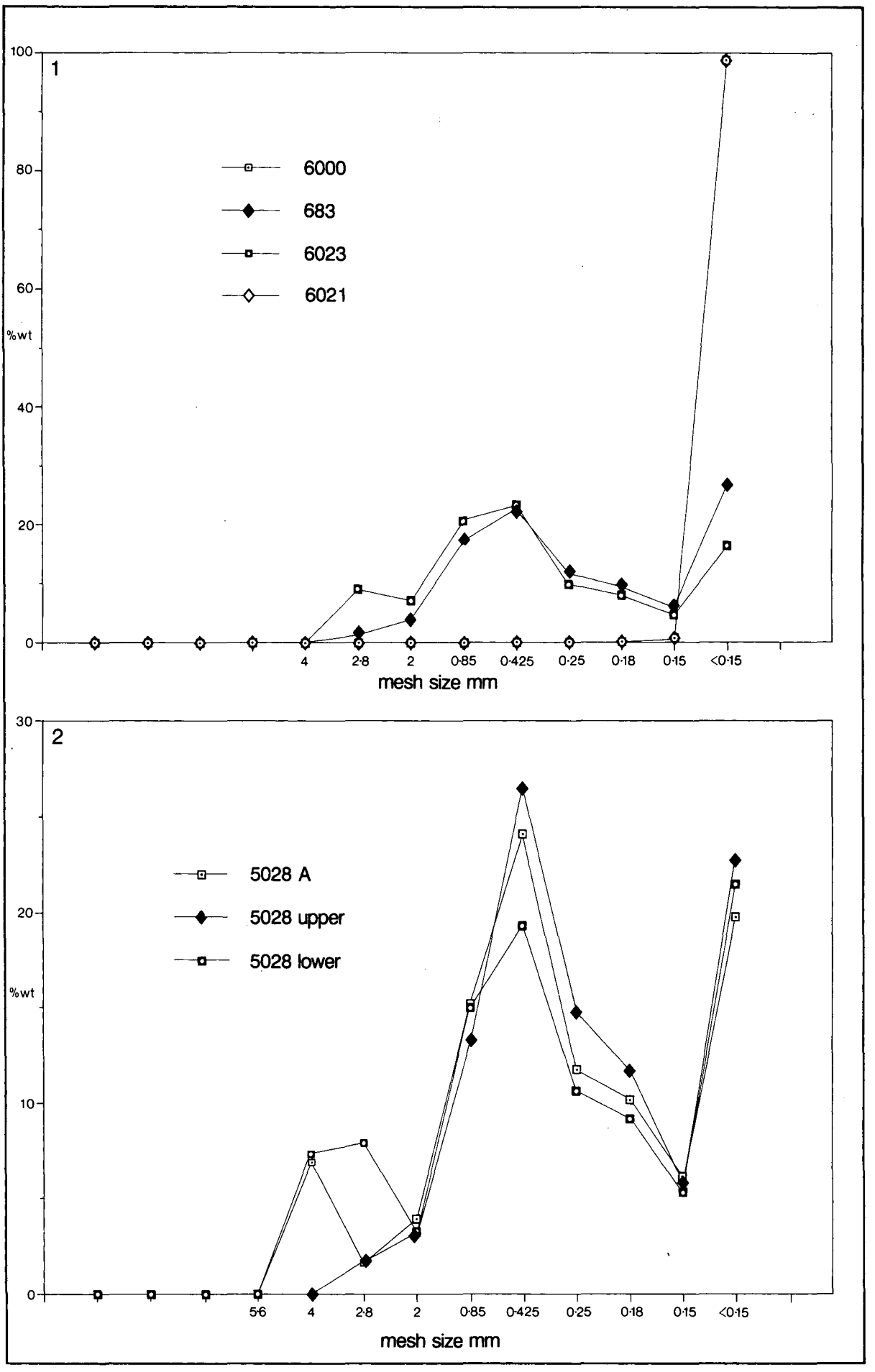


FIG. 61 Mortar samples; groups 1 and 2 particle size distribution curves

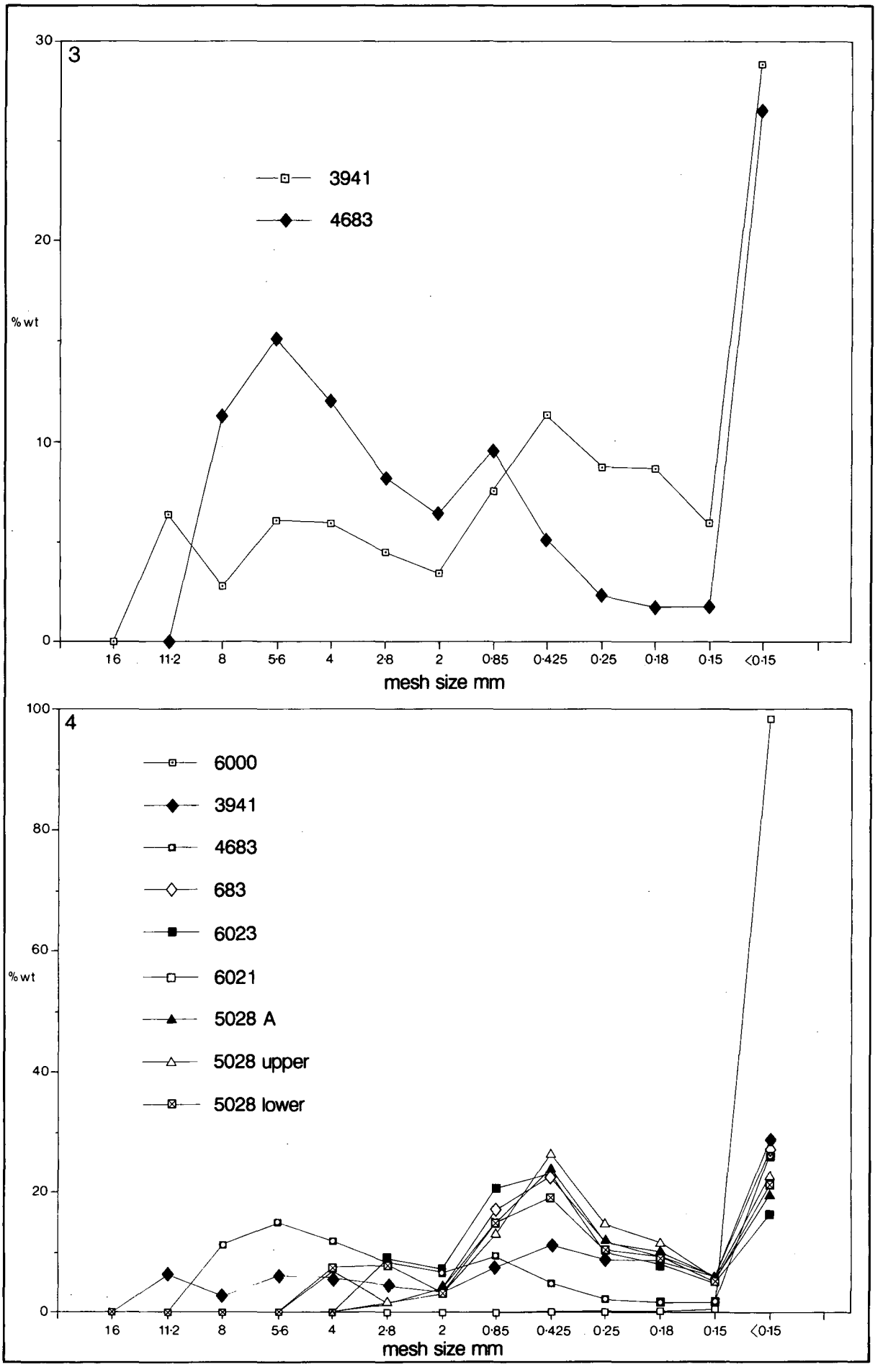


FIG. 62 Mortar samples; groups 3 and 4 particle size distribution curves

plaster was very fine and was probably derived from decayed limestone. The sand in the other samples was mainly angular to sub-angular quartz and quartzite, with similar grading curves. The angular nature suggests crushed or weathered rock rather than alluvial sand. Sample 4683 had an aggregate composed mainly of crushed brick or tile and may be described as *opus signinum*; sample 3951 had the typical sand with the addition of crushed brick or tile, and, although it is not, therefore, a true *opus signinum*, it would still have had some of the water-resisting properties and increased strength of tile-based mortars. The presence of some burnished painted plaster is of note as it shows that some expertise was available to produce good quality work. Too few samples were available to comment in detail on the nature of the painting. The fragments appear to represent the borders of panels. The pigments were all earth colours; red, yellow and brown ochres (haematite), white lime, green earth (glauconite) with the addition of black soot or charcoal. The presence of calcite grains may indicate the deliberate use of that crystal to enhance the plaster, but only one occurrence was noted and the calcareous nature of the local geology means that accidental inclusion should not be ruled out. The compositions of the mortars and plasters is somewhat lime-rich, suggesting that part of the aggregate was composed of calcareous material. Most of the carbonate contents of the plasters were in the range 37% to 47% by weight. General analysis of Romano-British plaster shows that the expected 'lime' content is often not more than 30% by weight. The *opus signinum* sample has a higher 'lime' content corresponding to the higher 'lime' of other *opus signinum* mortar in Britain, often about 40% by weight.

WINDOW GLASS

by Jennifer Price and Sally Cottam

There was very little window glass (19 fragments), and as might be expected, late Roman blown glass was present in greater quantity than first- to third-century cast glass. The plotted distribution of the five cast fragments did not show a concentration in any particular area, although it is interesting to note that two fragments were found next to Building VII, although none in association with the later Buildings I or IX.

Fourteen fragments of blown window glass were found, a type which is almost always associated with late Roman buildings. It was probably formed from a long, blown cylinder of glass which was then cut and opened out to form a flat pane (Harden 1961). The actual number of fragments is surprisingly small on a site where several late Roman stone buildings have been uncovered. Interestingly, there is a distinct concentration at the north-eastern corner of Building I, whilst a scatter of fragments comes from Area III and two fragments were found in Building IX. No late window glass was found in the earlier Building VII. It is noteworthy that window panes which were not broken were sometimes retrieved complete for re-use as windows elsewhere or perhaps as cullet. At Fishbourne Palace for example, panes for re-use were collected in room N 9, where they were melted in the fire which destroyed the building (Harden and Price 1971, 367–8, no. 111). This practice and the collection of fragments for cullet may account for the lack of window glass at Fosse Lane, with the small concentration in Building I remaining as evidence for at least one window in the vicinity being broken during the occupation of the site.

None of the window glass is illustrated and a complete catalogue is in the archive.

KEYS, LATCH AND DOOR FITTINGS

by Derek Moscrop and Martin Henig

A small collection of Roman objects associated with locks and security was recovered both in the 1990 excavation and in the nineteenth-century explorations (now in the collections of

the Shepton Mallet Museum). The 1990 material included an L-shaped key, a padlock key, latch-lifters and latch fittings. In addition, there was an elaborately decorated handle from a key for a tumbler lock, reported on below by Martin Henig. With the exception of the latter, there is little chronologically diagnostic about these objects. Included in the catalogue are earlier nineteenth-century site finds, though of uncertain provenance, which include further examples of common Roman types (SHPMM A246–A250).

Catalogue of illustrated examples (FIG. 63)

3. Iron. L-shaped key. The stem is round in cross-section and ends in what would have been a circular eye, though this is now largely broken. The bit is L-shaped and the remnants of two teeth only survive. The base of the stem is hollow. XRF-analysis found traces of copper and lead which suggest that the object may have been plated. Length 75 mm; length of bit 23 mm. *4060, Area VI (044 121)* (Acc. no. 47)
4. Iron. ?Barb-spring padlock key. Loop-ended, rectangular-sectioned, with damaged bit; only the outer edge of part of the bit remains. Arguing against this identification, and for a more common typing, is the absence of the normally present holes cut into the bit, though the Fosse Lane example is both damaged at this point and heavily corroded (nothing shows by X-ray). For complete examples of the type see Manning (1985) 071–4. Length 125 mm. *4019, Area VI (029 144)* (Acc. no. 367)
5. Iron. Latch lifter. Rectangular-sectioned flat handle which may have had a loop at its end. The straight blade has a round-sectioned stem tapering towards the upturned tip. Similar to Manning (1985) 01. Length 275 mm. Width of handle 20 mm. *4024, Area IV (016 066)* (Acc. no. 45)
6. Iron. Latch lifter. The handle, flat and rectangular-sectioned, is either short or has been broken. The round-sectioned blade is straight, with an upturned tip. Similar to Manning (1985) 01. Length 300 mm. *C6030, Building IX, Period 2*, (Acc. no. 46)
7. Iron. Almost-complete L-shaped lift key, with an open, circular rolled bar on a rectangular plate. The plate bit has three teeth. Similar to Manning (1985) 037–8. Length 197 mm. (SHPMM A246)

FIG. 64

1. Iron. Lever-lock key. The now-broken, piped stem curves up towards a partially surviving rolled bow. The bit has four slots, though no slit is visible along the outer edge, as is found in similar examples given by Manning (1985) 057–64. Length 149 mm. (SHPMM A248)
2. Iron. Lever-lock key. Square-sectioned pipe stem with a rolled bow. The stem turns a right-angle towards the bit, which has two slots cut into it. Length 165 mm. (SHPMM A250)
3. Martin Henig writes: Copper-alloy key-handle from a tumbler-lock in the form of a lion with the head of a stag (note the vestigial antlers) in its jaws. The transverse piercing between the back of the lion's jaw and the head of his prey served, no doubt, for a suspension loop. The handle, which is broken at the back, is somewhat corroded. Length 71 mm.

   The type is a common one with numerous variants ranging from simple lions such as those from Verulamium and Baldock (Frere 1984, 49, fig. 18.165; Stead and Rigby 1986, 136–7, fig. 59.370) to more complex types such as that from Brampton, Norfolk, where a lion is mauling a man (Henig 1984). Key-handles with lions holding animal-heads in their jaws include examples from Augst (Kaufmann-Heinimann 1977, 134, no. 222, pl. 144) and Bavai (Faider-Feytmans 1957, 108–9, nos 253–5).

   The theme may have been a *memento mori*, like the well-known mosaic from Verulamium showing a lion with a stag's head in its mouth (Toynbee 1962, 197, pl. 208.179). A date in the late second or early third century is likely. *u/s, metal detector find*

MISCELLANEOUS FITTINGS

by Derek Moscrop and Julie Smith

Catalogue (FIG. 64)

4. Lead. Plug-like piece of caulking with ring handle for attaching or removing of the plug. Some adherent metal forms part of the seal around the edges of the object. Weight 408 g. *F630, Building X, Period 2* (Acc. no. 1771)
5. Copper alloy. Fragment of pendant or mount, formed of a pierced central disc from which extends a lanceolate lobe or tag. The outer edges of the lobe bear simple notched decoration. Possibly a horse trapping, though decorative mounts such as this could have been used on any number of objects. *u/s, metal detector find* (Acc. no. 142)
6. Copper alloy. Fragment of an elongated mount, beaten out from sheet metal, and formed around a piece

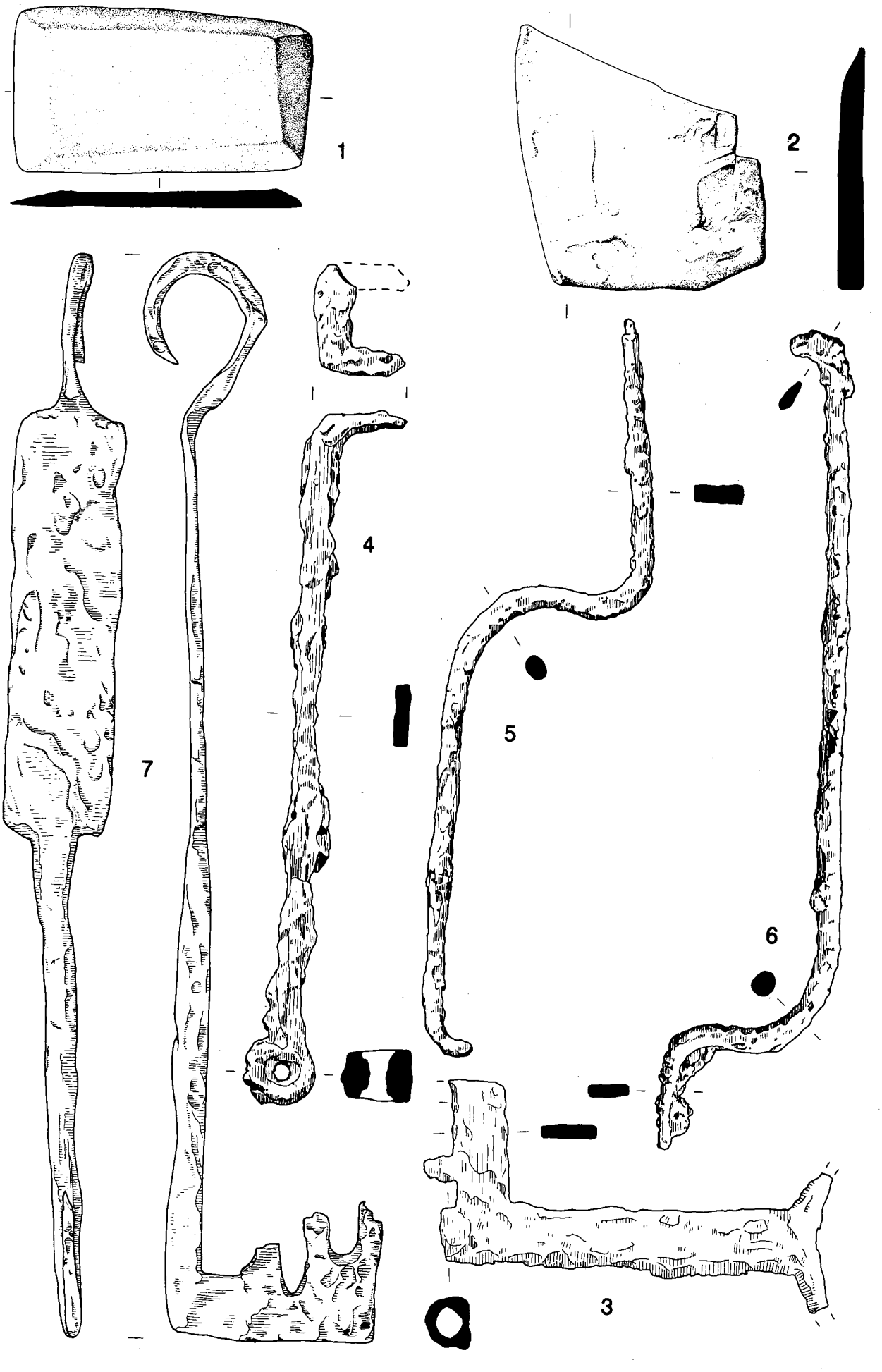


FIG. 63 Palettes, nos 1–2; scale 1:2; iron keys and latch lifters, nos 3–7; scale 1:1

of wood or leather. The central part of the mount is ridged, with rivet holes for attachment being along the outer, lower, edges. Part of a copper-alloy rivet remains *in situ* in one of the two holes. *4720, Area III (075 047)* (Acc. no. 144)

Not illustrated

Caulking. Eleven further pieces of lead caulking were recovered, used to seal various openings of objects. (Acc. nos 1717–18, 1720, 1729–30, 1766–8, 1770, 1773, 1775)

Mounts. Numerous fragments of copper-alloy sheet representing binding or mounts were recovered.

Chain link (Acc. nos 64–6) and loops (Acc. nos 67–70, 382). A small number of each type of fitting in iron was recovered, the only noteworthy examples being a chain link attached to a double-spike loop (Acc. no. 64) and a piece of figure-of-eight loop (Acc. no. 382).

Ferrules. The examples recovered, all iron (Acc. nos 62–3, 408), included a conical ferrule with a nail hole for attachment (Acc. no. 62) and a collar ferrule (Acc. no. 63). Some may have belonged to domestic or industrial implements.

Cleats. Seventy-four iron cleats, varying in length from 8 mm to 36 mm, were recovered. The majority of the examples were between 16–18 mm and may have been shoe cleats rather than carpentry cleats, though some small cleats could just as easily have served both purposes (Manning 1985, 131).

Clamps. A variety of iron structural clamps was found (Acc. nos 344–51, 513) including four joiners' dogs, six T-clamps (Acc. nos 339–43, 607) and a 'customised' clamp (Acc. no. 609) made from a piece of metal with one spatulate end, bent over at both ends to form a cleat or staple.

Loop-headed spikes. Fifteen iron, loop-headed spikes were among the assemblage, varying in length from 37–105 mm. These objects could have been driven into either woodwork or masonry (Manning 1985, 129).

Hooks. Three possible wall hooks, made of iron, were found, each being in form suggestive of customisation rather than the object being made to order. (Acc. nos 365–6, 614)

COPPER-ALLOY NAILS AND STUDS

by Julie Smith

Two copper-alloy nails and eight studs were recovered from the excavations. These were all of a relatively small size and could have been from either furniture or caskets, though one or two of the dome-headed studs could have come from leather straps or belts. None is illustrated.

IRON NAILS

by Olwen Coventry

A total of 2,854 structural iron nails came from the excavations. A number of hobnails was also found, and these are discussed under Personal Objects, above.

The structural nails were all X-rayed, catalogued and quantified according to the classification of types defined by Manning (1985), and the results are tabulated below. While just over half of the assemblage consisted of unclassifiable fragments, the vast majority of the rest were type 1 nails, the commonest type on Romano-British sites (Manning 1985, 134), and in particular type 1B. Such nails would have had a general and universal function. None is illustrated.

The types are listed:

Types	1A	1B	2	3	4	5	8	9	Unclassified	TOTAL
Totals	150	1032	12	31	2	12	77	1	1537	2854

An examination of the nails present in graves, 291 in total, some with mineralised wood attached, showed that, where identifiable, these were of type IB (60 examples) or type IA (one example). Given the fact that these were in any case the most common type of nail on site, it is interesting to see that they were also used as coffin nails. Other possible coffin fittings include cleats (one in F108, three in F127), copper-alloy studs (two in F132) and binding strip (three pieces in F123).

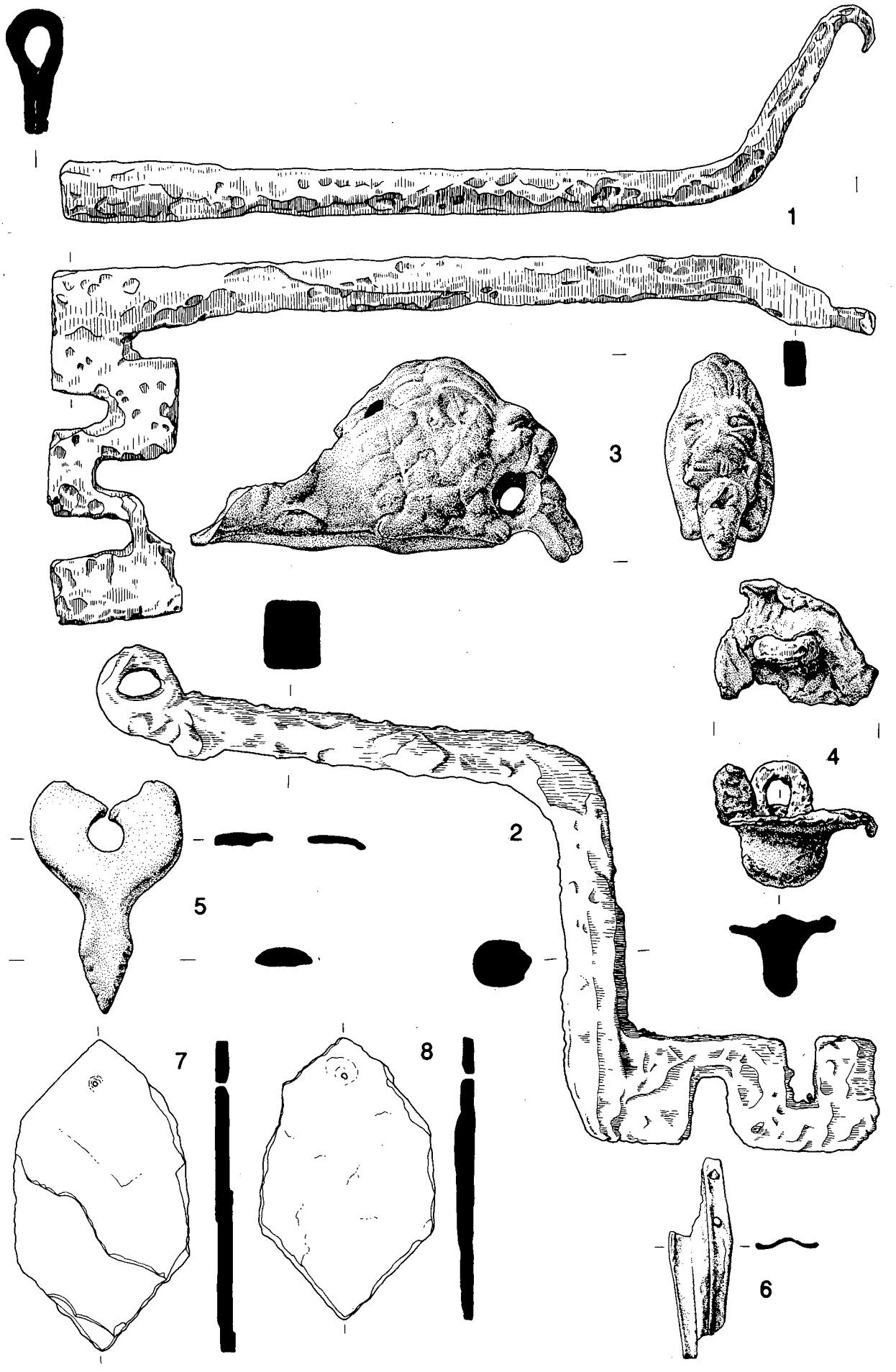


FIG. 64 Keys, nos 1–3; lead caulking, no. 4; copper-alloy mounts nos 5–6, scale 1:1; stone roof tiles, nos 7–8, scale 1:8

3.7: DOMESTIC EQUIPMENT, TOOLS AND IMPLEMENTS

QUERNS AND MILLSTONE

by Fiona Roe

The quern fragments are all from rotary querns, mainly the flat, disc type to be expected from Roman contexts, but two (FIG. 65.2 and 3764) are thicker pieces, nearer to the beehive type. These querns, and two from Building VII *(C1313 and C1351, Period 2)* are made of a pebbly variety of Mendip Old Red Sandstone from Beacon Hill, two and a quarter miles north up the Fosse Way. Workings there indicate the possibility of a quarry for querns. The same material was used for rotary querns from later Iron Age contexts at South Cadbury (Roe forthcoming), while it was also probably used at Ilchester (Leach 1982, 217), Bradley Hill, Somerton (Leech 1981, 248), Catsgore (Leech 1982a, 129) and Gatcombe (Branigan 1977, 101). It would seem that this particular quern material may have been used extensively in the area from Late Iron Age times onwards.

There are two further quern fragments of unspecified Mendip Old Red Sandstone, one from Area V *(821, 069 035)* and one from Area VI *(3395, 007 121)*. Similar stone could have been obtained only a few miles away from either Pen Hill or Priory Hill, above Wells. Querns made from unspecified Old Red Sandstone were also found at Gatcombe (Branigan 1977, 101). There is just one quern made from Upper Greensand from Area IV *(3676, 018 072)*, and this is likely to have come from another quarry area at the Pen Pits near Stourhead, about eleven miles to the south-east. Other greensand querns have been recorded from Bradley Hill (Leech 1981, 248), Catsgore (Leech 1982a, 129) and Camerton (Wedlake 1958, 244), though it cannot be certain whether these too were acquired from the Pen Pits. At South Cadbury, Pen Pits greensand was used for a few rotary querns from Middle Iron Age to Roman contexts. Possibly this was a material used in conjunction with the Beacon Hill conglomerate, but for grinding different materials.

The millstone (FIG. 65.1) again is Mendip Old Red Sandstone, though the exact source is unknown. This millstone is on the small side, as the average diameter for Roman millstones is around 750 mm. However it would have been too heavy for operating by hand. Roman millstones are not especially uncommon, and it has been suggested that forts, villas and towns were normally equipped with powered mills (Greene 1990, 215). Parts of two millstones were recorded from Ilchester (Leach 1982, 217, fig. 107), and another small example, estimated to have been 560 mm in diameter, was found at the Halstock Roman villa (Lucas 1993, 96).

Catalogue (FIG. 65)

1. Complete lower half of a millstone made of a banded reddish stone, Mendip Old Red Sandstone. Maximum diameter 540 mm. *F310, C1320, Building VIII, Period 5* (Acc. no. 597)
2. Fragment of beehive type quern. *3675 Area IV* (Acc. no. 598)

WHETSTONES

by Fiona Roe

There are thirteen whetstones from the site, and these are divided between three different materials. As with the quern materials, these could have been intended for different purposes. Six of the whetstones appear, on macroscopic examination, to be made from Kentish Rag, and these typically are rod-shaped, like a cigar. Phased examples are from Periods 2 and 3. Three of these whetstones came from Building IX *(C6032, C6034 and C6039)* and one from Building VIII *(C1579)*. The two others came from Area V *(4629)* and Area VI

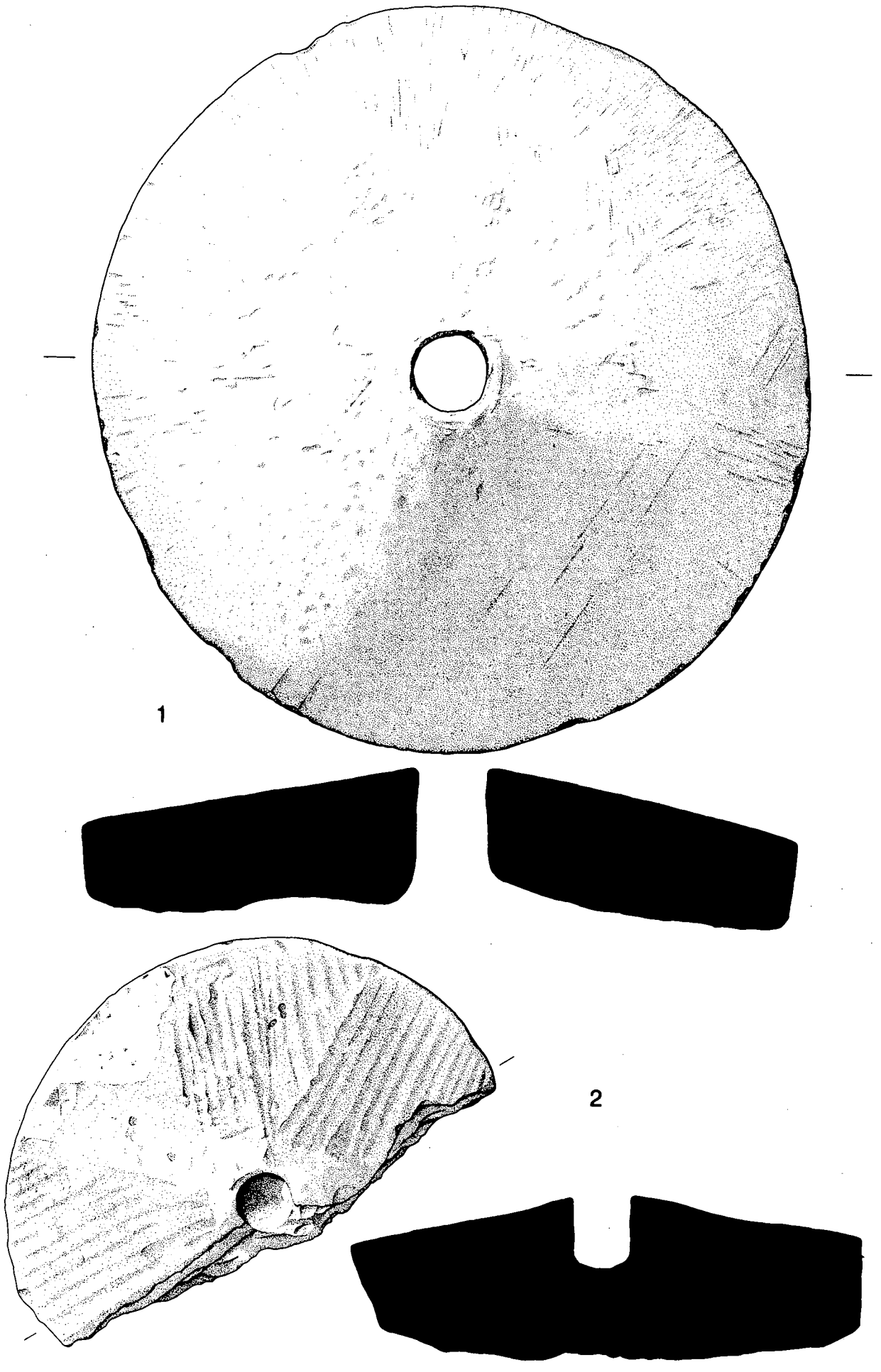


FIG. 65 Millstone and quern, nos 1–2; scale 1:4

(3682). Despite the distance from the source, similar whetstones have been recorded from Ilchester (Leach 1982, 224) and Catsgore (Leech 1982a, 129).

Another six whetstones are made from local Old Red Sandstone *(848, Area IV; 1068 and 2156 Area V; C1552, Building VIII; 3927, Area X; 4455, Area I* — FIG. 66.1*)*, red brown, slightly micaceous and finer-grained than the stone used for querns. These are more varied in shape, tending towards rectangular slabs. Two are multi-purpose implements, one *(3927)* having also been used as a point sharpener, while another *(2156)* was used as a hammer-stone. One find from Building VIII *(1552)* is assigned to Period 6 but probably derived from the Romano-British levels. Old Red Sandstone has also been recorded in use for whetstones at Camerton (Wedlake 1958, 245) and Gatcombe (Branigan 1977, 99). One other whetstone fragment is made from Pennant sandstone *(2536, Area IV)*.

Catalogue (FIG. 66)

1. Whetstone in Old Red Sandstone. *4455, Area I* (Acc. no. 599)

WEIGHTS

by Fiona Roe (stone) and Iain Ferris (lead)

Stone

There are two small stone weights, one in quartzite (FIG. 66.2) and another made from flint (not illustrated, *5298, Area IX*). The latter is roughly spherical with a partly battered surface. There is no particularly suitable local source for either flint or quartzite, and they may both have come from Pleistocene deposits such as the Clay-with-Flints, which can be found on the Chalk (Wilson *et al.* 1958, 192). Very similar weights, made of the same materials, are known from South Cadbury (Roe forthcoming). These are mainly Middle Iron Age in date, with three that are Late Iron Age or Roman, so this may be a traditional form which continued in use unchanged.

Catalogue (FIG. 66)

2. Small, well-shaped weight approximating to the Roman 'cheese type' of weight; made from quartzite. *662, Area V* (Acc. no. 600)

Lead

Seven lead weights or possible weights were recovered, weighing 15 g, 26 g, 28 g, 122 g, 128 g, 185 g and 576 g. The fact that there are two pairs of objects at 26–28 g and 122–128 g suggests that these are of a standard weight. Indeed, it is possible to relate all the weights to approximate Roman units: 15 g = *c.* 16 scruples; 26–28 g = *c.* 1 Roman ounce; 122–128 g = *c.* 5 Roman ounces; 185 g = *c.* 7 Roman ounces; and 576 g = *c.* 22 Roman ounces. However, not all the objects may be weights. Two examples are illustrated from the complete catalogue in archive.

Catalogue (FIG. 66)

3. Biconical lead weight with sunken top into which is set a small iron suspension ring, now broken. This weight is from a beam balance. Wt. 576 g. *C1552, Building VIII, Period 6* (Acc. no. 1732)
4. Irregular lead weight with iron nail set in top. Could be caulking, but the weight of the object, close to 5 Roman ounces, suggests that it is likely to be a pan weight. Wt. 122 g. *u/s., metal detector find* (Acc. no. 1734)

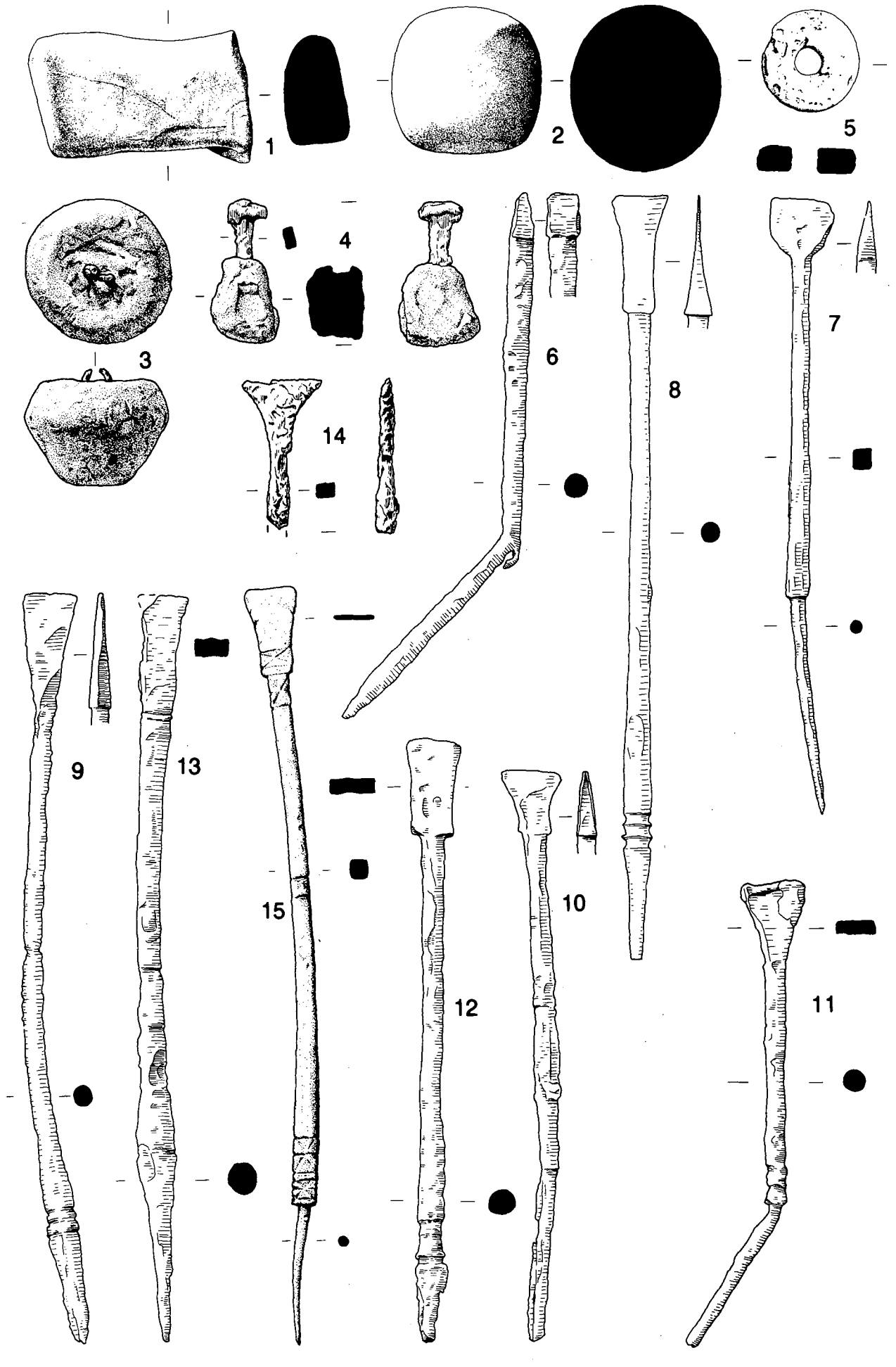


FIG. 66 Whetstone, no. 1; weights, nos 2–4; spindlewhorl, no. 5; scale 1:2; styli, nos 6–15; scale 1:1

SPINDLEWHORLS

by Fiona Roe (stone) *and Jane Evans* (pottery)

Stone

Two disc-shaped spindlewhorls, one from Area III (FIG. 66.5) and one from Area IV (not illustrated, 1660) are made from White Lias limestone. Roman spindlewhorls of White Lias were also found at Camerton (Wedlake 1958, 246).

Catalogue (FIG. 66)

5. Disc-shaped spindlewhorl. *4653, Area III* (Acc. no. 601)

Pottery

Five ceramic spindle whorls were identified, all made from re-used sherds in coarse-ware pottery fabrics. Three came from stratified contexts: two from a single Period 2 context (C6032) in Building IX and one from a Period 3 context (C6033) in Building X. None is illustrated.

STYLI

by Derek Moscrop and Julie Smith

Twenty styli were recovered, some fragmentary. With the exception of one example made of copper alloy (FIG. 66.15), all the styli are iron, although at least one (FIG. 66.8) had a possible bronze/brass inlay. Three of the styli could have been bent before being discarded (FIG. 66.6, 10, 11), perhaps as part of some ritual activity.

The iron styli, when displaying diagnostic characteristics, can be paralleled by examples in Manning (1985), types II (FIG. 66.6), III (FIG. 66.7) and particularly IV (FIG. 66.8–10, 12 and 13; Acc. nos 52–3, 58). The copper-alloy stylus is difficult to date, but could be a third- or fourth-century type.

The number of styli would suggest either a relatively high degree of literacy, or at least the presence of activities requiring the keeping of records or accounts. The following examples are illustrated from a full catalogue in archive.

Catalogue of illustrated examples (FIG. 66)

6. Iron. Complete example; round-sectioned, bent towards pointed end. The eraser is short and markedly wedge-shaped, and is clearly separated from the stem. Manning (1985) type II. Length 110 mm; maximum width of stem 5 mm; maximum width of eraser 6 mm. *C6045, Building X, Period 2* (Acc. no. 50)
7. Iron. Complete example; square-sectioned stem, round-sectioned end tapering to a point. The point is long and separated from the stem by a marked shoulder. The flattened, slightly wedge-shaped eraser has convex sides and an oblique edge. Manning (1985) type III. Length 110 mm; length of point 40 mm; maximum width of stem 5 mm; maximum width of eraser 12 mm. *u/s, metal detector find* (Acc. no. 57)
8. Iron. Complete example apart from damaged tip; round-sectioned stem, thickening towards the point, which is separated from the stem by a register of decoration consisting of three grooves forming two concentric reels. XRF-analysis detected the presence of lead, copper and zinc, suggesting a possible bronze/brass inlay. The eraser is wedge-shaped and has concave sides and a straight edge. Manning (1985) type IV. Length 132 mm; maximum width of stem 5 mm; maximum width of eraser 11 mm. *5090, Area VI (059 137)* (Acc. no. 48)
9. Iron. Complete example with damaged point; round-sectioned stem, separated from the tip by a register of banded concentric decoration. The eraser is separated from the stem by a marked shoulder, and is wedge-shaped with slightly concave sides and a straight edge. Manning (1985) type IV. Length 135 mm; maximum width of stem 4 mm; maximum width of eraser 10 mm. *4577, Area III (075 047)* (Acc. no. 51)
10. Iron. Complete apart from missing point tip. The point is long and slightly bent out from the stem. The central portion of the stem is square-sectioned and quite distinct and separated from the point. The

eraser is wedge-shaped with concave sides and a slightly convex edge. Manning (1985) type IV. Length 104 mm; maximum width of stem 4 mm; maximum width of eraser 11 mm. *4304, Area I (096 089)* (Acc. no. 54)

11. Iron. Almost-complete stylus with a long point bent out at an angle from the circular-sectioned stem. Point is separated from stem by a band of ?concentric grooves, now largely obscured by corrosion product. The eraser is almost triangular in shape with a wedge-shaped profile. Manning (1985) type IV. Length 87 mm; maximum width of stem 44 mm; maximum width of eraser 12 mm. *4773, Area VII (065 138)* (Acc. no. 56)
12. Iron. Complete example with damaged point; round-sectioned stem, widening towards the point which is separated from the stem by a band of decoration which consists of a bead flanked on either side by a reel. Copper-alloy flecks visible here may represent the residue of an inlay, not otherwise detected by XRF. The eraser is wedge-shaped with concave sides and a convex edge. Manning (1985) type IV. Length 107 mm; maximum width of stem 6 mm; maximum width of eraser 11 mm. (Acc. no. 59) *1353, Area IV (016 080)*
13. Iron. Complete example with slightly damaged eraser. There are four equidistant concentric grooves (11 mm apart) towards the base of the round-sectioned stem. One of the grooves separates the stem from the long, tapering point. The eraser is also separated from the stem by a groove and a marked shoulder. The eraser is markedly wedge-shaped with concave sides and what appears to be a convex edge. Copper-alloy specks, clearly visible in one groove, possibly the residue of an inlay, were not detectable by XRF. Manning (1985) type IV. Length 134 mm; maximum width of stem 5 mm; maximum width of eraser 9 mm. *C6030, Building IX, Period 3* (Acc. no. 61)
14. Iron. Eraser only; wedge-shaped with concave sides and a straight edge, separated from stem by a clear shoulder. Surviving length 21 mm; maximum width of eraser 15 mm. *4349, Area I (090 085)* (Acc. no. 60)
15. Copper alloy. Complete, bent towards long point; square-sectioned stem with incised line decoration in three separate registers; wedge-shaped eraser. A parallel comes from South Shields (Allason-Jones and Miket 1984, fig. 3.430). Length 136 mm; maximum width of stem 4 mm; maximum width of eraser 10 mm. *2600, Area V (057 004)* (Acc. no. 119)

SPOONS

by Julie Smith and Roger Tomlin

Six spoons or spoon fragments were recovered during the excavation, a further six having been found on the site over a number of years by metal detectorists, and two more from the site already being in the collection of the Taunton Museum. These fourteen spoons are here discussed as an assemblage, a selection of which is illustrated from the complete archive catalogue. Nine could be broadly dated by analogy. The two round spoons can be dated to the first century, the four pear-shaped bowls to the second century, and a mandolin-shaped bowl was of a type common throughout the Roman period. Two shaft fragments are likely to be from fourth-century types. As has been noted by Jackson (1986), round spoons can be found in surgical kits and therefore a domestic context for the Fosse Lane spoons of this type need not necessarily be assumed.

Catalogue of illustrated examples (FIG. 67)

1. Copper alloy. Round-bowled spoon and part of shaft only. Conservation analysis showed that the spoon was of leaded bronze and the silvery appearance was due to tinning. Similar spoons, Crummy type 1 (Crummy 1983, no. 2008), date from the second half of the first century. Length 58 mm*5487, u/s, metal detector find* (Acc. no. 100)
2. Copper alloy. Part of spoon with pear-shaped bowl, resting notch and broken shaft. Similar examples, Crummy (1983) type 2, date from the first half of the second century. Conservation analysis detected traces of silver and 'a number of striations visible in the bowl such as might be keying for the retention of applied silver' (Margaret Brooks pers. comm.). Length 83 mm. *5101, Area IX (074 196)* (Acc. no. 102)
3. Bone. Fragmentary spoon, consisting of part of pear-shaped bowl, a double resting notch and part of a round-sectioned shaft. The bowl bears a graffito *Latinanus*, reported on here by Roger Tomlin. In capitals 8–9 mm high: LATINANVS, *Latin(i)anus*. The owner's name, the cognomen *Latinianus*, is already attested in Britain; it was elaborated from the common *Latinus*, which is twice attested at Bath (*RIB* 890. *RIB* 158; *Tab. Sulis* 98, 15; note also CIIC 470, 520, *Britannia* 24 1993, 320). Crummy (1983) type 2, dating from the first half of the second century. *2700, Area V (045 029)* (Acc. no. 1762)

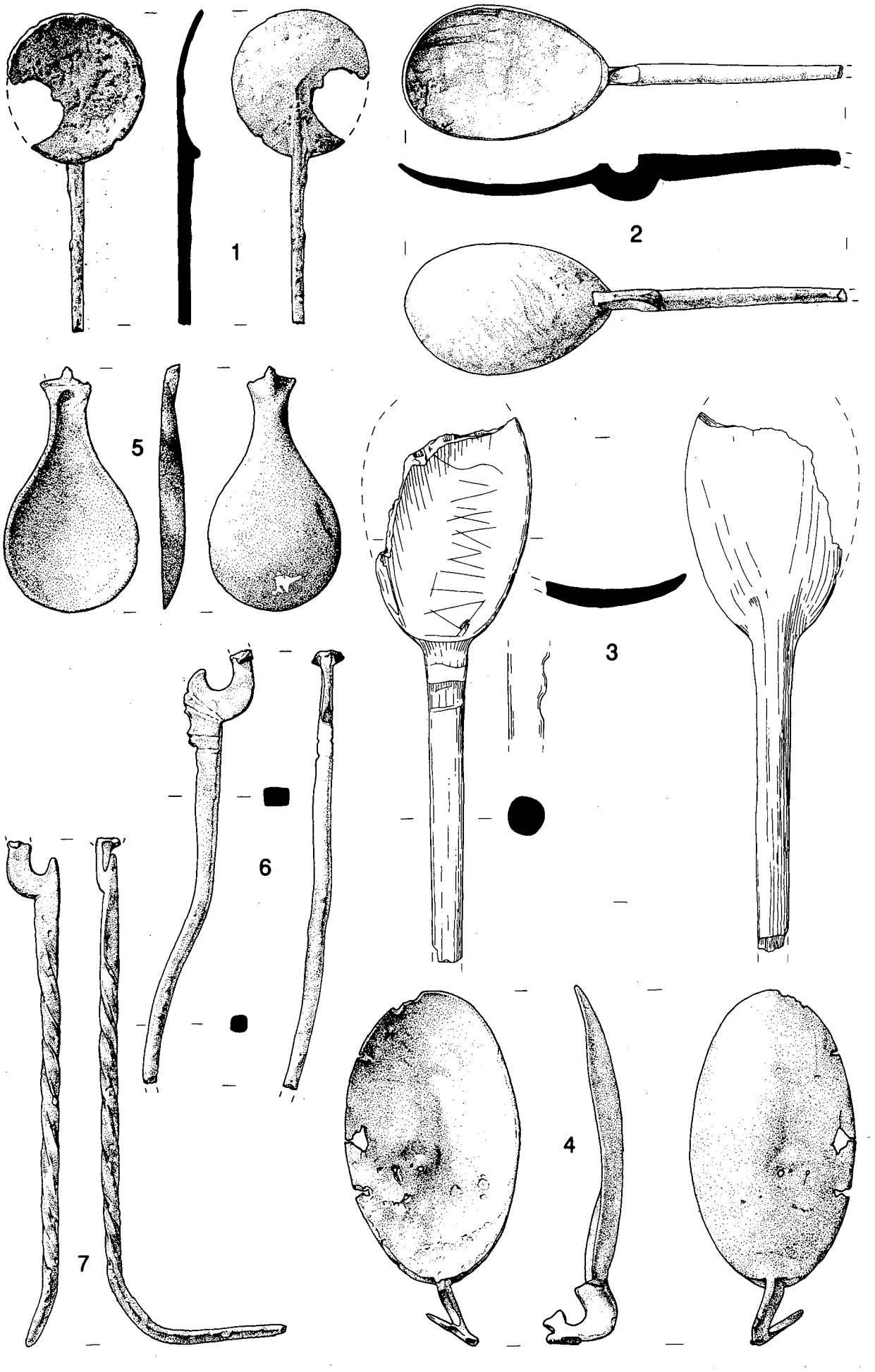


FIG. 67 Spoons, nos 1–7; scale 1:1

4. Copper alloy. Pear-shaped bowl and resting notch from spoon, broken away from spoon shaft. Some traces of tinning revealed during conservation analysis. Crummy (1983) type 2, dating from the first half of the second century. *u/s, metal detector find*
5. Copper alloy. Mandolin-shaped spoon bowl of Crummy (1983) type 3 produced throughout the Roman period. Conservation analysis showed that the object was of leaded bronze with tinning. *u/s, metal detector find, near Building VII*
6. Copper alloy. Broken, rectangular-sectioned spoon shaft, decorated with incised grooves along the junction with the resting notch. Bowl and tip of shaft missing. Shaft is partly bent. For a similar type from Uley, dated to the mid-fourth century, see Woodward and Leach (1993, fig. 134.7). Length 80 mm. *C1383, Building VII, Period 4* (Acc. no. 103)
7. Copper alloy. Shaft only. All of central portion of shaft, from below resting notch to within 10 mm of the tip, is formed of twisted metal. The tip of the shaft is bent over. Length 90 mm. *u/s, metal detector find*

KNIVES AND CLEAVERS

by Derek Moscrop

Eleven recognisable knives and/or cleavers were recovered from the excavation, along with a handle (not illustrated, Acc. no. 22) which is most likely to have been from a knife. In addition, there was a large number of fragments of blades, which, while they could have been from knives, could also have been tool blades.

The diagnostic knives have been catalogued according to the system developed by Manning (1985), though not all the identifications are certain. While one or two examples (FIGS 69.7; 70.1) could be types with Iron Age origins, continuing in use into the early Roman period, and while two others (FIG. 68.1–2) could possibly be early Roman types, going out of use some time in the second century, the assemblage can otherwise only be broadly defined as being representative of types common from the second to fourth century.

Catalogue (FIGS 68–70)

FIG. 68

1. Iron. Knife or cleaver with wide blade and tang set below a straight back. The cutting edge is almost straight (it may once have been convex) and curves up towards the tip which is now missing. Mineral-preserved wood was noted on the tang during conservation, but not identifiable to species. Similar to Manning (1985) type 2 or type 12. Length 240 mm; maximum width of blade 83 mm *5004, Area VI (032 180)* (Acc. no. 280)
2. Iron. Cleaver, with a straight back continuing the line of the tang, and a straight or slightly convex edge. Manning (1985) type 3. Length 260 mm. *Trench A, u/s* (Acc. no. 277)

FIG. 69

1. Iron. Knife, with the back continuing the line of the handle. The cutting edge is slightly convex and rises to the tip, now broken off. There is a sloping heel between the edge and the tang. This example is larger than other similar knives illustrated by Manning (1985) though it would appear to be too small to be classed as a cleaver. Analysis of organic material on the tang showed that the wooden handle was possibly of willow or poplar. Length 190 mm. *4522. C1135, F129, Period 5* (Acc. no. 278)
2. Iron. Small knife with a barleysugar-twist rod handle, now broken. The handle is separated from the straight back by a plain shoulder that steps down to the back. A convex edge rises to the tip. While the form of the knife may be a variant on Manning (1985) type 11, the handle is unusual and this may be a specialised implement of uncertain function. Length 100 mm. *4143, Area I (092 085)* (Acc. no. 276)
3. Iron. Complete blade and stub of tang from a knife with a convex edge, rising towards a slightly up-turned tip. The back has a pronounced rise from the tang which falls away again to the tip. Examination during conservation treatment suggested that this may be an unfinished object as the tang appeared unbroken and the blade unsharpened. Type uncertain, though similar to Manning (1985) type 18. Length 80 mm. *5022, Area IX (070 197)* (Acc. no. 271)
4. Iron. Complete blade, short and wide, with tang roughly along the mid-line. The back slopes up and then drops away to the tip; the edge is convex. Part of the back, nearest the tang, is decorated with

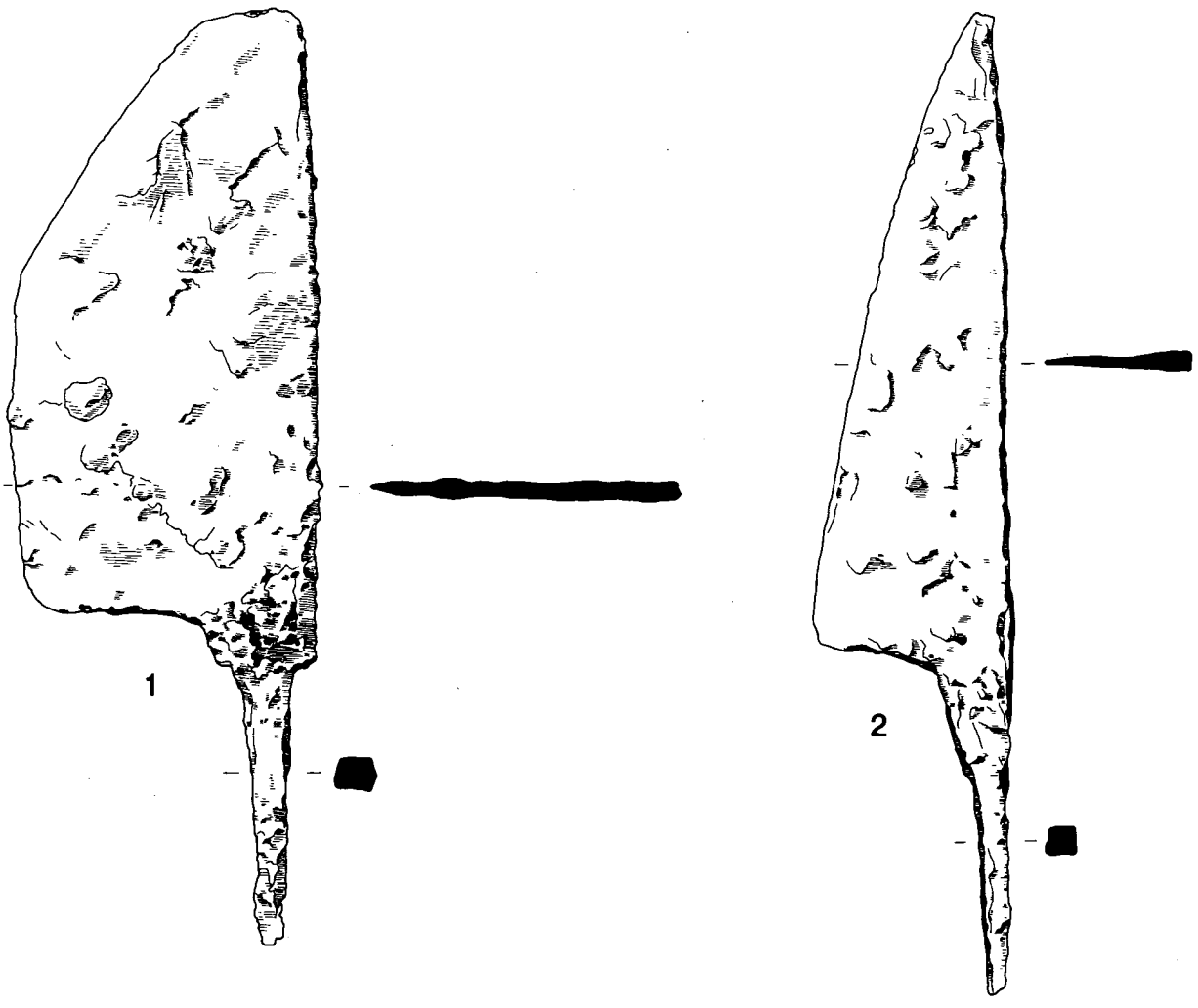


FIG. 68 Cleavers, nos 1–2; scale 1:2

incised grooves, while one face has two incised lines running parallel and close to the back, ending as it starts to slope away to the tip. Variant of Manning (1985) type 20. Length 105 mm. *4785, Area VII (060 139)* (Acc. no. 271)

5. Iron. More-or-less complete knife with short but wide blade and a very long, now bent, tapering tang. The tang is separated from the blade by a raised, ovoid collar or shoulder, and ends as a terminal knob centred on a thin, diamond-shaped iron plate. The blade would appear to be symmetrical with back and edge being convex. Along the back are shallow, incised grooves forming decoration along most, if not all, of its length. Apart from the length of the tang, this knife is similar to Manning (1985) type 21, but probably had a specialised function. Length 170 mm; length of blade 75 mm; length of tang 95 mm. *4569, Area V (069 044)* (Acc. no. 269)
6. Iron. Incomplete blade with stub of tang on the mid-line of the blade, and straight, or slightly convex, back and edge. Tip missing. Possibly of Manning (1985) type 21. Length 95 mm. *1429 Area IV (010 081)* (Acc. no. 275)
7. Iron. A small knife, with the back curving up from the tang to the, now-missing, tip. The edge is stepped down from the tang and curves up to the tip. Though part of the back is also missing, this knife can be equated with Manning (1985) type 23, a type which has Iron Age origins, but which continues into the Roman period. Length 85 mm. *4521, Area V (062 048)* (Acc. no. 270)

FIG. 70

1. Iron. A knife with an S-shaped profile along the back and the tang. The edge is straight and curves up towards the tip. There is a neck between the blade and the tang and an angled heel between the edge and the shoulder. Faint striations on the tang, noted during conservation, suggest that a handle was

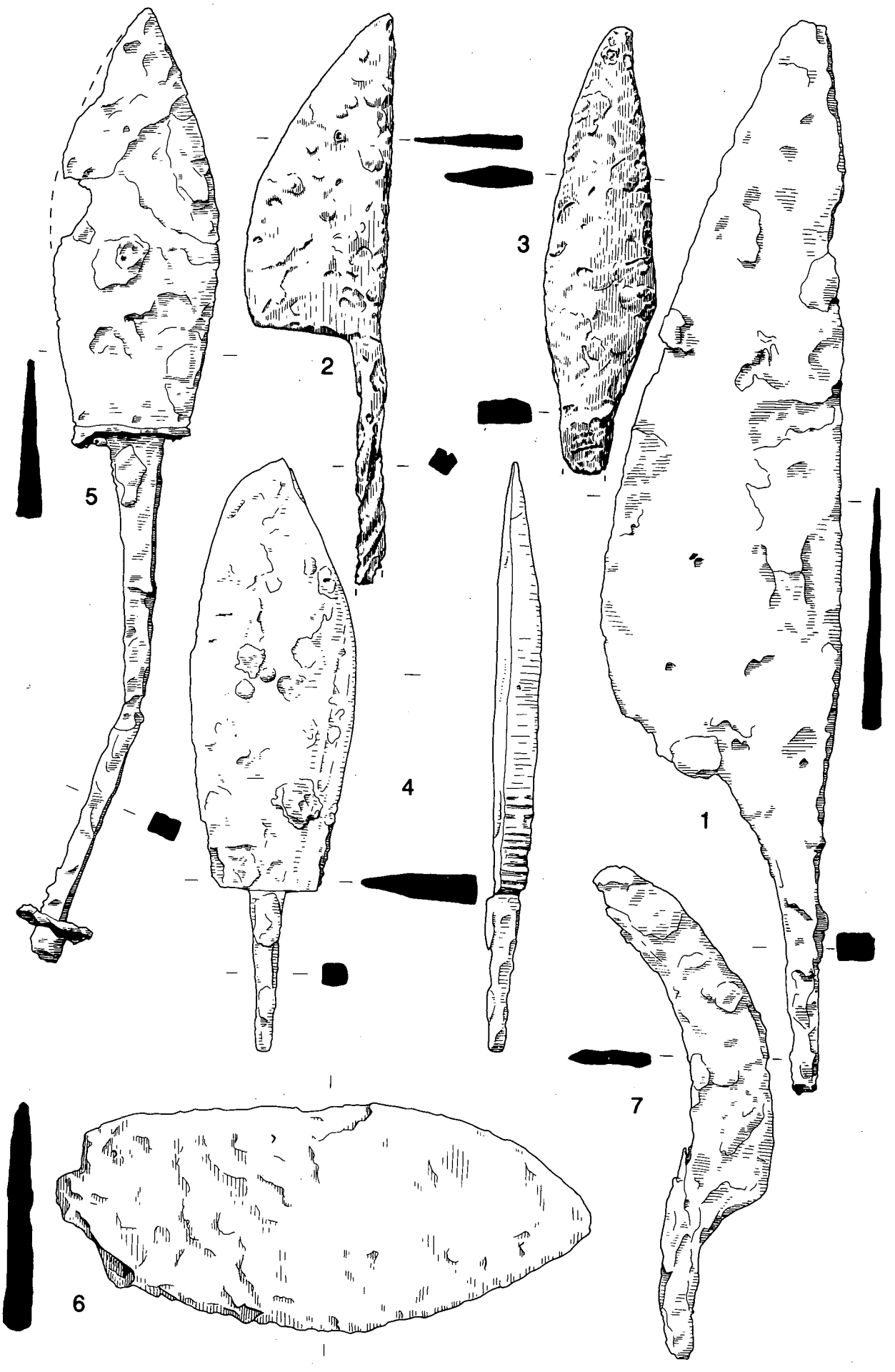


FIG. 69 Knives, nos 1–7; scale 1:1

intact at the time of deposition. Similar to Manning (1985) type 24, an Iron Age type which continued to be used into the early Roman period. Length 200 mm. *5560, u/s metal detector find* (Acc. no. 279)

2. Iron. Knife blade, with broken tang and tip. The edge is 'wavy' through damage during use. Type uncertain. *4849, Area IX (067 201)* (Acc. no. 273)
3. Fragment of decorated bone knife handle with a small portion of the iron knife blade and/or the tang still *in situ*, attached by a rivet piercing a thin sheet-copper-alloy collar. The bone is decorated with a central line of three ring-and-dot motifs, the middle of these being partially cut away by a roughly drilled hole through the handle, this hole obviously indicating the adaptation of the handle to allow suspension or attachment by a cord or string. Length 45 mm. *5544, u/s* (Acc. no. 282)

CRAFT AND INDUSTRIAL TOOLS

by Derek Moscrop

Forty-one tools or fragments of broadly identifiable tools were amongst the metalwork assemblage from the site. In addition, there are numerous fragments of suspected tool (or knife) blades and tool shafts that cannot be assigned with any degree of certainty to a particular tool type.

Amongst the carpentry tools are a saw, a paring chisel and two possible fragments of such a chisel, and a firmer or mortise chisel, though, as Manning has noted, such chisels could also be used by masons (Manning 1985, 21). Two ?punches (or chisels) could be metalworking tools. Four awls and a needle/bodkin represent leather- or cloth-workers tools. There are five further, possible, needle-shaft fragments. The rest of the tools consist of fragments that could come from punches, awls or carpenter's bits. A plumb-bob is also present. It is assumed that two small, spatulate-ended tools, one of iron and the other of copper alloy, are for modelling.

Catalogue of illustrated examples (FIGS 70 and 71)

FIG. 70

4. Iron. Part of the blade of a saw. It appears to have a slightly arched back which curves down to meet the straight edge. The teeth slope forwards, giving an effective cut on the forward stroke. XRF-analysis shows that the teeth are not set. Length 89 mm; maximum width 30 mm*4959, Area V (080 043)* (Acc. no. 40)
5. Iron. Complete paring chisel, with a thin blade, splayed to give a wide edge. The stem is sub-rectangular in cross-section, tapering gradually, and is separated from the blade by a marked shoulder. The stem does not appear to be tanged; rather it may be socketed, with the socket now being blocked or infilled by corrosion product. Length 150 mm; maximum width of blade 24 mm. *5085, Area VI, (064 170)* (Acc. no. 18)
6. Iron. Possible fragment of ?paring chisel blade. Slightly convex-edged, slender blade. Length 72 mm; maximum width 23 mm. *167, Area I (087 092)* (Acc. no. 20)
7. Iron. Possible firmer or mortise chisel. Rectangular-sectioned, tapering head with a square-sectioned, broken stem. This looks like a scaled-down version of a mortise chisel, though this is rather smaller than the examples discussed by Manning (1985, 23–4). Length 90 mm; maximum width 11 mm. *4151, Area VI (059 097)* (Acc. no. 21)
8. Iron. A ?smith's punch, with a rectangular-sectioned stem tapering to a chisel-like blade. Length 96 mm; maximum width 10 mm. *4418, Area I (093 083)* (Acc. no. 17)

FIG. 71

1. Iron. A ?smith's punch, long enough to be hand-held. With a square-sectioned stem, the head shows signs of battering. The short, chisel-like blade has sharply tapering sides. Length 147 mm; maximum width 11 mm. *4596, C1135, F129, Period 5* (Acc. no. 15)
2. Iron. An awl; square-sectioned and tapering towards both ends. The point at the thinner end is now broken. Length 147 mm; maximum width 8 mm. *1078, Area V (064 026)* (Acc. no. 24)
3. Iron. An awl. A slender tool, tapering gradually from its mid-point to both ends. At one end the tip is broken off, while at the other the tip is rounded. The stem is now bent at its mid-point. Length 133 mm; maximum width 5 mm. *3218, Area VI (013 118)* (Acc. no. 27)

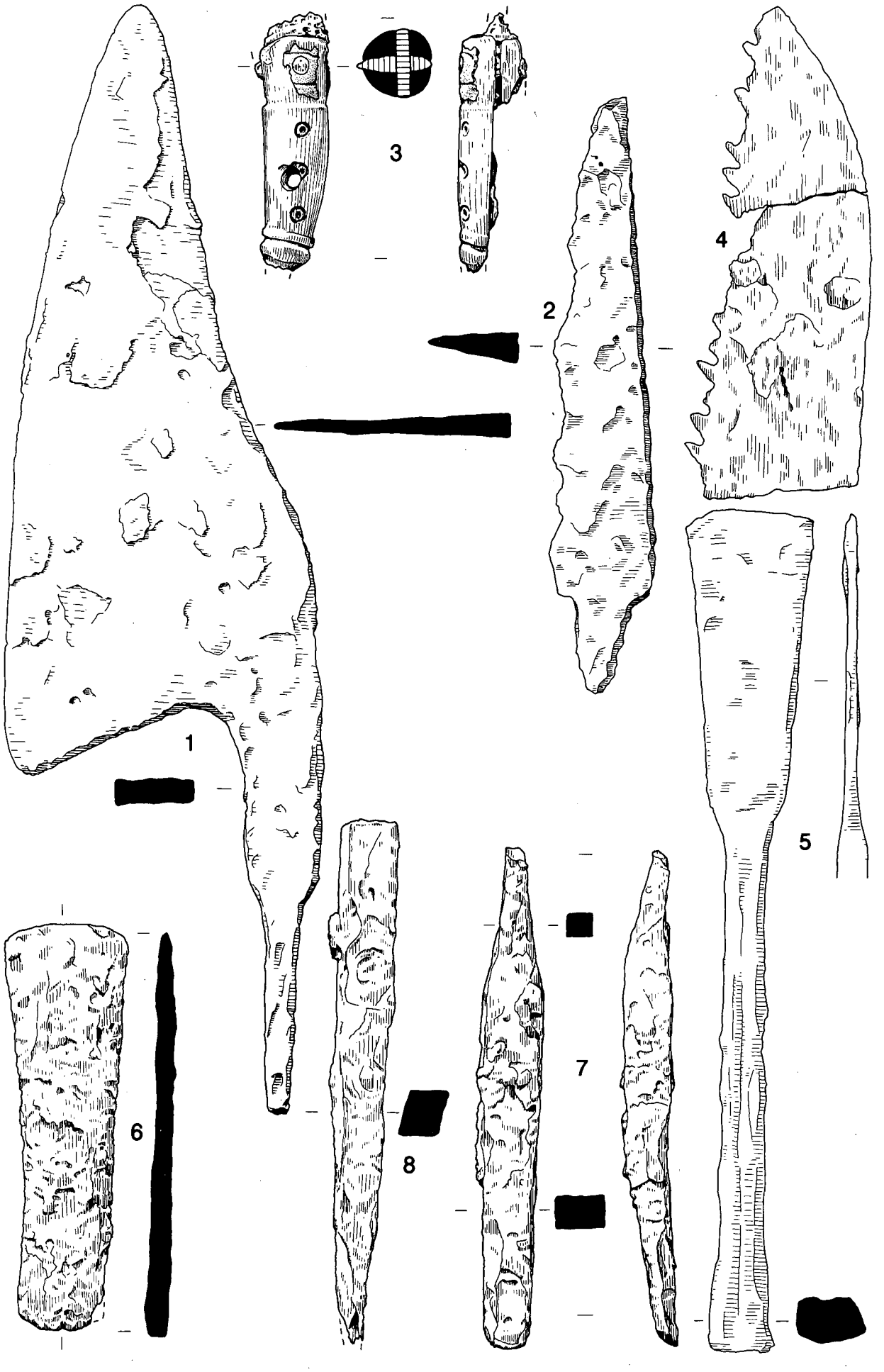


FIG. 70 Knives, nos 1–3; tools, nos 4–8; scale 1:1

4. Iron. An awl. The slender, square-sectioned stem tapers evenly from its mid-point to both ends. Both tips are pointed, suggesting its use, perhaps, as a leatherworking tool. Length 224 mm; maximum width 5 mm. *4638, Area V (081 041)* (Acc. no. 32)
5. Iron. A needle, with a round-sectioned stem, tapering gradually to a point. Towards the tip there is an indented area, pierced by a rectangular hole or eye, 8 mm in length. The size of this needle, and its stoutness, suggests its use in heavy-duty activities such as leatherworking or clothworking, if not actually as a packing needle (see Manning 1985, 36), though the eye of the needle is unusually placed. Length 196 mm; maximum width 8 mm. *3056, Area IV (018 102)* (Acc. no. 88)
6. Iron. A modelling tool, with a thin, square-sectioned stem, flattened at one end to form a spatulate blade. It has a small, domed head. This has the appearance of a custom-made object. Length 109 mm. *5494, u/s* (Acc. no. 39)
7. Copper alloy. A modelling tool, with round-sectioned shaft. One end is broken off, while the other is flattened to form a leaf-shaped, spatulate blade. Length 95 mm. *4991, Area IX (058 190)* (Acc. no. 117)
8. Lead and iron. Plumb-bob, with broken iron suspension hook in top. Weight 50 g. *u/s, metal detector find* (Acc. no. 1774)

AGRICULTURAL EQUIPMENT

by Derek Moscrop

A varied assemblage of material that may be collectively called agricultural equipment was recovered. It comprised a pruning hook (FIG. 71.9), part of what may possibly have been a pair of shears, seven ox-goads (FIG. 71.10), an ox-shoe, and two horse-fittings. A piece of plough coulter is more likely to be relatively modern in date. While all of this material is likely to be Roman, bar the plough fragment, none is diagnostic.

All the items of agricultural equipment are catalogued in the site archive and database, of which a selection are illustrated.

Catalogue of illustrated examples (FIG. 71)

9. Iron. A complete, small pruning hook, with a socket or ferrule for attachment to a wooden handle. A nail-hole half-way down the socket marks the point of attachment. The hook is formed by a curved blade whose cutting edge was noted during conservation as being somewhat pitted, but with no sign of any teeth. Traces of mineral-preserved wood were seen in the socket, but these could not be identified to species. Socketed pruning hooks are known from a number of sites in Roman Britain and are discussed as a group by Rees (1979). Length 68 mm; maximum diameter of socket 13 mm.*C1515, Building VII, Period 2* (Acc. no. 14)
10. Iron. Ox-goad, formed from a flat sheet of metal, rolled into a tube and butt joined, with a long spike at one end. Examination by Jacqui Watson showed that the mineral-preserved wood in the socket of the goad was possibly willow or poplar. Equivalent to Rees (1979) type 2 ox-goad. Length 62 mm; diameter 10 mm. *C6032, Building IX, Period 2* (Acc. no. 10)

3.8: INDUSTRIAL BY-PRODUCTS

BONE AND METALWORKING

by Iain Ferris

A certain number of objects was recovered which attests to working or manufacture on site, leaving aside evidence from industrial residues and from excavated features.

In addition to the recovery of fully made bone objects there are two objects that suggest bone working on site. A drilled bone from Building VIII (C1557), from the proximal end of a right fourth metacarpal of a horse (Stephanie Pinter-Bellows pers. comm.), would seem to be a practice piece, while three fragments of red deer antler from Building IX (C6032) have been only partially worked. Stephanie Pinter-Bellows writes: 'The first is the sawn outer surface of the beam, main axis of the antler, showing gutters, irregular grooves which run

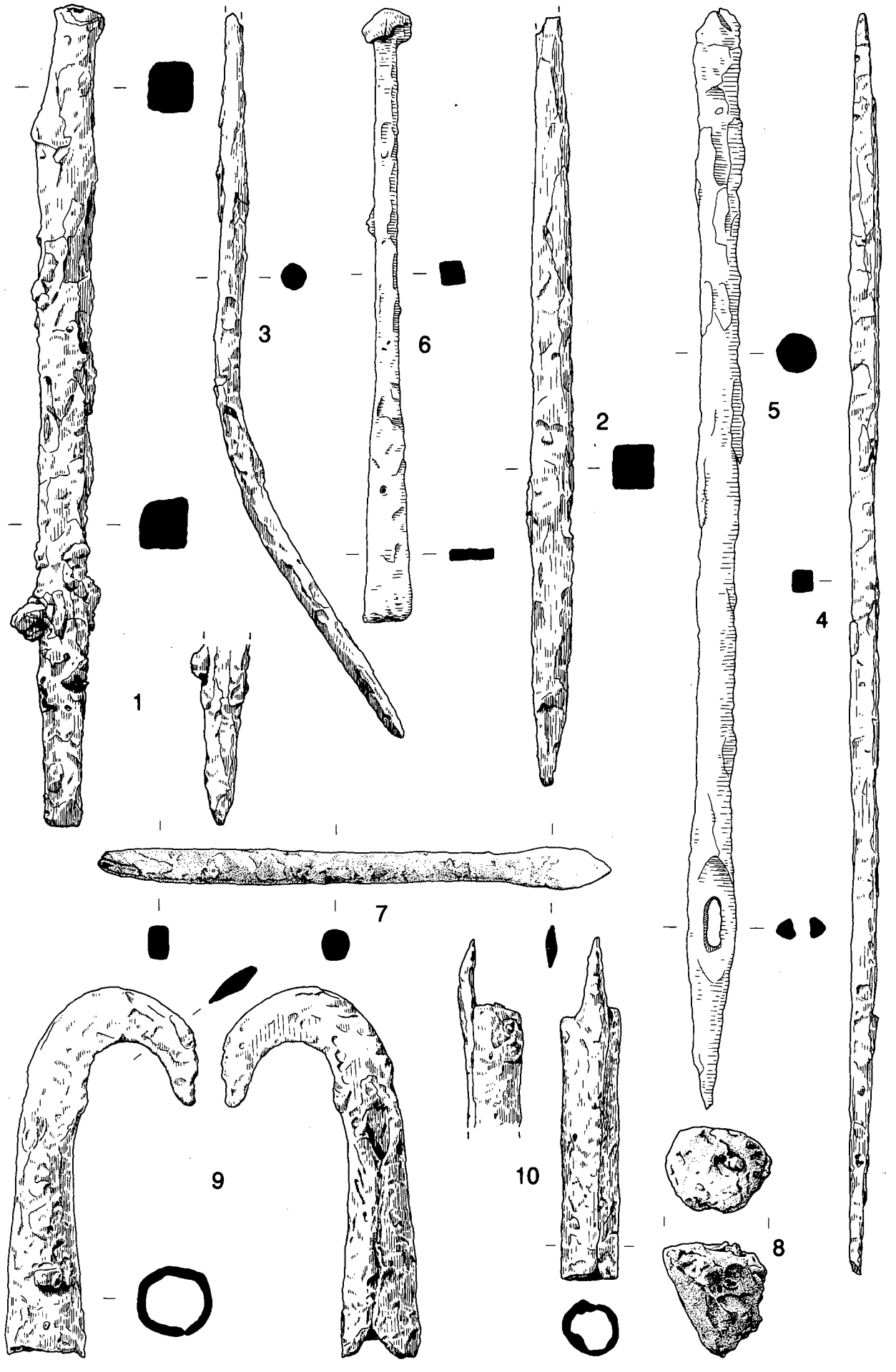


FIG. 71 Tools, nos 1–8; agricultural implements, nos 9–10; scale 1:1

along the length of the beam and tines, the second is part of the beam, the outer surface being cut off with a knife after soaking it, and the third is an off-cut of the beam just where a tine was attached'.

Ironworking could be attested by the presence of three short lengths of ?wire, an unfinished blade from Area IX (5022) and seven offcuts of rectangular-sectioned or square-sectioned rods of metal, but none of these was found in contexts that would support such an interpretation. In any case such material might be expected to be present in quantity around any similar site of the period. Residues (Starley, below) and possible metalworking tools (Moscrop, 3.7) were, though, found on the site.

No unfinished copper-alloy objects or non-ferrous metalworking residues were found, and the presence of two offcuts of square-sectioned rod is probably of no significance.

The finding of a lead ingot (FIG. 73.1) suggests the possibility of processing lead on or near the site. A lump of galena, weighing 552 g was found by a metal detector user, but none was found *in situ* in a Roman deposit. Similarly, there is no direct evidence from industrial residues for on-site lead working (Starley, below). The following quantities of non-object lead were found on site and some may represent working waste.

Spatter/spillage/melt	Sheet	Strip	Lumps	Total
4477 g	716 g	188 g	585 g	5966 g

INSCRIBED LEAD INGOT

by Roger Tomlin

Lead. Brick-shaped lead ingot, 228 x 106 mm, 35 mm high, weighing 8 kg, found near a hearth within a suspected building in Area VI (FIG. 73.1; PL. XXIIa). The sides of the ingot exhibit what appear to be four distinct laminae, but this 'striation' is due to continuous pouring of the molten lead into the mould at a comparatively low temperature. This mould was made of clay, and its bottom surface was inscribed while still wet, rather as tiles were sometimes inscribed, this inscription being reproduced in reverse and in relief on the top of the ingot. It reads retrograde: MINNIV S (Hassall and Tomlin 1993, 319–20).

Minnius is a personal name, that of the mould-maker or the lead-smelter. It occurs as a nomen in north Italy and Gaul (*CIL* V 1892 (ILS 5371); 7034, XII 1871). Compare *CIL* VI 3884 (a soldier in the Urban Cohorts, A.D. 197/8) and *Minius* as a nomen in north Italy and as a cognomen in Gaul (*CIL* V 1289; 7481, XIII 5780). It is also cognate with *Minianus* on a curse tablet from Bath (*RIB* 154 = *Tab. Sulis* 4). Roman lead ingots or 'pigs' from Britain bear formal moulded inscriptions (now published in *RIB* II, 2404) often dated, and the Fosse Lane ingot is unparalleled. However, many of the (British) lead ingots from the Ploumanc'h wreck off the north coast of Brittany, although much larger and differently inscribed, also bear personal names of similar form (Michel L'Hour pers. comm.). *3176, Area VI (014 114)* (Acc. no. 1713)

SLAG AND OTHER METALWORKING DEBRIS

by David Starley

Introduction

Out of 50 kg of slag and metalworking debris, 3 kg came from areas sampled by excavation and 47 kg from first-definition cleaning. In addition to the slags and metalworking debris a small number of amorphous copper objects were examined.

TABLE 15 SLAGS AND FERROUS METALWORKING DEBRIS

Class	Qty	Total wt (kg)
Tap slag	77	15.620
Dense ironworking slag	51	4.657
Smithing hearth bottoms	4	1.325
Probable smithing hearth bottom	3	0.975
Vitrified hearth/furnace lining	97	10.860
Non-diagnostic ironworking slag	84	6.180
Iron-rich cinder	45	4.430
Cinder	51	3.215
Iron objects	31	0.920
Stone, possibly ore	10	0.607
Ferruginous concretion	8	0.488
Slag cake	1	0.440
Fired clay	8	0.278
Stone	12	0.260
Fuel ash slag	14	0.188
Hearth/furnace lining	3	0.095
Burnt stone, possibly roasted ore	5	0.090
Tin/pewter	2	0.085
Unknown	1	0.015
Burnt clay	2	0.013
Coal	1	0.010
Ceramic	3	0.028
Charcoal	1	0.005
Bone	1	0.005

Slags and ferrous metalworking debris

Because of the need to provide a breakdown of the assemblage for computer plotting, all the material was examined visually, classified to type and weighed separately. The results of this examination are catalogued in archive. The types of debris found are listed (TABLE 15).

The largest, and most diagnostic component of the assemblage was that identified as 'tap slag'. These dense, fayalitic slags show a ropey flowed structure on their upper surface and little porosity. They form when molten slag is run off from a smelting furnace and provide clear evidence of iron smelting, i.e. the primary production of metallic iron from the ore, and are typical of Roman iron smelting. 'Dense ironworking slags' lack the characteristic flowed surface, but are of similar consistency to tap slags and also derive from iron smelting. Further evidence for smelting activity was found in the tentatively identified 'slag cake' and the iron-rich 'stone, possibly ore', some of which appears to have been roasted, and may have provided a viable source of iron.

Slags diagnostic of smithing activity were less frequently observed. Some pieces were identified on morphological grounds as probable 'smithing hearth bottoms'. However they did not conform well to the characteristic form, which has an irregular, convex underside and an upper surface which is flatter, or slightly hollowed, from downwards pressure from the air blast of the tuyère, and has a smoother, vitrified appearance. The evidence of ironsmithing is generally much less certain than that for smelting. The one exception to this was a small quantity of material subsequently recovered from a small pit during a watching brief, and examined at a later date, together with some other material which had previously been misclassified. Debris from the pit included four well-formed 'smithing hearth bottoms' (TABLE 16) and some flake and spheroidal 'hammer scale', both of which provide good evidence of iron smithing although the size of the assemblage and of the hearth bottoms themselves is very small and therefore provides evidence of no more than very limited scale iron smithing.

'Vitrified hearth/furnace lining' fragments may derive from iron smelting or smithing

TABLE 16 SMITHING HEARTH BOTTOM DIMENSIONS

	Range	Mean	Std dev.
weight (g)	135-460	330	125
length (mm)	60-110	85	20
width (mm)	50-80	70	10
depth (mm)	30-50	40	10

structures or those used for other high temperature processes. The material forms as a result of a high temperature reaction between the clay lining of the hearth/furnace and the alkali fuel ashes or fayalitic slag. The fragments generally show a compositional gradient from unmodified baked clay on one surface to an irregular cindery material on the other. The slag attack of the Fosse Lane material was more than superficial and this would tend to suggest that the lining once formed part of a smelting furnace.

Material classed as 'ironworking slag' is fayalitic (iron silicate) slag with a relatively dense structure. As very similar material can be produced both by iron smelting and smithing, the slag is not diagnostic.

'Cinder' tends to be of a relatively light, highly porous but hard and brittle nature, and forms as a result of high-temperature reactions between the alkali fuel ashes and any available source of silica, such as sand used as a flux during smithing or fragments of clay which have spalled away from the furnace lining. 'Iron-rich cinder' has a similar appearance, but has a significant iron content making it denser. Both materials are thought to be indicative of ironworking, but it is not possible to determine whether this is iron smithing or smelting.

'Fuel ash slag' is a very lightweight and normally light-coloured (grey-brown), highly porous material that results from the reaction between alkaline fuel ash and silicates from soil, sand or clay at elevated temperatures. The reaction is shared by many pyrotechnological processes and the slag is not diagnostic.

The 'ferruginous concretion' is likely to have been formed as a result of iron panning. The redeposition of iron hydroxides is a natural phenomenon although the process may have been enhanced by the nature of the surrounding archaeological deposits. Although 'bog ore' provided a source of iron for smelting in antiquity, the ferruginous concretions examined would appear on initial examination to be insufficiently rich in iron for successful smelting in the bloomery furnaces of the period.

Distribution of ironworking debris

As noted above, only a small proportion of the metalworking debris was excavated stratigraphically, the bulk being recovered after stripping and cleaning of a large area of the site. EDM recording of this material allowed distributions to be plotted and different categories of material to be compared (AutoCAD plots in archive). Distributions of slags characteristic of iron smelting (i.e. tap slag and dense ironworking slag) and iron smithing (i.e. smithing hearth bottoms and possible smithing hearth bottoms) were compared with the 'background' distribution of non-diagnostic ironworking slag. Smelting slags are almost as widely distributed as non-diagnostic slag, with the exception of the extreme south-western corner of the site (Area V) which produced very little smelting debris. High concentrations of smelting slag are evident at two locations in Area VI and another, apparently within Building I, although the stratigraphic relationship between the building and the slag cannot be judged from the plots. Although slag characteristic of smithing is not well represented in the assemblage, its distribution shows no examples from the north of the site, or from the area around Building I. Within the main area studied, smithing hearth bottoms came only

from the western edge of Area VI and from Area V. It is probable that these distributions represent the peripheral dumping of material, rather than the immediate location of the iron extraction/working. Initial concern that the slag distributions relate to road surfaces do not appear to be borne out by the distribution plots. It might be expected that the distribution of vitrified hearth/furnace lining fragments more closely reflects the site of the smithing, smelting activity than the slag, however, the distributions largely coincide. One exception is a spread coinciding with Building IX, where significant quantities of hearth/furnace lining were not matched by ironworking slag. This could result either from slag being disposed of elsewhere, or a high temperature process which did not involve iron.

As mentioned above, remarkably little slag was recovered from the fully excavated parts of the site and this paucity of material is possibly more significant than its presence. Had ironworking or smelting been an important activity during the occupation of the site then the debris of these activities would have been more evident. Occasional slag lumps, such as the probable hearth bottom from Building VII (Period 2) might indicate contemporary, itinerant, smithing activity. The only tap slag associated with the first five periods was very small, isolated fragments and the possibility that these are intrusive should be considered.

Non-ferrous metal objects

Ten samples which were thought to relate to non-ferrous metalworking were visually examined (TABLE 17). The classification of five of these was confirmed by qualitative X-ray fluorescence (XRF) analysis.

TABLE 17 NON-FERROUS METAL OBJECTS SAMPLES

Context/find	Wt (gm)	Interpretation, comments
C1379, Bldg. VIII	4.0	Cu alloy* spill
C1514, Bldg. VII	2.0	Cu alloy* spill
826, Area V	0.6	Cu alloy spill
1314, Area IV	46.4	Sn/Pb alloy*, poss. pewter
1916, Area IV	1.3	Cu alloy spill
2768, Area V	3.1	Pb/Cu obj.*
3133, Area II	20.8	Cu alloy spill
3292, Area VI	2.5	fuel ash slag* no metal traces
4752, Area VII	1.3	Cu alloy spill
4844, Area VII	0.8	Cu alloy spill
C6033, Bldg. X	1.2	Cu alloy spill

* Confirmed by XRF-analysis

The amorphous form of these corroded copper-alloy objects does resemble spills of metal associated with the casting of small artifacts. Similar results could, however, also be obtained when small objects were accidentally melted, for instance when a building caught fire. The fragment of fuel ash slag showed no traces of non-ferrous metals, and could derive from one of many high temperature processes. The absence of crucibles, mould fragments or other evidence of metal casting debris is also notable. On balance, there would seem to be insufficient evidence to support non-ferrous metal casting on the site.

Conclusions

The metalworking slag assemblage contains a wide variety of ironworking debris, but the significance of this to the life of the settlement is not easy to establish. Of the diagnostic slags, those associated with smelting iron predominate. The smelting furnace employed is

likely to have been the Roman shaft furnace which produced slag in a sufficiently liquid state to enable it to be tapped from the furnace. However, the quantities of tap slag recovered are small when compared with the possible output of such a furnace, and the probability is that the site was peripheral to any iron extraction activities. Very little of this slag was found within the stratigraphically excavated areas of the site, and it would therefore seem likely that iron smelting took place towards the end of the occupation of the site. Some smithing, i.e. hot working, of iron is also attested by slag although this is even more limited in extent. A number of hearths are recorded from the excavation, but there appears to be no close association between these and the ironworking debris. There is insufficient evidence to support non-ferrous metal casting.

3.9: FUNERARY AND RITUAL

STONE COFFIN

by Fiona Roe

The coffin from F120, Area II (FIG. 72.1, 2; PLS VII and VIII) is made from three large segments of stone, two of which appear to be re-used architectural pieces, with lead sheeting to cover the joins. A lid of two further re-used pieces appears to be of similar stone. There is no specific dating, though the late fourth century is likely. A small sample of stone from a broken piece of the coffin proved to be the local Downside stone, available in Shepton Mallet itself and from outcrops just to the north of the town (Green and Welch 1965, 91). This was also used for a possible column base (F402; 1404), but has not been recorded before in use for a coffin. Ham Hill stone seems to have been the more usual material in this region, and was utilised for eight coffins at Poundbury, Dorset (Mills 1993, 133) and at least four at Ilchester (Leach 1994a, 97–8). There were also four mausolea at Poundbury in association with stone coffins (Farwell and Molleson 1993, 64), as was the Fosse Lane coffin, and this would seem to indicate burials of high status.

Lead strip from stone coffin
by Stephen Minnitt

A carefully cut piece of sheet lead (FIG. 72.3; TABLE 18) was used to cover four internal joins (along the base, either end and one side) in the composite stone coffin excavated in F120 and described above (FIG. 72.1, 2). It ran along one side of the base with bent-up uprights at either end and on one side. In each case the verticals stood to the height of the stone coffin side at that point. The lead strip was composed of two 'soldered' together lengths, the 'solder' in this case was not analysed. The verticals had been nailed to the coffin sides by the use of three nails in the side section, two nails at the higher end and one at the lower. The purpose of this strip is unclear, it clearly cannot have performed any structural function. *4285, F120, Area II, Period 4.*

TABLE 18 LEAD STRIP DIMENSIONS

Measurement	Dimension	Comment
Length of horizontal	1.9 m	the soldered junction occurs at the 0.98/0.9 m point
Height of verticals - ends	0.3 m and 0.32 m	
Height of verticals - side	0.32 m	

The width is constant at 0.20 m except for the side vertical which is 0.16 m

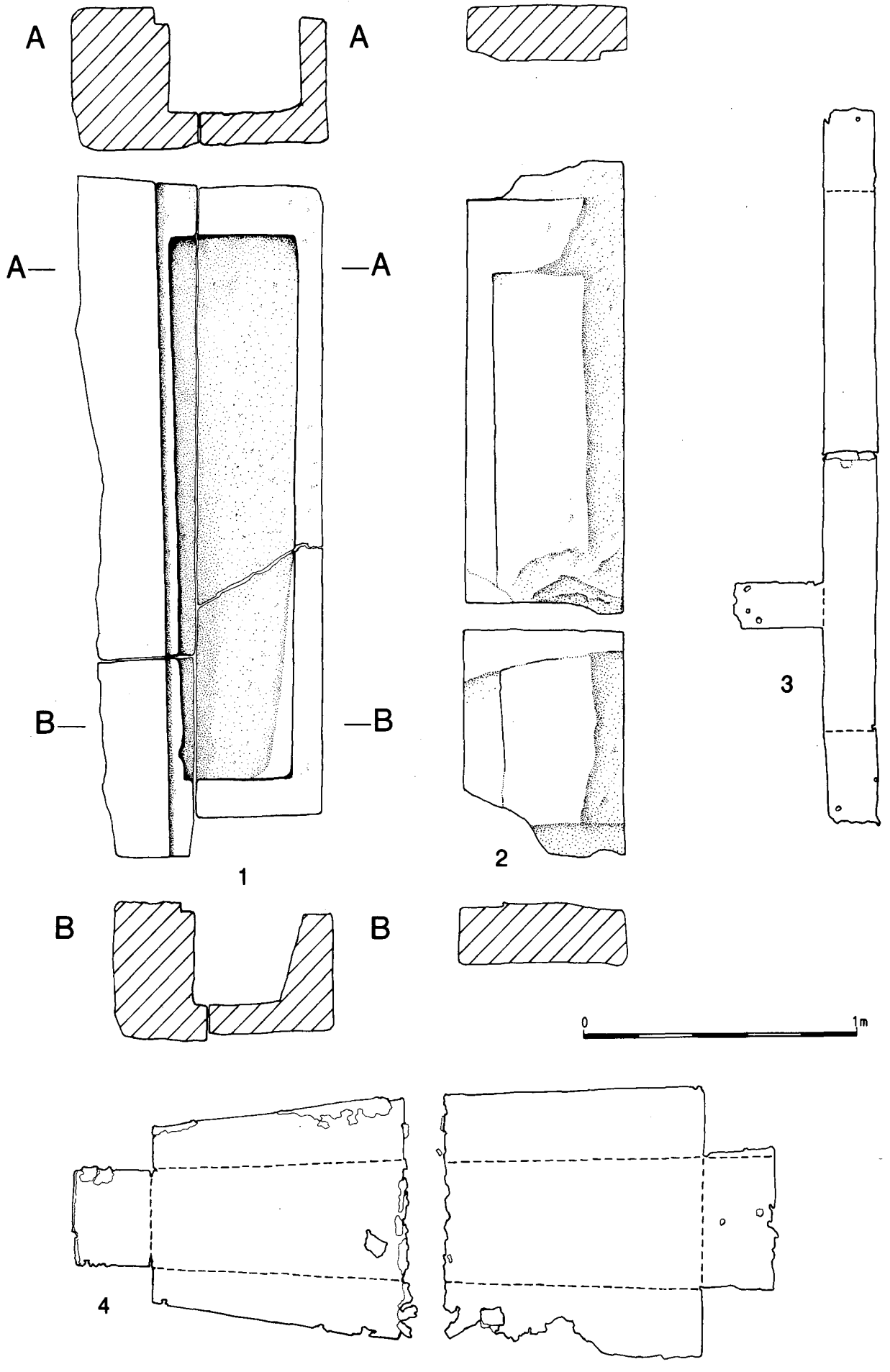


FIG. 72 Stone and lead coffins, nos 1–4, scale 1:20

LEAD COFFINS

by Stephen Minnitt

Coffin 1

The coffin (FIG. 73.5) was discovered in August 1987 by Steve Search whilst metal detecting. His investigation extended to digging down and exposing the full length of the lid which he raised at the wider end to confirm the presence of a burial. The discovery was reported to the Somerset County Museums Service and a site visit was made. The hole was then refilled to conceal and protect the coffin. Concern about the security of the coffin led to its excavation and removal in 1988. Lack of overnight security meant that the excavation had to be completed in the space of one day. To accomplish this the coffin was lifted with its contents *in situ* and transported to the Somerset County Museum, Taunton, where the burial was excavated (HB 1: Pinter-Bellows, below).

A 3 x 4 m area was opened to allow investigation of the immediate surround of the grave and enable identification of any associated structure. In the event none was found, but its context within the small inhumation cemetery of Area III was subsequently established during the excavations of 1990. The coffin lay in an east-south-east by west-north-west orientated rock-cut grave, relocated in 1990 and identified as F29 (FIG. 10; PL. II). Packing stones had been placed around the coffin. The presence of iron nails shows that there was originally an outer wooden coffin. Fourteen nails were found in the grave fill, spaced irregularly along the sides and ends, and a further seven were found within the fill of the coffin. Four, or possibly five, nails had been driven through the base of the wooden coffin and had pierced the base of the lead coffin. Adhering to one of the latter nails was a fragment of mineralised wood providing a thickness for the wooden coffin base of 16 mm at that point. As a group, the nails ranged from 75 to 110 mm in length, all had shanks of square cross section. Surviving heads are all of flat-head form with diameters varying between 15 and 28 mm. No other fittings relating to the wooden coffin were found. The lead coffin was completely filled with earth. Amongst the fill were 20 sherds of Romano-British pottery, derived from a similar number of vessels. The sherds were all small, up to a maximum of 50 mm across, and distributed throughout the fill and had undoubtedly entered the coffin through natural processes along with the earth fill itself. *F29, Area III, Period 5*

The lead coffin and its lid were constructed from six separate sheets of lead — lid, base, sides and ends (FIG. 73.5). This relatively unusual mode of construction conforms to Toller's type 4 (Toller 1977, 11). The sides were attached to the base by the use of what appeared to be solder. The cut surface of a sample of solder and a sample of sheet lead were analysed qualitatively using an X-ray fluorescence analyser by David Starley of the Ancient Monuments Laboratory. Both samples proved to be pure lead with no significant tin content, demonstrating that the lead sheets were welded together rather than soldered using a low melting point lead-tin alloy. Additional strength was provided to the fixing of the base to the foot-end panel and to the mid-sections of the sides by the attachment of narrow lead strips to the outer face of the joins. The side and end panels apparently simply abutted each other, though at the foot-end the sides were folded around the end to give some additional strength.

The width of sheet lead used for the side panels varied from 0.23 m at the foot to 0.43 m at the head. The sides had been folded across the body in a tapered manner to give a horizontal top to the coffin. The fold ran from nothing at the foot, where the 0.23 m represented the height of the coffin, to approximately halfway across the width of the coffin at the head-end. The head-end panel was similarly folded forward over the skull. The side folds overlaid the end fold. Details of these folds, whether angular or rounded, have been lost due to the post-burial distortion suffered by the coffin. The likely positions of the folds are illustrated on FIG. 73.5 as a dotted line. The foot-end panel rose some 40 mm above the height of the adjacent sides. At the time of excavation the top portion of this panel was bent outwards, but

it is uncertain whether this was its original form or whether it stood vertically proud of the sides.

The truncated pyramid-shaped lid has slight folds running parallel with the two sides and wider end, all the result of post-deposition distortion. A 50 mm-wide section was, however, intentionally bent downwards at right angles to the rest of the lid at the foot-end.

TABLE 19 COFFIN 1: DIMENSIONS OF COMPONENT SHEETS
(as near as the distortion will allow)

Component	Measurement	Dimension
Base	length	1.77 m
	width (head)	0.46 m
	width (foot)	0.30 m
Sides	length	1.82 m
	height (head)	0.43 m
	height (foot)	0.23 m
Head-end	height	0.42 m
	width	0.47 m
Foot-end	height	0.28 m
	width	0.27 m
Lid	length	1.90 m
	width (head)	0.51 m
	width (foot)	0.34 m

The thickness of the sheet lead ranged from 2.5 to 8.5 mm

Three samples (from the lid, base and one side) were submitted to Dr H. Gale, Department of Earth Sciences, University of Oxford, for lead isotope analysis who reported as follows: 'the isotopic compositions are identical within the experimental error of a little less than 0.1%. This shows that all parts of the coffin were made of lead coming from the same ore deposit. The lead isotope data is fully consistent with the lead having come from lead ores from the Cornish mines of Great Wheal Baddern, Wheal Mary Anne and St Teath or the Devon mine of Christow Valley. Lead isotope analyses of no other British lead mine so far analysed match the coffin. There are very few modern, accurate lead isotope analyses of British ores so that the database of comparanda is at present very limited.'

Whilst not wishing to totally exclude the possibility of an alternative source for the lead used to make the coffin, it would be most unexpected if it derived from a source other than the Mendips. A need clearly exists to build upon the lead isotope database using samples from the specific areas of Mendip where lead was exploited in the Roman period and from artifacts, such as locally found lead pigs, which are undoubtedly of Mendip lead.

Coffin 2

A coffin from Area II, of Toller type 10 (Toller 1977), was also of unusual construction (FIG. 72.4; PL. IX). It was made in two parts joined transversally across the centre. The end and sides in each case were bent upwards at right angles to the base. At the foot-end the sides and end simply abut each other whilst at the head-end the edges of the end section have been hammered around the sides to provide additional support. At neither end was solder or welding used on the joins. The dimensions of the open end of each section were such that one could fit inside the other. The two halves of the coffin were joined at the point of overlap. Analysis by X-ray fluorescence of the 'solder' and a sample of lead sheet produced the same results as for coffin 1, both were pure lead. The two halves had therefore been crudely welded together. *3941, F106, Area II, Period 4*

One side of both halves of the coffin comprised the irregular edge from the end of the 'run' when the sheet lead was made. In both cases additional lead had been poured after cooling had begun to extend the run presumably in an attempt to give a straighter edge to

the sheet. The result was only partially successful, one side in particular has a rough and irregular top edge dropping at one point to a height of only 0.11 m.

The height of the foot-end stands 0.15 m above the height of the adjacent side. The end stands straight lacking any evidence for its having been folded, this height differential must therefore have been a feature of the coffin. There was no lead lid.

The presence of iron nails in the grave fill indicates an outer wooden coffin which would have concealed the crude nature of the lead casket.

TABLE 20 COFFIN 2: DIMENSIONS

Component	Measurement	Dimension
Head section	length	0.93 m
	width (head)	0.46 m
	width (open end)	0.41 m
	height of end panel	0.26 m
	height of sides	0.11–0.26 m
	thickness of lead sheet	1–8 mm
Foot section	length	0.92 m
	width (feet)	0.34 m
	width (open end)	0.42 m
	height of end panel	0.30 m
	height of sides	0.13–0.22 m
	thickness of sheet lead	2–4 mm

ALTAR

by Fiona Roe

The fragment of an altar (not illustrated) from above Building IX is made of oolitic limestone from Bath (5450). This is a freestone, and so suitable for sculptural ornament, which in this case has not survived. A more complete altar, also made of oolitic limestone, was found at Sea Mills, Bristol (Henig 1987, 65, fig. 30).

AMMONITE

by Fiona Roe

Part of a large ammonite was found in a grave in Area II (F110; 4038). Ammonites must have been familiar if puzzling objects to those living on or near Jurassic strata. Very small ammonites were collected and perforated, possibly to wear as beads, at South Cadbury, Meare and Glastonbury (Roe forthcoming; Bulleid and Gray 1917, 584; Gray 1966, 89).

SILVER PENDANT WITH MONOGRAM CROSS

by Catherine Johns

The pendant consists of a silver disc with four projecting arms forming a cross (FIG. 73.2; PL. XXIIb; and cover). The disc bears the device of a monogram cross executed evenly and accurately in simple punching. The arms and the longer shaft of the cross are slender projections onto which silver beads of double-reel shape are threaded, one for each arm and two for the foot: the ends of the projections are hammered flat to retain the beads. The upper element of the cross is formed on a similar double-reel bead soldered horizontally to the edge of the disc, thus forming a suspension loop.

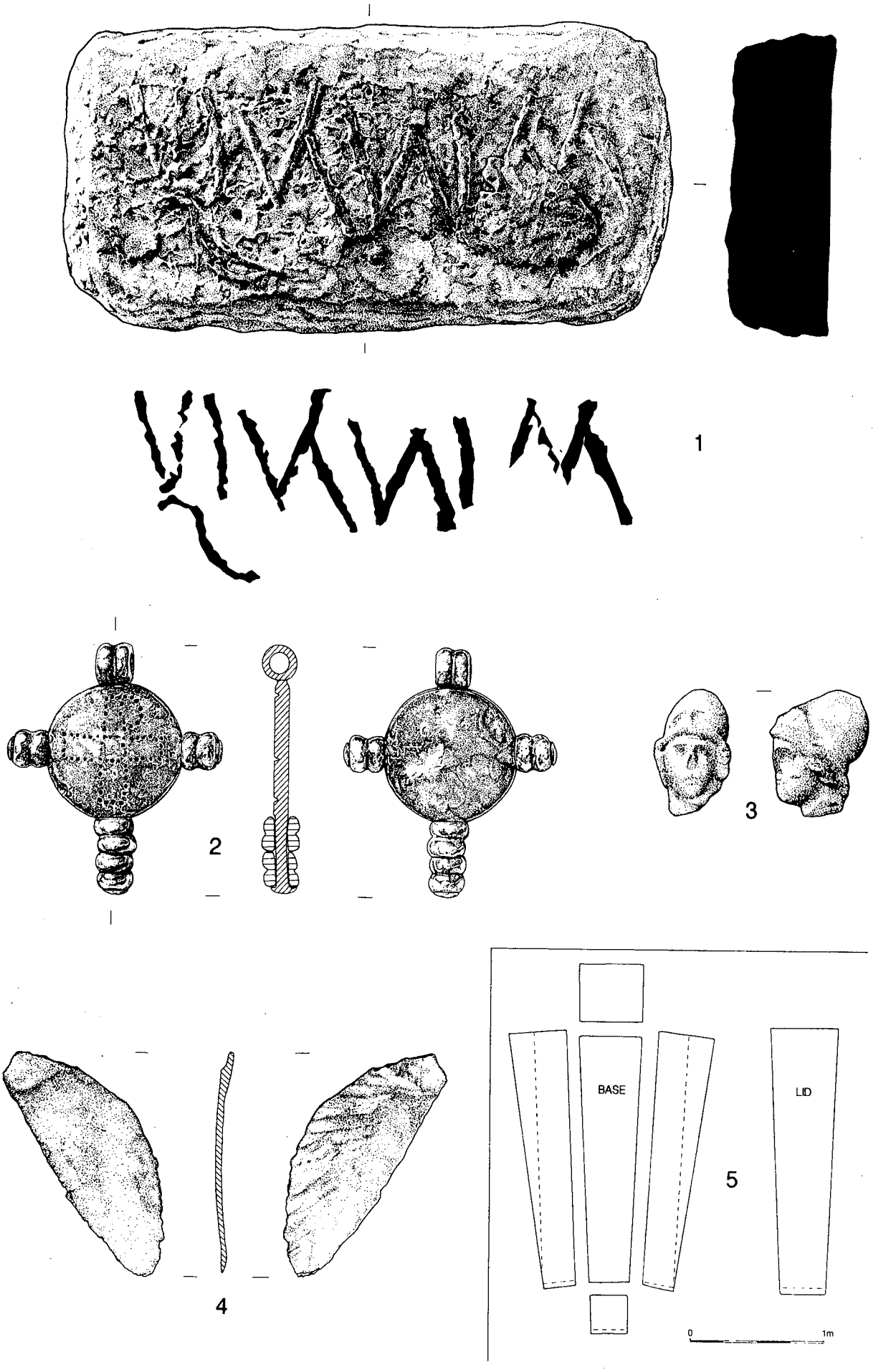


FIG. 73 Lead ingot, no. 1; silver amulet, no. 2; votive objects, nos 3–4; scale 1:1; lead coffin, no. 5 F29; scale as shown

PL. XXIIa Lead ingot *(3176, Area VI)*, inscribed MINNIVS. (G. Norrie)

PL. XXIIb Silver pendant with punched monogram cross from grave F50, Area III, scale 1:1 approx. (G. Norrie)

There is a blackish patina on the obverse and reverse of the disc. The back surface of the disc is uneven, with two marked irregular hollows. There is some dark patina on the beads which form the shaft and crosspiece of the cross, but there are also rubbed areas where the bright metal shows through. Measurements: disc: 25 mm diameter, *c.* 1.75 mm thick; beads: length 6 mm, diameter 7 mm, diameter of perforation 4 mm; arms: 7 mm long; foot: 13 mm; overall height: 45 mm; overall width: 39 mm; Monogram: height 19 mm, width 18 mm. Weight: 21.4 g. Metal: silver 92.6%, *C0999, F50, Area III, Period 5*

Discussion

The Fosse Lane pendant is unique, not merely in Britain, but as far as this writer can ascertain, elsewhere in the Roman Empire as well. The standard Constantinian form of the Christian monogram is well represented in fourth-century Britain (Thomas 1981, 85–91), but the more developed monogram cross seen here is exceedingly rare. The dating of this form of Christogram is conventionally believed to run from about the third quarter of the fourth century in the Mediterranean area, and there is no reason to doubt that it could have evolved independently. There are, indeed, engraved monogram crosses on some very late Roman

spoons from Britain, as well as some simple graffiti, but only one close parallel is yet known for the form and technique seen here.

This solitary parallel for the form of the monogram is on a parcel-gilt silver brooch from Sussex acquired by the British Museum in 1954: it has no precise provenance or detailed history (British Museum registration number 1954–12–6.1). The Sussex brooch is a crossbow variant of unique type, incorporating a stylised boar's head with inlaid eyes as the bow. The animal head faces a silver disc placed over the head of the pin; the three terminals are reels similar to those forming the arms of the Fosse Lane pendant rather than the usual onion-shaped terminals found on crossbow brooches. On the disc is punched a monogram cross of a form which is strikingly similar to that of the Fosse Lane amulet, even to the extent that in both inscriptions the curve of the rho is a single line of punch-marks while the upright and cross arms are double lines. The overall visual similarity between the Fosse Lane pendant and the head end of the Sussex brooch is very striking.

Typologically, therefore, our silver cross pendant stands alone: the only comment which can be made about the dating is that it must be late, perhaps into the fifth century. The Sussex brooch itself is problematic as far as date is concerned. Precious-metal jewellery was manufactured in Roman Britain and no doubt continued to be made in a Roman tradition after the formal ending of the Province. Unusual and idiosyncratic forms may well have increased in the late period. Finger-rings such as the well-known group from Amesbury (Kent and Painter 1977, nos 141–3) are a case in point, belonging to a distinctive late Romano-British type. The Amesbury rings were found in 1843 in a coin hoard with a deposition date of *c.* A.D. 395.

The metal of the Fosse Lane cross is also unique for a Roman object, in that its composition very closely resembles that of modern sterling silver. Analysis of the Sussex brooch, on the other hand, has revealed a metal composition typical of ancient silver. Several hundred analyses of ancient silver (Roman, Byzantine, Sassanian) have been published, and none has so far been found which resembles the composition of the Fosse Lane pendant. If it were a stray find, there would certainly be serious doubts about its antiquity, but in view of the archaeological context, it seems wise to keep an open mind, and hope that future discoveries may produce evidence which will resolve the apparent contradiction.

Working on the assumption that the amulet is late Roman, its importance ranks with finds like the silver treasure from Water Newton or the mosaic floor from Hinton St Mary, making it an early Christian object of international significance. Roman Britain has produced not only abundant evidence of Christianity in the fourth century, but an impressive number of exceptionally important Christian objects. In this respect, despite its unusual features, the Fosse Lane cross fits in with an established pattern (Hassall and Tomlin 1993, 320).

VOTIVE OBJECTS

by Martin Henig

Catalogue (FIG. 73)

3. Heavy leaded bronze head of the goddess Minerva wearing a Corinthian helmet (FIG. 73.3). The crest is now lacking as is the body of the figure. The features are regular and well modelled and the figurine was evidently of high quality. Height 22 mm. Compare Oggiano-Bitar (1984, no. 205; from Arles) and Menzel (1986, no. 77; Cologne) for small bronzes with similar refined features. The bronze probably dates from the second century. *u/s, metal detector find.*
4. Piece of copper-alloy sheet, leaf-shaped, with a rough pattern of shallow, oblique grooves around a curving edge to which it appears to provide a decorative border (FIG. 73.4). Length 45 mm. Although such rilling is to be seen on votive plaques (*RIB* II, nos 2432.4, from Godmanchester and 2432.6, from Uley) these tend to be thinner. Also there is no trace of an inscription upon the piece of sheet from Fosse Lane, whose function must remain uncertain. *u/s, metal detector find.*

3.10: HUMAN REMAINS

THE HUMAN SKELETONS

by Stephanie Pinter-Bellows

Summary

A total of 45 late and post-Roman inhumations and one cremation were recovered. While the majority of the skeletons were found in three distinct groupings, no non-metric or metric traits set any of the groupings apart. As far as can be determined from their stature and the relatively low rate of pathologies, this appeared to be a healthy population sample. A difference in the prevalence of caries for males and females implies that there may be a difference in the composition of the diet between the sexes.

Material and methods

Almost all of a total of 45 inhumations and one cremation, together with a very small amount of redeposited bone, were recovered from the southern half of the site. The skeletons were found in three distinct groupings (five of Period 4 in Area II, nine of Period 5 in Area IV, and sixteen of Period 5 in Area III), and a few isolated burials. It is not certain whether other groups of burials for this community exist outside the excavated area, or even in unexcavated areas within it, although both possibilities are suspected. It must be kept in mind throughout this report that the relatively small numbers mean that the description of the individual skeletons does not necessarily accurately reflect the mortality conditions which prevailed generally during the late or early post-Roman periods.

Because of the nature of the excavation, the skeletons were all recovered by hand with no sieving taking place. In the laboratory, the skeletons were cleaned with water and no preservative was applied. An inventory was made of the bones and teeth from each skeleton, including the completeness of the articular ends and shaft of each bone. Standard metric and non-metric data was recorded; information on sexing and ageing characteristics was collected; and bone and dental pathologies were noted. A summary of this inventory is available in the archive.

The demographic characteristics of each skeleton were established following the criteria and procedures presented in Bass (1971), Brothwell (1981), Phenice (1969), and Stewart (1979). Priority for gender determination was given to innominate morphology. Cranium morphology was also used, and, whenever possible, supplemented by univariate measurements of the femur and humerus head, the glenoid fossa of the scapula, the maximum length of the talus; and other robusticity indicators. Morphological traits of the pelvis and cranium from skeletal series of known sex are reported generally to be around 95% accurate (Krogman 1962), univariate measurements range from 80 to 90% accuracy (Buikstra and Mielke 1985; Dittrick and Suchey 1986; Steele 1976). Sexing was only attempted for adult skeletons (a term used here to indicate those above the age of approximately 20 years).

Subadult age was determined through dental development (Downer 1975), diaphysis lengths (Scheuer *et al.* 1980; Workshop of European Anthropologists 1980) and epiphyseal union (Krogman 1962; Brothwell 1981). Adult age was evaluated using the recommendations of the Workshop of European Anthropologists (1980) for pelvis and cranium, Suchey *et al.* (unpubl.) for pubic symphysis metamorphosis, Lovejoy *et al.* (1985) for auricular surface metamorphosis, and Miles (1962) and Brothwell (1981) for dental attrition. A range of possible ages was first established, using all indicators applicable and then a final best estimate of age was determined by the smallest range of agreement among the indicators.

The regularity of adult osteological maturation processes is under debate at the moment,

as is the precision and accuracy to which adult skeletal age can be estimated. Acsádi and Nemeskéri (1970) whose complex method is advocated in the recommendations of the Workshop of European Anthropologists (1980) claims an accuracy of 80–85% with a margin of error of two to five years. However, when Molleson (1993, 167–72) used this method on the Spitalfields sample of known age only 30–35% were accurate to within 5 years, 75% were assessed within fifteen years. Molleson (1993, 171) does caution that there might be a specific environmental or genetic component to the moderate performance of the method on the Spitalfields sample. This does again underline that the age profile of a skeletal population sample should only be considered in the most general manner. Large age intervals were used in this report for the adults in an attempt to prevent the over-ageing of younger individuals and the under-ageing of old individuals distorting too much the demography of the adult sample. The adults here have been separated into three groups: young adults (20–29.9), middle-age adults (30–49.9), and old adults (50+). As children's maturation is considered to be a more regular process than that of adults, the subadults have been divided into more age categories: foetal–birth, birth–0.9 years, 1–4.9, 5–9.9, 10–14.9, 15–19.9. One other category is also used: adults age unknown.

Measurements were taken following descriptions in Bass (1971) and Brothwell (1981). Stature was calculated following Trotter (1970). The formulae for stature used individual bone lengths; however, it should be noted that the limb proportions for this population could differ from the modern Americans of north European ancestry used as a reference population, so the formulae are not necessarily appropriate. Cranial non-metric variants were recorded as described by Buikstra (1976) and the post-cranial non-metric variants following Finnegan (1978). Pathological conditions were evaluated through gross anatomical observation and radiographic examination. Criteria for probable diagnosis stemmed from Steinbock (1976), Ortner and Putschar (1981), Rogers *et al.* (1987), and the experience of Dr Juliet Rogers and the Paleopathology Group at Bristol. Coding for dental pathologies followed Hillson (1979).

Condition and taphonomy

The preservation of the majority of the skeletal material was good (TABLE 21). Preservation was scored as good, fair or poor on the basis of a visual inspection of the remains. Of the total, 64% were in good condition, 27% fair and 9% poor. Poor preservation was often found in shallow grave cuts.

TABLE 21 CONDITION OF SKELETONS

Good		**Fair**		**Poor**	
n	%	n	%	n	%
29	64	12	27	4	9

The degree of completeness varied. 40% were over 80% complete, but 20% had less than 20% of the skeleton present (TABLE 22). Again, the less-complete skeletons are more often found in the shallow graves and those disturbed by mechanical excavation or agriculture.

TABLE 22 DEGREE OF COMPLETENESS OF SKELETONS

<20%		***c.* 20–40%**		***c.* 40–60%**		**60–80%**		**>80%**	
n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
12	27	7	16	2	4	6	13	18	40

An examination has been made of patterns of bone absence caused by differential destruction of skeletal elements in the soil and those brought about by differential recovery during excavation following methods used by Mays for adult burials (1992). This examination included all skeletons except those of the infants under 0.9 years of age. Few of the infants were found in grave cuts and thus identified as human at the time of excavation; therefore, different excavation biases occurred in these cases. The representation of each element (RepT) was calculated by expressing the total number of an element present as a percentage of that expected if all burials were represented by complete skeletons. A skeletal element was recorded as present if it was represented by a complete or incomplete bone. A comparison was made between the patterns of relative representation of the assemblage as a whole and that of the assemblage divided into skeletons found in a good state of preservation (n=22) as opposed to those found in a fair or poor state of preservation (n=15). The representation of each element according to preservation was made by calculating separately the elements from burials in a good state of preservation and those from burials in a fair or poor state. The measure of the relative deficit of the skeletal elements from burials in fair or poor preservation was compared with those from well-preserved ones (RepP/G) by expressing the element from the fair and poorly preserved burials as a percentage of the well-preserved ones, the result multiplied by 100.

FIGURE 74 shows RepT and RepP/G for each skeletal element. The data from RepT in the figure are listed in sequence, with the bones with the lowest values at the top and those with the highest at the bottom. The pattern of relative representation of different skeletal elements in the assemblage as a whole (RepT) may be considered a result of a combination of preservation and recovery factors. With the RepP/G, the smaller the percentage, the greater its deficit in poorly preserved compared with well-preserved burials and, by implication, the greater its vulnerability to destruction in the soil. If preservation factors alone influenced the relative representation of elements, RepT would have the same rank order as RepP/G. Much of the rank order is the same, showing that preservation did play a large part in determining which bones would be available for study. Bones which appear to preserve poorly on this site and are found in small numbers are those with a high proportion of cancellous bone, such as ribs; and also the smaller bones of the feet and the hyoid. Conversely, elements which are large and have a high proportion of cortical bone, such as the long bones, preserve well and are found in large numbers on the site.

There are, however, several differences in the ranking of the elements in the two lists. The carpals, hand phalanges, metacarpals, metatarsals and patellae were all recovered in lower numbers than would have been expected from their preservation. The difficulties in recovering carpals, hand phalanges and patellae has been noted before (Mays 1992, 57).

Sex and age

Of the 32 adult inhumations, 28 had characteristics allowing sex to be determined. Depending on the morphological trait and the overall sex, between 9 and 30% of the individuals exhibited traits which were ambiguous (TABLE 23). Metric standards were developed using univariate measurements for the femur and humerus head, the glenoid fossa of the scapula, and the maximum length of the talus. A total of 21 skeletons, felt to be fairly securely sexed on morphological grounds, was used to generate the standards. Not all skeletons had all the measurements; 7–8 female skeletons and 9–11 male skeletons were used in constructing each standard. Means for each sex were calculated for every measurement, the two mean values added and divided by two. The resulting value was used as the sectioning point. The sectioning points are shown in TABLE 24, together with the percentage of morphologically sexed skeletons used to generate the original values which would have been misclassified, had they been sexed using the metric standards only.

Using the above techniques for sex attribution, nine skeletons were diagnosed as female

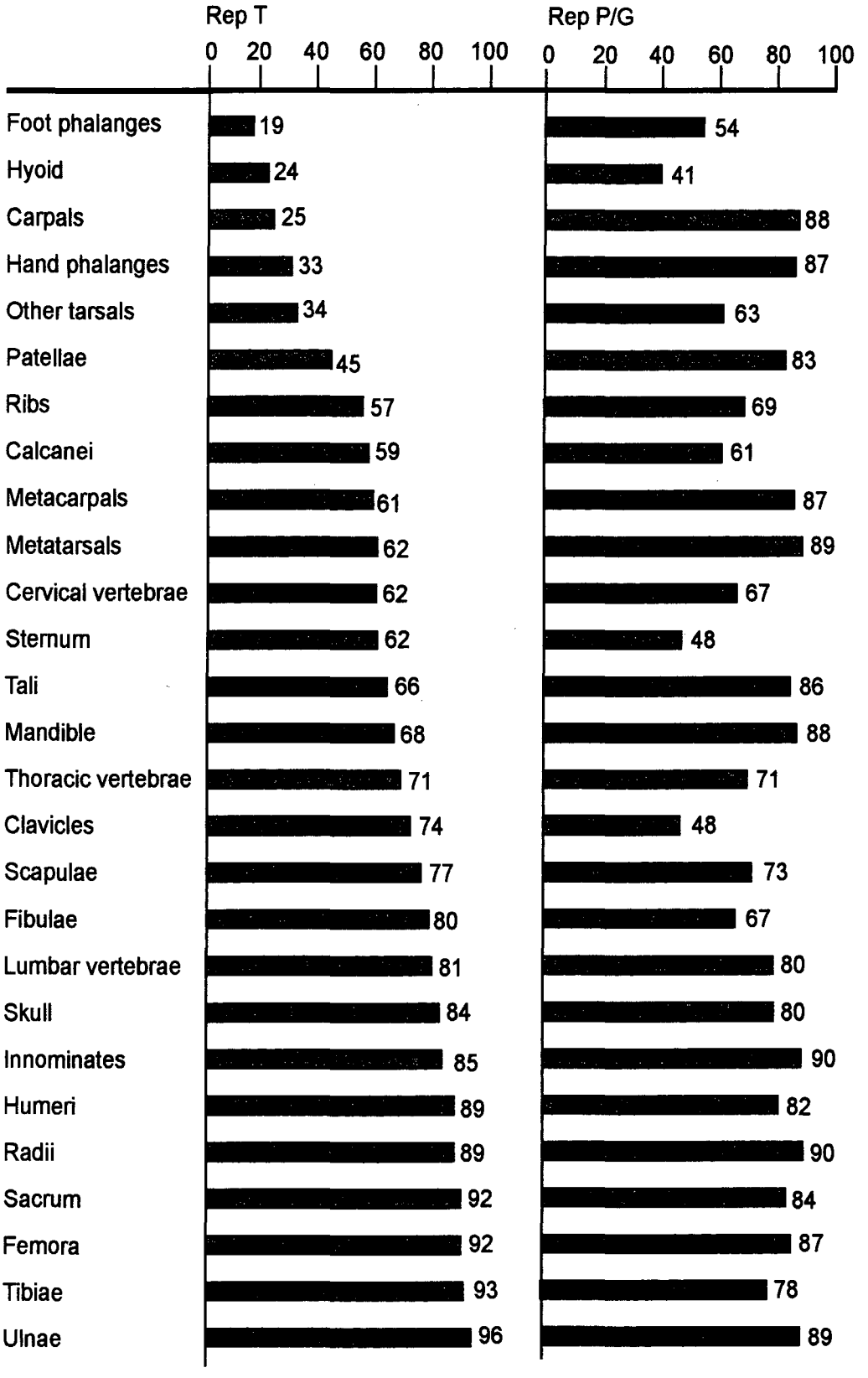


FIG. 74 Representation of skeletal elements

TABLE 23 MORPHOLOGICAL FEATURES USED FOR SEXING

	Males		Females		% separation
	n	%	n	%	on this trait
Supra-orbital ridges					
large	9	100	0	0	100
small	0	0	4	100	100
Mastoid process					
large	8	89	0	0	100
medium	0	0	2	29	100
small	1	11	5	71	83
Nuchal crest					
large	8	89	2	29	80
medium	1	11	0	0	100
small	0	0	5	71	100
Sciatic notch					
large	0	0	10	91	100
medium	3	30	1	9	75
small	7	70	0	0	100
Pre-auricular sulcus					
absent	9	100	1	10	90
present	0	0	9	90	100
Phenice ventral arc					
absent	6	100	0	0	100
present	0	0	5	100	100

TABLE 24 METRIC SEXING STANDARDS

Bone	Sectioning point (mm)	% misclassified			
		Females		Males	
		n	%	n	%
Scapula					
vertical diameter of the glenoid fossa	37.4	0	0	0	0
Humerus					
maximum head diameter	44.8	1	13	0	0
Femur					
maximum head diameter	45.8	1	14	1	10
Talus					
maximum length	58.9	0	0	2	18

and five as probably female, eleven skeletons were diagnosed as male and two as probably male (TABLE 25). This gives a gender ratio of 1:1, that expected from a normal biological population. It is generally assumed that cemeteries with an even sex distribution are likely to be those where a representative selection of the whole adult population was buried, probably in family groups. This certainly appears to be the case archaeologically and osteologically at Fosse Lane.

A fairly even gender ratio can also be seen at the later and post-Roman cemeteries of Poundbury (Molleson 1993), Bradley Hill (Leech 1981), Butt Road, Colchester (Pinter-Bellows 1993) and Ulwell (Cox 1989). This is in contrast to the cemeteries where the ratio has been found to be weighted in favour of males; these include Ilchester (Everton and Rogers 1982), Lynch Farm (Jones 1975), Lankhills (G. Clarke 1979) and Cirencester (Wells 1982). The imbalance in the gender ratio at Cirencester suggested to Wells (1982, 135) the presence of veterans, however no material or archaeological evidence for this was uncovered during the excavations (Viner and Leech, 1982, 109).

In turning to the age profile (TABLE 25), close to a third of the burials (28.9%) are those of

TABLE 25 DEMOGRAPHY FOR FOSSE LANE

Age	Unknown Sex	Males	Females	Total
Foetal – Birth	7			7
Birth –0.9	1			1
1–4.9	0			0
5–9.9	2			2
10–14.9	2			2
15–19.9	1			1
Young adults (20–29.9)		4	5	9
Middle-age adults (30–49.9)		7	7	14
Old adults (50+)		1	1	2
Adults age unknown	5	2	1	8
Total	18	14	14	46

subadults (those individuals approximately under the age of 20 years). This figure is around that which would be expected in a representative population sample. A rough test of the completeness of a skeletal sample is that a minimum of 30% of the skeletons should be under fifteen years of age (Weiss 1973, 49); in this sample it is 26.7%. As many of the infants were not in identifiable grave cuts and were fairly incomplete, it is possible that several could have been completely destroyed. Two other criteria of a complete sample are that it should have a late subadult mortality that is significantly lower than infant mortality and that children aged ten to fourteen should be the healthiest segment of the populations, with the probability of dying being less between ten and fourteen than it is between fifteen and nineteen (Weiss 1973, 46). The Fosse Lane sample has a significantly lower late subadult mortality, but it does not show 10–14.9 to be the healthiest segment of the population; however the entire skeletal sample is so small that this could be statistical chance.

Slightly over half of the subadults recovered (53.9%) are late foetal or neonatal. It was not possible from the skeletal evidence to determine whether they were stillborn or died in the immediate post-natal period. The adult age distribution shows that the greatest percentage of adults for which age could be determined were in the middle-age category. This is a quite common distribution. There are, however, fewer old adults than might have been expected. Of the population samples already mentioned above in the discussion of gender ratios only Lynch Farm (Jones 1975) has as small a percentage of old adults, though Ilchester also has a demographic spread which has more young adults than might be expected (Everton and Rogers 1982). While it is possible that adults within this age range could have been under-aged and put into the middle-age adult category, it is not probable, as the author also worked on another of the population samples being compared (Colchester, Pinter-Bellows 1993) and its profile does not seem to show a problem of consistent under-ageing.

Stature

Of the 28 adult skeletons which could be sexed, 22 (78.6%; twelve males and ten females) had long bones from which stature could be calculated. TABLE 26 shows the bones that were available for the calculations and an assessment of the standard errors for each bone. Examination of the data shows the statures derived from the forearm measurements to be, in general, greater than those for the leg bones, though usually only by 20–40 mm This is an indication that the arms of the Fosse Lane skeletons are relatively longer than that of the reference sample of Trotter and Gleser (1958).

The distribution of statures can be seen in FIG. 75. The height distribution of the stem and leaf histogram is slightly irregular, this is probably because of the small number in the

TABLE 26 BONES USED FOR STATURE ESTIMATION (LISTED IN DECREASING VALUE OF ACCURACY; STANDARD ERRORS FROM TROTTER 1970, 77)

	n		(+/-) Standard error (cm)	
Bone	**Females**	**Males**	**Females**	**Males**
Femur and tibia	2	3	3.55	2.99
Fibula	0	2	3.57	3.29
Tibia	5	7	3.66	3.37
Femur	4	5	3.72	3.27
Radius	3	5	4.24	4.32
Ulna	2	4	4.30	4.32
Humerus	8	8	4.45	4.05

sample and the variety of long bones used to calculate the stature. TABLE 27 shows the means and ranges for both sexes, along with the adult stature for other Roman and post-Roman sites. Growth and stature have been shown to be important factors in evaluating overall stress in a population (Hummert and Van Gerven 1983). Chronic stress during development can affect adult stature. Developmental stress does not seem to have been a problem for this community with the mean statures for both males and females equal to the tallest means of the other population samples. The mean height of the women is slightly taller than any of the other samples except for Poundbury, with the shortest females from Fosse Lane being the mean height for the other populations. The shortest males also are not as short as in other population samples, but neither are the tallest men as tall. The Fosse Lane skeletons have the narrowest range to be seen of all the samples, 0.11 to 0.15 m. This would not be surprising if it were assumed that Fosse Lane contains only a few family groups. In comparing the mean stature for the males in the different burial areas (the females which could

TABLE 27 STATURE, MEANS AND RANGES FOR FOSSE LANE AND OTHER ROMANO-BRITISH POPULATION SAMPLES

Sex	**n**	**Mean**	**Range**
Fosse Lane			
Female	10	162.13 cm (5' 4")	157.1 cm (5' 2") – 168.3 cm (5' 6")
Male	12	171.66 cm (5' 7")	162.8 cm (5' 4") – 178.1 cm (5' 9")
Period 2, Butt Road (Pinter-Bellows 1993, 64)			
Female	59	156.3 cm (5' 2")	141.5 cm (4' 7") – 171.0 cm (5' 7")
Male	85	167.6 cm (5' 5 1/2")	154.5 cm (5' 1") – 190.0 cm (6' 3")
Poundbury (Molleson 1993, 168)			
Female	360	160.9 cm (5' 4")	150.9 cm (5' 0") – 171.5 cm (5' 7")
Male	341	166.2 cm (5' 5")	148.2 cm (4' 9") – 185.3 cm (6' 2")
Cirencester (Wells 1982, 140)			
Female	44	157.9 cm (5' 2")	147.5 cm (4' 10") – 169.8 cm (5'7')
Male	107	169.1 cm (5' 6 1/2")	159.8 cm (5' 3") – 181.7 cm (5' 12")
Trentholme, York (Warwick 1969, 149)			
Female	52	153.0 cm (5' 1")	144.0 cm (4' 8") – 168.0 cm (5' 6")
Male	231	171.0 cm (5' 7")	159.0 cm (5' 3") – 180.0 cm (6' 0")
Hampshire Roman Cemeteries (Arnold 1984, 137)			
Female		156.6 cm (5' 2")	
Male		171.1 cm (5' 7")	
Ilchester Roman Cemeteries (Everton and Rogers 1982)			
Female	12	157.7 cm (5' 3")	151.1 cm (5' 0") – 164.5 cm (5' 5")
Male	21	170.0 cm (5' 7")	156.7 cm (5' 2") – 176.0 cm (5' 9")

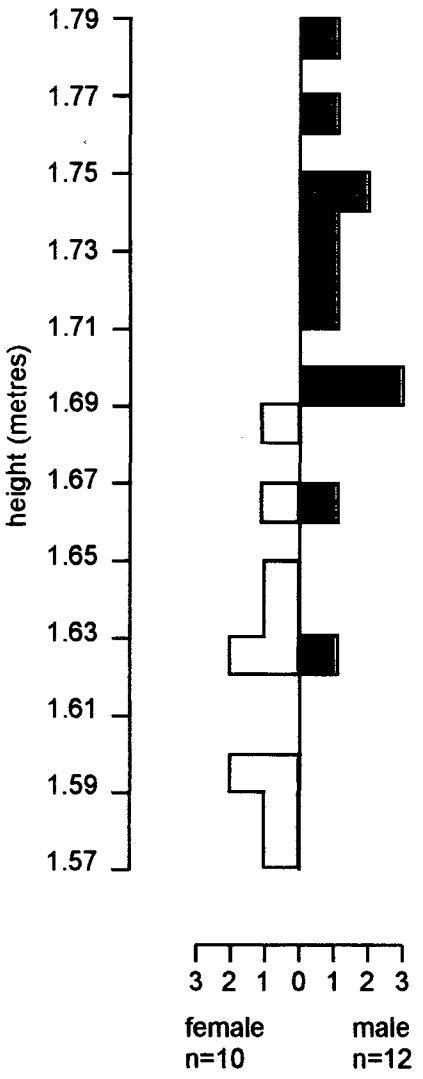


FIG. 75 Distribution of stature for males and females

be measured for stature were not evenly enough distributed), the mean for the males from Area II is 27–38 mm (1–1½″) greater; however a student's t-test does not show this difference to be significant.

Metrical analysis

Few crania were complete enough to be fully measured, only two could have the cephalic index calculated, only one the height-length index. Crania were not reconstructed in order for measurements to be taken. The few cranial measurements which could be taken are in the archive.

A range of post-cranial measurements was taken for each skeleton, some of which were used for assessment of sex and for stature estimates, as discussed above. Also taken were measurements used to calculate the Meric Index, a measure of the front to back flattening of the subtrochanteric part of the femoral shaft; and measurements for the Cnemic Index expressing the side to side flattening of the tibia at the level of the nutrient foramen (TABLE 28). The significance of these conditions is uncertain. They are not necessarily functionally related, but have both been variously ascribed to mechanical adaptation, poor nutritional level altering the conformation of the bone, and the result of pathological conditions (Brothwell 1981, 88–9). A few other post-cranial measurements were also taken and they, along with the measurement already discussed, are in archive.

TABLE 28 MERIC AND CNEMIC INDICES: MEANS AND RANGE

Sex	Means			Range
	L	R	L+R	
Meric Index				
male	86.0 (3)	84.9 (2)	85.5 (5)	83.1 – 90.3
female	84.8 (3)	80.2 (3)	82.5 (6)	78.3 – 96.1
Cnemic Index				
male	80.9 (5)	78.8 (8)	79.6 (13)	70.1 – 96.0
female	74.0 (4)	78.9 (6)	76.9 (10)	70.0 – 83.8

Non-metric analysis

Non-metric skeletal variants are discontinuous features that are usually recorded as being present or absent. Non-metric skeletal variants can arise from either a predominantly genetic or environmental source (or be a mixture of the two) where there is a genetic propensity for a trait, but it is not expressed unless there is interaction with environmental stress. At present no specific human non-metric trait has convincingly demonstrated major gene interaction, though it has been demonstrated in experimental animals (Saunders 1989, 104). Nor, unfortunately, does the presence of a trait thought to be predominantly genetic in several individuals necessarily mean that they are related — at least in the recent past. The ability of these traits to prove inter- or intra-population relationships is still experimental. A total of 28 cranial and 26 post-cranial variants was recorded with the results shown in TABLES 29–30.

Non-metric variants which were present in roughly 10% or less of the observable sample were used to examine the possibility of corroborating the family relationships presumed in the different burial areas. The Fosse Lane population sample is so small and the preservation of the various markers so patchy, however, that this is possibly more of an exercise in wishful thinking than a scientific endeavour. TABLE 31 displays the variants which are at least worthy of speculation and the proportion of the possible cases recorded in each area. Four variants were found only in individuals from Area III: epipteric bone, posterior atlas bridging, cleft spinous process, spondylysis and septal aperture. Not all of these may prove genetic relationships. There is some question as to whether the production of supernumerary bones (the epipteric bone is a supernumerary bone found at the junction of the maxilla, frontal, parietal and temporal) can be affected by biomechanical stress (Bennett 1965; El-Najar and Dawson 1977); though a cultural practice which only a segment of a community utilised would also be interesting, even if it is only supposition at this time. Infraorbital suture, tympanic dehiscence and hypotrochanteric fossa are found mainly in individuals found in Area III. One variant, medial 'squatting' facets, was found mainly in individuals from Area IV; it is still an open question as to whether these facets are caused by squatting.

Skeletal and dental malformations and anomalies

There is only one malformation, most likely congenital, which would have been noticeable and affected the individual during life. On a middle-age male (HB 14) the bones of the right arm, carpals and metacarpals are smaller and in some cases mis-shapen compared with the left. The scapula, clavicle and proximal two-thirds of the humerus for the right were not recovered. The minimum circumference of the right humerus, the maximum length of the radius, ulna, and third metacarpal are all smaller than the left (TABLE 32). The trochlea and trochlear notch of the right humerus look normal, the capitulum is not present. The head of the right ulna is a third of normal size; the styloid process is inflated to approximately the same size as the head, the ulnar groove is not noticeable. There is no radial notch on the

TABLE 29 CRANIAL NON-METRIC VARIANTS

Trait	n	R. side*	L. side*	Breakdown of observations by individual							
				1/1	2/2	1/2	1/-	2/1	2/-	-/1	-/2
Bilateral traits											
Epipteric bone	5	1/4	1/3	2		1			1	1	
Asterionic bone	5	1/4	1/5	2		1		1		1	
Parietal notch bone	6	1/5	2/6	3	1	1				1	
Lambdoid ossicle	12	6/11	4/10	5	3			1	1		1
Coronal ossicle	11	2/10	1/9	8					2		1
Os Japonicum	7	0/6	0/6	5			1			1	
Infraorbital suture	12	2/7	6/12	5	2					1	4
Parietal notch	10	2/8	2/9		7		1				2
Supraorbital notch	21	18/20	17/18	1	15	1		1	2		1
Supraorbital foramina	21	2/20	1/18	15	1			1		1	3
Accessory supraorbital foramina	21	0/20	0/19	18			2			1	
Multiple mental foramina	25	2/25	1/23	20		1	2	2			
Mylo-hyoid arch	23	0/22	1/19	17		1	4			1	
Accessory infraorbital foramina	6	0/4	0/6	4						2	
Tympanic dehiscence	21	3/20	1/21	16	2			2		1	
Auditory exostoses	18	0/16	0/18	16						2	
Divided hypoglossal canal	22	8/21	6/22	11	4	2		3	1	1	
Post-condylar canal not patent	5	0/4	2/5		3			1		1	
Multiple zygomatico-facial foramina	20	8/17	3/16	7	2	1	1	3	3	3	
Mandibular torus	19	1/19	1/18	17	1		1				
Obelionic foramen	14	3/14	5/12	2	6	1		3		2	
Unilateral traits											
Metopism	18	2/18									
Bregmatic bone	9	1/9									
Os inca	13	1/13									
Apical bone	8	0/8									
Sagittal ossicle	8	1/8									
Superior sagittal sulcus turns right	20	12/20									
Palatine torus	12	0/12									

* Total observation by side: trait present/site observable

Key to observations by individual

2/2 both sides with trait
1/1 both sides with trait absent
1/2 right side with trait absent, left side with trait present
0/- right side with trait absent, left side unscorable
2/1 right side with trait present, left side with trait absent
2/- right side with trait present, left side unscorable
-/1 right side unscorable, left side with trait absent
-/2 right side unscorable, left side with trait present

TABLE 30 POST-CRANIAL NON-METRIC VARIANTS

Trait	n	R. side*	L. side*	Breakdown of observations by individual							
				1/1	2/2	1/2	1/-	2/1	2/-	-/1	-/2
Bilateral traits											
Atlas facet form	19	5/18	6/17	10	5	1	2			1	
Atlas: lateral bridging	19	0/18	0/16	15			3			1	
Atlas: posterior bridging	19	2/18	1/16	13	1		3	1		1	
C3-7: accessory foramina	19	10/18	11/18	6	8	2		1	1		1
Spondylysis	19	2/18	2/18	15	2		1			1	
Os acromialis	19	1/17	0/15	13			3		1	2	
Septal aperature	26	2/24	1/23	20	1		2		1	2	
Acetabular crease	18	1/16	1/17	14	1		1			2	
Accessory sacral facets	17	4/15	4/16	10	3		1	1		1	1
Allen's fossa on femur	22	0/18	1/21	17			1			3	1
Extention of articular surface on head	22	7/18	9/21	10	5	1		1	1	1	3
Hypotrochanteric fossa on femur	23	5/19	6/22	14	4				1	2	2
Exostosis in trochanteric fossa on femur	19	4/16	3/18	12	2			1	1	2	1
Third trochanter	21	1/18	0/20	16			1	1		3	
Vastus notch on patella	14	0/11	0/12	9			2			3	
Emarginate patella	15	0/12	0/12	9			3			3	
Medial tibial 'squatting' facet	17	2/15	3/17	13	2					1	1
Lateral tibial 'squatting' facet	18	0/16	0/18	16						2	
Os trigonum on talus	22	0/20	0/22	20						2	
Inferior talar articular surface	22	11/20	11/21	8	11			1		2	
Anterior calcaneal facet	21	12/18	12/19	6	10				2	1	2
Peroneal tubercle on calcaneus	17	10/14	12/16	4	9				1		3
Unilateral traits											
C–L: cleft spinous process	18	2/18									
Thirteenth thoracic vert.	15	0/15									
Lumbarisation of vert.	15	5/15									
Sacralisation of vert.	18	3/18									

* Total observation by side: trait present/site observable

Key to observations by individual

2/2	both sides with trait
1/1	both sides with trait absent
1/2	right side with trait absent, left side with trait present
0/-	right side with trait absent, left side unscorable
2/1	right side with trait present, left side with trait absent
2/-	right side with trait present, left side unscorable
-/1	right side unscorable, left side with trait absent
-/2	right side unscorable, left side with trait present

TABLE 31 NON-METRIC VARIANTS WHICH MAY EXPRESS FAMILIAL RELATIONSHIPS

Areas	I	II	III	IV	V	VI	VII
Traits							
Epipteric bone	0/0	0/2 (0%)	2/3 (66%)	0/0	0/0	0/0	0/0
Infraorbital suture	0/0	1/4 (25%)	3/4 (75%)	1/3 (33%)	1/1 (100%)	0/0	0/0
Tympanic dehiscence	0/0	0/4 (0%)	3/12 (25%)	0/4 (0%)	1/1 (100%)	0/0	0/0
Divided hypoglossal canal	0/0	1/3 (33%)	7/12 (58%)	1/5 (20%)	0/1 (0%)	0/0	0/0
Atlas: posterior bridging	0/0	0/3 (0%)	2/11 (18%)	0/3 (0%)	0/1 (0%)	0/0	0/0
Cleft spinous process	0/0	0/3 (0%)	2/12 (17%)	0/3 (0%)	0/0	0/0	0/0
Spondylysis	0/0	0/3 (0%)	2/12 (17%)	0/4 (0%)	0/0	0/0	0/0
Septal aperature	0/0	0/5 (0%)	2/13 (15%)	0/6 (0%)	0/1 (0%)	0/0	0/0
Hypotrochanteric fossa	0/1 (0%)	0/5 (0%)	6/10 (60%)	0/5 (0%)	1/1 (100%)	0/0	0/0
Medial 'squatting' facets	0/0	0/4 (0%)	1/9 (11%)	2/3 (66%)	0/1 (0%)	0/0	0/0

TABLE 32 METRIC COMPARISONS OF THE LEFT AND RIGHT (ABNORMAL) ARM BONES OF HB 14

Measurements	Left (mm)	Right (mm)
Humerus circumference midshaft	71.0	60.0
Radius maximum length	244.0	224.0
Ulna maximum length	268.0	229.0
Third metacarpal maximum length	69.0	63.0

right ulna; the area where the head of the radius would normally fit is straight, not concave. The head of the right radius is to normal height on the dorsal side and slopes sharply away on the anterior side; the radial tuberosity is small and underdeveloped. There is no ulnar notch on the distal right radius; there may be a small area of articulation slightly above this area. The distal right radial articulation has an exaggerated slant down to the lateral side, a 45° angle. The 3 carpals present from the right hand are all small and landmarks are without their proper definition. The hook of the hamate, while protruding, does not curve. The base of the second metacarpal is almost flat. The heads of the metacarpals are normal.

There are a few minor skeletal anomalies which were noted aside from those discontinuous features which were scored for each individual. It is doubtful that any of these would be noticeable to the individual who had them. One middle-age male (HB 26) has a possible congenital synostosis of the vertebral bodies (a fusing together) of the second and third cervical vertebrae, no extra bone growth was noted; the articulating facets for those vertebrae are not present. It seems more likely that this is a congenital abnormality than to have been caused through trauma. There are also several cases of spina bifida occulta; it is most common at the sacral, lower lumbar and atlas vertebrae (Schmorl and Junghanns 1971, 83) and Fosse Lane has an individual with each. Spina bifida occulta is a failure in the bony spinal canal of the vertebrae; in life the defect is bridged by fibrous tissue and causes no symptoms. The old adult male (HB 12) displays the defect in the first sacral segment (the rest of the sacrum was not recovered); a middle-age female (HB 25) on the fifth and sixth lumbar vertebrae and a middle-age female (HB 1) on the atlas vertebra. There is strong evidence that spina bifida are inherited; however recent evidence suggests that what is inherited is the propensity for this defect and the trigger is a deficiency in folic acid during the early formation of the foetus.

An adult male (HB 3) has a supernumerary rib of the left side of the first lumbar vertebra. A young adult female (HB 10) has only eleven ribs per side; the twelfth thoracic vertebra, aside from the lack of articular facets for ribs, has a spinous process the shape of those found in lumbar vertebrae. An adult of unknown sex (HB 34) has the triquetral fused to the distal end of the right ulna. It is possible that this is a congenital abnormality, however, as this individual also has a healed fracture of the clavicle; it is also possible that the wrist was injured at the same time, causing this fusion.

Lastly, there is a young adult male (HB 43) who does not appear to have the normal talocalcaneonavicular joint on the left or right sides. Instead of the articulation between the calcaneus and the navicular in the ankle being part of a synovial joint shared with the talus, it appears to be a cartilaginous articulation. The articular surface of the two bones has a margin of compact cortex with a central, finely pitted area containing a few crater-like pits, such as is found on the articular surfaces in the non-union of the os acromiale. On the left the articular surface for the cuboid is shared between the calcaneus and navicular on this area, instead of it being on the calcaneus.

For the dentition, agenesis, or congenital absence of one or more teeth, was the most often noted anomaly. The third molar is the most likely tooth to be missing. The frequency of this in archaeological material cannot be accurately assessed without routine radiography, which was not carried out on this sample; it is also difficult to distinguish in some cases between ante-mortem loss of a tooth many years previous to death and agenesis of that tooth. Where ante-mortem loss of other molars had occurred, particularly of the second molar, absence of the third molar was therefore usually also recorded as probable ante-mortem loss. Six out of the 22 adults (27%) which were recorded had at least one molar believed to be congenitally missing. Not all the dentitions were complete, but it is possible to say that probable agenesis of all four third molars had occurred in most of the individuals. While the congenital absence of teeth appears to be determined to a great degree by genetic factors (Pindborg 1970), the individuals without third molars were located across the site.

One young adult male (HB 24) suffered from an impacted maxillary right third molar. This same individual also had hypodontia, or the reduction in size, of the maxillary left third molar; and crowding of the maxillary teeth, especially on the right side. A young adult male (HB 16) has two supernumerary maxillary teeth, the left one, which is present, is between the canine and the second incisor and is in line with the other teeth; the right one, which is represented by the tooth socket, is between the first and second incisors and slightly behind them. The shape of the tooth makes it unlikely that these are retained deciduous teeth. Supernumerary teeth are produced as a result of accessory tooth buds differentiating from the dental lamina. These extra teeth are most frequently found in the maxillary incisor and third molar regions.

Pathology

Dental disease

For the adults, parts of eleven male maxillae and twelve mandibles survive, coming from five young adults, five middle-age adults, one old adult and one adult age unknown; and parts of eight female maxillae and nine mandibles survive, coming from three young adults, five middle-age adults, one old adult and one adult age unknown. If these maxillae and mandibles had contained complete normal dentitions, 640 tooth positions would have been identifiable, but with post-mortem damage there were 580 (90.6%) available for study. Unfortunately with the small numbers of individuals being dealt with here, one individual with an extreme number of ante-mortem lost teeth, caries or abscesses can dramatically affect the percentages.

TABLE 33 shows the frequency of ante-mortem loss from each tooth position. Fifty-nine per cent of the individuals (13 of 22) with surviving maxillae and mandibles show evidence of tooth loss. The females have a greater percentage of teeth lost (12.5%) than the males (9.2%) overall. But much of the female tooth loss comes from the one old adult female (HB 29) who, of 27 tooth positions, had ante-mortem tooth loss for 21 of them; if she is removed, the percentage of ante-mortem tooth loss for females drops below the rate for the males to 4.8%. When all adults are considered together the percentage of tooth loss is 10.4 (7.4% if the old adult female is excluded). Either of these figures is comparable with the 10.7% tooth

TABLE 33 ADULT ANTE -MORTEM TOOTH LOSS

Tooth	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8	Total
Male ante-mortem tooth loss, 9.2%																	
Maxilla																	
Tooth positions	5	8	8	10	10	10	10	10	11	11	11	11	11	11	11	8	156
Ante-mortem loss	1	1	1	1	0	0	1	0	1	0	0	0	2	2	4	2	16
%	20	12.5	12.5	10	0	0	10	0	9.1	0	0	0	18.2	18.2	36.4	25	10.3
Mandible																	
Tooth positions	7	11	11	11	11	11	11	11	10	11	11	11	11	12	12	7	169
Ante-mortem loss	2	1	2	2	0	0	0	0	0	0	0	1	1	0	3	2	14
%	28.6	9.1	18.2	18.2	0	0	0	0	0	0	0	9.1	9.1	0	25	28.6	8.3
Female ante-mortem tooth loss, 12.5%																	
Maxilla																	
Tooth positions	6	8	9	8	8	9	7	8	7	8	8	8	8	6	6	6	120
Ante-mortem loss	1	2	2	1	1	1	0	1	1	0	1	0	1	0	0	0	12
%	16.7	25	22.2	12.5	12.5	11.1	0	12.5	14.3	0	12.5	0	12.5	0	0	0	10
Mandible																	
Tooth positions	6	9	9	10	10	9	9	10	9	8	10	10	7	8	7	4	135
Ante-mortem loss	2	2	1	2	1	1	1	1	1	1	1	1	1	3	0	1	20
%	33.3	22.2	11.1	20	10	11.1	11.1	10	11.1	12.5	10	10	14.3	37.5	0	25	14.8
All adult teeth ante-mortem tooth loss, 10.7%																	
Maxilla																	
Tooth positions	12	16	17	18	18	19	17	18	18	19	19	19	19	17	17	14	277
Ante-mortem loss	2	3	3	2	1	1	1	1	2	0	1	0	3	2	4	2	28
%	16.7	18.8	17.6	11.1	5.6	5.3	5.9	5.6	11.1	0	5.3	0	15.8	11.8	23.5	14.3	10.1
Mandible																	
Tooth positions	13	20	20	21	21	20	20	21	19	19	21	21	18	10	19	11	294
Ante-mortem loss	4	3	3	4	1	1	1	1	1	1	1	2	2	3	3	3	34
%	30.1	15	15	19	4.8	5	5	4.8	5.3	5.3	4.8	9.5	11.1	30	15.8	27.3	11.2

ante-mortem tooth loss found at Butt Road, Colchester (Pinter-Bellows 1993, 79) and the 8.5% found at Cirencester (Wells 1982, 147).

Caries are formed when sugars in the presence of harmless bacteria ferment and the resultant plaque has a pH low enough to demineralise enamel, cement, and dentine. The caries may be merely opaque spots in the enamel, or large cavities. TABLE 34 shows the frequency of caries for each adult *in situ* tooth. Sixty-four per cent of the individuals (14 of 22) show evidence of caries. The females have approximately twice the percentage of caries as the males (15.2 and 7.9 respectively); unlike ante-mortem tooth loss however, there is no one female who is affecting the percentages. Another way to express the number of caries is the average number per individual. The females had an average of 2.6 caries per individual and the males 1.8. The difference in caries prevalence between the females and males is unusual. Poundbury (Molleson 1993, 183), Colchester (Pinter-Bellows 1993, 79) and Cirencester (Wells 1982, 148) all had roughly the same prevalence rates. A difference was seen in a sample of Romano-British skeletons from Trentholme Drive, York, slightly favouring the females (5.2% to 4.3%) (Cooke and Rowbotham 1968, 207), but nothing approaching the difference seen at Fosse Lane. While not proven, there is some suggestion that women in general have a higher rate of caries (Burt 1981); however where differences have been noted in modern population samples, they are usually explained by cultural rather than genetic or hormonal factors.

The prevalence rate of caries is higher for the mandibular teeth than the maxillary teeth; this is a common finding in skeletal series (Manchester 1984, 33). The caries frequency of individual maxillary and mandibular teeth shows the premier site for the development of dental caries is in the molar teeth, with the mandibular first molar the most frequent in males and the second molar the most frequent in females. From TABLE 35, showing the surface location of the caries, it can be seen that the highest frequencies of caries are occlusal, followed by mandibular approximal caries, with only females being affected by cervico-enamel junction caries to any extent. The occlusal caries are found more frequently on the young adults, since, as the individuals gets older, the attrition of the occlusal surface appears to have removed the carious dentine nearly as fast as it was formed.

The overall frequency for both sexes of caries for each adult *in situ* tooth of 10.7% is greater than those from Colchester (3.9%) and Cirencester (5.1%), less than that from Poundbury (15.8%) but fits in well with two composite figures for caries for other Romano-British groups: 9.3% (Moore and Corbett 1973) and 11.4% (Brothwell and Blake 1966). A clear association exists between sugars and carbohydrates and high caries rates. The difference in caries prevalence between males and females intimate that the diet of females may have had more sugars and carbohydrates than that of the males.

A dental abscess is a local circumscribed area of infection (osteomyelitis). It is usually the result of severe dental caries or advanced degrees of occlusal attrition. TABLE 36 shows the distribution of dental abscesses for each adult *in situ* tooth. Twenty-seven per cent of the individuals (6 of 22) show evidence of dental abscesses. The overall percentage of abscesses per tooth position is 1.7%, with males having slightly more abscesses (1.8%) than females (1.6%).

Dental calculus may be considered as a mineralised dental plaque. It takes the form of a concretion on the teeth consisting mainly of calcium salts and, in life, organic material in which flourishes numerous bacteria; it is associated with poor oral hygiene. Fifty-nine per cent of the individuals (13 of 22) show evidence of dental calculus, 58% of the males (7 of 12) and 60% of the females (6 of 10). Periodontal disease is perhaps the best skeletal indicator of general oral hygiene (Manchester 1984, 34). It involves inflammatory pitting of the alveolar margins and the progressive alveolar resorption resulting in exposure of tooth root. Thirty-six per cent of the individuals show evidence of periodontal disease, 50% of the males (6 of 12) and 20% of the females (2 of 10).

Enamel hypoplasia is an area with a deficiency of enamel of a developmental origin in a

TABLE 34 ADULT CARIOUS TEETH

Tooth	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8	Total
Male carious teeth, 7.9%																	
Maxilla																	
n	4	7	7	9	9	10	6	9	8	9	11	10	9	8	6	5	127
carious teeth	0	0	2	1	0	1	0	0	0	0	0	0	0	2	0	1	7
%	0	0	28.6	11.1	0	10	0	0	0	0	0	0	0	25	0	20	5.5
Mandible																	
n	5	9	9	8	7	9	11	8	9	9	11	9	9	11	9	5	138
carious teeth	0	2	4	1	1	0	0	0	0	0	0	0	1	3	2	0	14
%	0	22.2	44.4	12.5	14.3	0	0	0	0	0	0	0	11.1	27.3	22.2	0	10.1
Female carious teeth, 15.2%																	
Maxilla																	
n	3	6	7	6	6	7	4	4	3	5	5	5	4	5	3	3	76
carious teeth	1	2	2	0	0	0	0	0	0	0	1	0	0	1	1	1	9
%	33.3	33.3	28.6	0	0	0	0	0	0	0	20	0	0	20	33.3	33.3	11.8
Mandible																	
n	3	7	6	7	8	6	5	4	5	5	6	7	6	4	6	3	88
carious teeth	1	5	2	0	1	0	0	0	0	0	0	1	2	0	3	1	16
%	33.3	71.4	33.3	0	12.5	0	0	0	0	0	0	14.3	33.3	0	50	33.3	18.2
All adult carious teeth, 10.7%																	
Maxilla																	
n	7	13	14	15	15	17	10	13	11	14	16	15	13	13	9	8	203
carious teeth	1	2	4	1	0	1	0	0	0	0	1	0	0	3	1	2	16
%	14.3	15.4	28.6	6.7	0	5.9	0	0	0	0	6.3	0	0	23.1	11.1	25	7.9
Mandible																	
n	8	16	15	15	15	15	16	12	14	14	17	16	15	15	15	8	226
carious teeth	1	8	6	1	2	0	0	0	0	0	0	1	3	3	5	1	30
%	12.5	50	40	6.7	13.3	0	0	0	0	0	0	6.3	20	20	33.3	12.5	13.3

TABLE 35 SURFACE LOCATION OF CARIES IN ADULT TEETH

Tooth	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8	Total
Male carious teeth, 7.9%																	
Maxilla																	
n	4	7	7	9	9	10	6	9	8	9	11	10	9	8	6	5	127
Occlusal	-	-	1	1	-	-	-	-	-	-	-	-	-	2	-	1	53.9%
Approximal	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	21.5%
Cervico-enamel J.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Mandible																	
n	5	9	9	8	7	9	11	8	9	9	11	9	9	11	9	5	138
Occlusal	-	1	2	-	-	-	-	-	-	-	1	-	1	1	1	-	75.1%
Approximal	-	-	2	-	1	-	-	-	-	-	-	-	-	2	1	-	64.3%
Cervico-enamel J.	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1<.01%
Female carious teeth, 15.2%																	
Maxilla																	
n	3	6	7	6	6	7	4	4	3	5	5	5	4	5	3	3	76
Occlusal	1	1	2	-	-	-	-	-	-	-	-	-	-	1	1	1	79.2%
Approximal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	11.3%
Cervico-enamel J.	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	22.6%
Mandible																	
n	3	7	6	7	8	6	5	4	5	5	6	7	6	4	6	3	88
Occlusal	1	1	1	-	-	-	-	-	-	-	-	-	1	-	1	1	66.8%
Approximal	-	2	1	-	-	-	-	-	-	-	-	-	1	-	2	-	66.8%
Cervico-enamel J.	-	2	-	-	1	-	-	-	-	-	-	1	-	-	-	-	44.5%

TABLE 36 ABSCESSES IN ADULT MAXILLAE AND MANDIBLES

Tooth	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8	Total
Male abscesses, 1.8%																	
Maxilla																	
Tooth positions	5	8	8	10	10	10	10	10	11	11	11	11	11	11	11	8	156
Abscesses	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
%	0	0	0	0	0	0	0	0	0	0	0	9.1	0	0	0	0	<0.1
Mandible																	
Tooth positions	7	11	11	11	11	11	11	11	10	11	11	11	11	12	12	7	169
Abscesses	0	1	1	0	0	0	0	0	0	0	0	0	1	2	0	0	5
%	0	9.1	9.1	0	0	0	0	0	0	0	0	0	9.1	16.7	0	0	3.0
Female abscesses, 1.6%																	
Maxilla																	
Tooth positions	6	8	9	8	8	9	7	8	7	8	8	8	8	6	6	6	120
Abscesses	0	0	2	0	0	0	0	0	0	0	0	0	0	1	1	0	4
%	0	0	22.2	0	0	0	0	0	0	0	0	0	0	16.7	16.7	0	3.3
Mandible																	
Tooth positions	6	9	9	10	10	9	9	10	9	8	10	10	7	8	7	4	135
Abscesses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All adult abscesses, 1.7%																	
Maxilla																	
Tooth positions	12	16	17	18	18	19	17	18	18	19	19	19	19	17	17	14	277
Abscesses	0	0	2	0	0	0	0	0	0	0	0	1	0	1	1	0	5
%	0	0	11.7	0	0	0	0	0	0	0	0	5.3	0	5.9	5.9	0	1.8
Mandible																	
Tooth positions	13	20	20	21	21	20	20	21	19	19	21	21	18	10	19	11	284
Abscesses	0	1	1	0	0	0	0	0	0	0	0	0	1	2	0	0	5
%	0	5	5	0	0	0	0	0	0	0	0	0	5.6	20	0	0	1.6

tooth. The area affected is usually a band or a line of pitting. It occurs during acute severe stress in childhood and has a non-specific aetiology. It is associated with general systemic disorder and nutritional deficiency. There are also some forms of enamel hypoplasia which are hereditary or occur through trauma to the tooth. In order to identify and discount these types, in this study enamel hypoplasia was only counted if at least two teeth from different classes were affected. Six incidents were noted, all on permanent teeth. One young adult male (HB 15) had a thick band of enamel hypoplasia in the form of dots. Lines of enamel hypoplasia were found on one unsexed 14–19-year-old (HB 7), one young adult male (HB 15) and female (HB 13) and one middle-age male (HB 22) and female (HB 28). The young adult female's enamel hypoplasia had led to caries and an abscess. Twenty-three per cent of the 26 individuals with teeth present exhibited enamel hypoplasia; this is close to the 27% found from Colchester (Pinter-Bellows 1993, 88) and less than the 39% from Poundbury (Stuart-Macadam 1985, 323).

Metabolic and nutritional disease

Cribra orbitalia is an increase of the diploic bone in the orbital roofs resulting in an increase in the thickness of the orbital plate and sieve-like lesions or pits appearing in the thin cortical bone layer of the orbital roofs. It is usually presented as a response to chronic anaemia (Stuart-Macadam 1985), especially when found in conjunction with the aetiologically related porotic hyperostosis. This anaemia can be caused by a number of factors, such as physiological susceptibility, poor nutrition or parasitic infestation. It is usually considered to be due to anaemia in young childhood, and not to develop in response to anaemia in adulthood (ibid., 398). However, when the cribra orbitalia is found in isolation, some are beginning to question whether this would be a useful response to anaemia or whether it would be better to interpret it as a response to other metabolic disturbances such as scurvy or perhaps eye infections (Don Ortner pers. comm.).

Cribra orbitalia was observed in five individuals (22% of the 23 individuals with observable orbits): three middle-age males (HB 8, HB 9 and HB 22) and two unsexed subadults, a 14–19-year-old (HB 7) and an 8-year-old ± 24 months (HB 30). Cribra orbitalia was noted in 9.9% of the sample from Colchester (Pinter-Bellows 1993, 87), 17.7% from Cirencester (Wells 1982, 186) and 27% from Poundbury (Stuart-Macadam 1985, 393). Only at Poundbury was porotic hyperostosis also observed.

In four cases (HB 8, HB 9, HB 22 and HB 30), the cribra orbitalia was noted in isolation without any other nutritional or metabolic pathologies being seen. Two of the individuals also have enamel hypoplasia (HB 7 and HB 22). While enamel hypoplasia is considered a response to acute forms of stress and cribra orbitalia to chronic forms, they are thought to be aetiologically related and the occurrence of both shows individuals under pressure from nutritional or systemic disorders. The adolescent (HB 7) is particularly interesting, the cribra orbitalia seen in both orbits, is a severe 'coral-like' cribra orbitalia covering the entire orbit roof. Along with this, on the right and left maxilla, towards the posterior on the angle between the horizontal and perpendicular plates, and up on the perpendicular plate, is seen a thickish layer of woven subperiosteal bone. The bone on the palatine process along the mid-line and anteriorly is rough and pitted, though part of this could be post-depositional erosion. These are features which are believed to be associated with scurvy, however further research in the affects of scurvy on the skull is needed. Scurvy is a disease caused by prolonged inadequate intake of vitamin C (ascorbic acid). Scurvy's major effect is in diminishing bone matrix formation, it also leads to haemorrhaging which occurs spontaneously and on minor traumatization. It is probably a calcified or ossified haematoma which has caused the subperiosteal bone seen on the maxilla.

Infection and inflammation

The majority of infections affect the soft tissues of the body, and many, from influenza and

measles to meningitis and pneumonia, run their course too rapidly for the infective process to spread to the bones. Bone lesions are, therefore, going to represent the chronic infections, which are more likely to involve a bacteria than a virus, viral infections being resolved more rapidly. The Fosse Lane population sample shows no evidence of identifiable infections, such as tuberculosis or leprosy. Non-specific infections are made up of those lesions, inflammatory in nature, for which the pathogenic agent is unknown. Lesions which are superficial and appear to involve only the fibrous covering of the bone (the periosteum) are termed periostitis. Periostitis is recognised as a deposition of irregular new bone upon the outer surface of a bone. It is usually thin and localised in area, but can be thicker and cover a bone more extensively.

Summaries of the distribution of the periostitis by individuals and skeletal element can be seen in TABLES 37 and 38 respectively. Two infants, one approximately 39 weeks in utero (HB 6a) the other 0–0.5 years (HB 32) had unhealed periostitis on the inner and outer table of the skull bones. One subadult, approximately 9–11 years (HB 37), had unhealed, thick, porotic striated periostitis found on the mid-shaft and upper shaft of the right tibia, and a small amount on the mid-shaft at the posterior, medial border of the left tibia; most of the rest of this individual was not recovered, so it is not known if this is the extent of the periostitis.

TABLE 37 DISTRIBUTION OF PERIOSTITIS BY INDIVIDUAL

Age	n	Present	%
Infant	8	2	25
Other subadults	5	1	20
Young adult	9	2	22
Middle-age adult	14	5	36
Old Adult	2	0	0
Adult age unknown	7	0	0

TABLE 38 DISTRIBUTION OF PERIOSTITIS BY ELEMENT

Element	n*	Present	%
Skull	33	3	9
Ribs	39	2	5
Tibia	37	4	11
Fibula	34	5	15

*n is the number of individuals for which the element was observable

Seven adults exhibit periostitis. One young adult female (HB 13) has unhealed periostitis on the bony floor of the maxillary antrum; this individual suffered from chronic sinusitis secondary to a perforation of the antral floor by a sinus from a maxillary abscess. Two middle-age females (HB 4 and HB 28) have unhealed periostitis on ribs. On one (HB 4) the periostitis has been fairly short term, four ribs show an unhealed thin layer of periostitis mid-way along the ribs on the middle portion on the visceral surface. On the other (HB 28) the affected area of ribs is swollen and globular, pointing to a process which had been going on for some time. The five left ribs have thick unhealed periostitis, starting near the head and going down the blade 40–50 mm, most of it relatively newly laid down woven bone, not incorporated into the outer table on the visceral side. From the sole evidence of periostitis on the visceral surface of the ribs, it cannot be determined whether the cause was pneumonia, tuberculosis or another infection which has a pulmonary component.

Two-thirds of the adult periostitis is found on the lower leg. A middle-age female (HB 25) has it on the tibia mid-shaft only. Two individuals have it on the tibia and fibula; a young adult female (HB 19) has healed gummeus periostitis on the distal shaft and a middle-age

male (HB 22) has it on the mid-shaft. Three individuals have it only on the fibula; one middle-age male (HB 17) has it on the proximal third of the mid-shaft and a young adult female (HB 13) and a middle-age female (HB 28) have it just above the distal articular surface. The middle-age female is the only individual to have periostitis on the lower leg which is not healed, this individual was also mentioned above for having unhealed periostitis on her ribs. More than one aetiology could have accounted for the cases represented here. Periosteal bone formation on the lower legs, in the absence of general pathology, has been noted in association with repeated and minor trauma to the lower legs (Manchester 1984), chronic venous insufficiency (Resnick and Niwayama 1988) and tropical ulcers with soft tissue infection (Molleson 1993).

The middle-age male (HB 22) not only has periostitis on the lower leg, but in the left acetabulum; in the proximal area of the socket there is an area of destruction and unhealed reactive bone, which appears to be a cyst. There is also one female adult of unknown age (HB 27) with inflammation on the soft tissues, on the inferior side of the vertebral bodies of the lumbar vertebrae four and five, 'discitis'; and on the auricular surfaces of the left and right innominate, 'sacroilities'.

Trauma

Trauma may affect soft tissue, bone, or both. For trauma to the bone, fractures, there is direct evidence (as discussed below). However, the majority of injuries are sustained by the soft tissues. Evidence for these injuries is indirect and depends on the severity of the damage to the soft tissues adjacent to the bone.

There are four incidents of exostosis. Muscle tears or blunt injuries to an area where the bone is close to the surface can result in a haematoma. If this haematoma becomes calcified or ossifies, it will lead to an irregular swelling (an exostosis) on or just under the bone surface. A young adult female (HB 13) has a small area on the right zygomatic on the edge of the floor of the eye orbit. A middle-age male (HB 22) has a flange of irregular-shaped bone resulting from a tear to the deltoid muscle on the left humerus. The old adult male (HB 12) has two right-hand phalanges with a small bump of exostosis just above the base on the anterior side. A middle-age female (HB 28) on the mid-shaft of the right second and third metatarsals on facing sides has exostoses made of mature dense bone which has not completely incorporated into the outer table of the bone.

There are five individuals, the four for which sex is known all male, who have injuries to their entheses or syndesmoses. The osseous sites of tendons, which attach the muscles to the bone, and ligaments, which attach near particular joints and limit movement, entheses and syndesmoses respectively, can have alterations occurring in the fibres. Disruption of the fibre bundles that are anchored to the underlying bone can cause hyperostotic (bone growth) or osteolytic changes (bone loss) to that area of the bone. They are often degenerative in nature and are 'common in older individuals' (Resnick and Niwayama 1981, 1297). If the individual in which the lesion occurs is young and robust and disease is not suggested as the causative agent, then direct and work-related trauma or loading stresses may be explored. The three individuals with changes to their entheses, each exhibit changes at different sites. An adult male (HB 3) has enthesophytes (extra bone) on the lesser trochanter of the right femur, left and right patellae, on the distal left and right fibulae and the right calcaneus. A middle-age male (HB 5) has enthesophytes on the lesser and greater tuberosities of the left humerus. A young adult male (HB 43) has an enthesolitic change (bone loss) at the insertion of brachialis. The two individuals with changes to their syndesmoses, however, exhibit change at the same site. A young adult male (HB 24) and a subadult approximately 14–19 years both show syndenmosolytic change at the attachment for the costoclavicular ligament on the right and left clavicles.

Another pathology thought to sometimes originate from stress to soft tissue, in this case the intervertebral discs, is Schmorl's node. While its aetiology is not completely understood,

it is believed that if the disc located between the vertebrae is subject to too much strain it may rupture. The bubble of escaped material then presses against the body of the adjacent vertebra, which gradually yields to the pressure, allowing a small cavity to be formed in its body. Schmorl's nodes provide evidence of torsional and compressional injuries that have occurred as a result of the sudden application of loading stresses, if they are not degenerative or related to various diseases (Resnick and Niwayama 1981, 1404). Four males, three young adults (HB 16, HB 21 and HB 24) and one middle-aged (HB 14); one middle-age female (HB 25) and one adolescent (HB 7) all exhibited Schmorl's nodes, 13% of those with observable vertebrae (6 of 28 with thoracic vertebrae, 6 of 30 with lumbar vertebrae). Six per cent of all observable thoracic vertebrae were affected (16 of 271) and 6% of all observable lumbar vertebrae (8 of 138). The Schmorl's nodes were found mainly in the lower thoracic and lumbar vertebrae.

Finally there is osteochondritis dissecans. This lesion appears as an irregular shallow pit. It seems to be an area of avascular necrosis of the articular cartilage and subchondral bone in diarthrodial joints. Although the aetiology is not completely understood, it seems probable that trauma plays at least a contributory role. One individual, a young-adult male (HB 21) exhibits two: an irregularly shaped 15 x 15 mm osteochondritis dissecans on the capitulum of the left humerus, and one 22 x 15 mm on the medial condyle of the left femur.

All the bone fractures were probably accidental, though it is a little uncertain how one was acquired. Criteria from Manchester (1983, 58) were used to make these distinctions. The most commonly fractured bone was the rib, one middle-age female (HB 1), and two males, one middle-aged (HB 22) and one old adult (HB 12) had rib fractures. Only for the female is the fractured rib (well healed with callous formation) the only injury. The middle-age male has a healed rib fracture with callus near the ventral end of the rib fragment, also the lateral articular surface of the right clavicle is not on the end of the clavicle, but on a sharp diagonal on the caudal surface; both the articular surface of the lateral clavicle and that of the acromion of the scapula are eburnated. That portion of the shoulder joint perhaps was dislocated in a fall which also broke the rib. This individual is also mentioned above with an exostosis originating from a tear in the deltoid muscle of the left humerus. The old adult male has three ribs with healed fractures. There is also a healed fracture of the nasal septum which has deviated the septum to the left, and a transverse, healed fracture of the neck of the right mandibular condyle, starting at the left corner of the condyle to lower right edge of the neck. The mandibular fossa of the right temporal has a depressed fracture and on the articular tubercle there is new bone growth and a fused chip of bone which came from the tubercle. The jugular process on the right side has enlarged into a tubercle for rectus capitis lateralis. These are the injuries, which may have come from an accidental fall, but equally could represent intentional blows.

A middle-age male (HB 5) has a diagonal healed crush fracture to the bodies of the second and third lumbar, they have fused with the ligaments ankylosing. There is also another vertebral fracture of a more specialised nature; a young adult female (HB 21) has spondylolysis of the sixth lumbar vertebra. In spondylolysis, it seems there may be a genetic propensity for a weakness between the arch and the body of the vertebra (it is one of the non-metrics which has been scored) and, due to the stresses and strains of daily life, these vertebrae may fracture by early adulthood (Frederickson *et al.* 1984). In most instances the defect does not create symptoms. An adult of unknown age (HB 34) has a healed fracture of the right clavicle 35 mm from the lateral end; it has healed at an angle of about 45° from contractions of the muscles. A fracture of this type is usually due to falling on the point of the shoulder. There is one appendicular skeletal fracture, a middle-age female (HB 31) has a healed closed fracture to the left radius, three-fifth of the way down the shaft. There is an over-ride of 4cm. The corresponding section of the left ulna is missing, so it is not known if the ulna was affected also. This type of fracture is known as a Colles' fracture and is due to a fall onto the outstretched arm.

The old adult female (HB 29) has had the area of articulation on the proximal left first metacarpal moved posteriorly onto a large area of added bone. This area is porous and eburnated. The trapezium which articulates with the first metacarpal was not recovered. It is likely however, that the thumb had been dislocated and a new area for articulation formed.

Two of the inhumations, a young adult female (HB 10) and a middle-age possible female (HB 31) were found with the head located in the area of the feet. Unfortunately, in neither case, can we tell exactly where on the body the decapitation took place. For the young adult female (HB 10), photos show that the first cervical vertebra was with the skull, it is unclear whether the second and third cervicals were with the skull or the torso. There are no cut marks on the occipital condyles, mandible or the cervical vertebrae which were recovered, the fourth cervical is incomplete and the fifth is missing. For the middle-age possible female (HB 31), the occipital is missing and the cervical vertebrae are very incomplete; no cut marks survive. Research shows, however, that the head is usually severed between the third and fourth cervical vertebrae, though cuts on the second to sixth vertebrae have been noted (Harman *et al.* 1981, 166, tab. 6). It is impossible to distinguish from cut marks between the removal of the head from a living individual and a corpse; however Philpott (1991) argues strongly for the removal of the head to have taken place after death. Human sacrifice was illegal under Roman law and with, occasionally, as many as one in fifteen individuals in some small towns and rural communities being buried decapitated, it could hardly have escaped the attention of the authorities and it is not likely that it would have been tolerated (Philpott 1991, 85). Decapitated burials are often associated with the burials of soldiers, the prematurely dead (Macdonald 1979), or prone burials (Harman *et al.* 1981) and that seems to be what has occurred here with the young adult female (HB 10) buried near an adolescent buried prone (HB 7), and the middle-age female (HB 31) buried near an infant (HB 32).

Arthropathies

The common skeletal diseases of degeneration are vertebral osteophytosis and osteoarthrosis of the synovial joints. Though these pathologies are to some extent related, both progressing with advancing age, their aetiology, pathogenesis and effects are different. Initial degenerative changes occur in the articular cartilage; it is not, however, until changes affect the bone below the cartilage that these diseases are recorded in skeletal samples.

Vertebral osteophytosis is a lesion resulting from additional subperiosteal bone formation on the anterolateral aspects of the superior and inferior borders of the vertebral body due to degenerative changes within the intervertebral disc. It is a very common condition, appearing in some individuals as early as 30 years old and present in almost all persons over 60 (Steinbock 1976, 287). The lesion's severity and progression had been related to obesity and work patterns, among other things (Manchester 1983, 35). The distribution of osteophytes by individuals and skeletal elements is shown in TABLES 39 and 40, respectively. In this small sample slightly more males than females had osteophytes. Females appear to start forming

TABLE 39 DISTRIBUTION OF VERTEBRAL OSTEOPHYTES BY INDIVIDUAL

Age	n*	Present	%
Young adult males	4	0	0
Young adult females	5	2	40
Middle-age males	7	6	86
Middle-age females	7	3	43
Old adult males	1	1	100
Old adult females	1	1	100
Adult males	2	1	50
Total males	14	8	57
Total females	13	6	46

*n is the number of individuals for which the element was observable

TABLE 40 DISTRIBUTION OF VERTEBRAL OSTEOPHYTES BY TYPE

Element	n	Present	%
Cervical	128	25	20
Thoracic	265	33	12
Lumbar	131	25	19

them earlier, with more males than females exhibiting them in middle-age. It must be kept in mind that the age ranges being studied are wide. Osteophytes are more common on cervical and lumbar vertebrae than on thoracic in this sample.

Osteoarthrosis, or degenerative joint disease, is an ubiquitous accompaniment of advancing age. The disease may also be a secondary phenomenon as a sequel to other pathological processes. In this sample osteoarthrosis may be secondary to the two cases of dislocation (HB 22 and HB 29). The rest of the osteoarthrosis encountered appears to be primary. Distribution of the osteoarthrosis by individuals and skeletal elements can be found in TABLES 41 and 42, respectively. Forty-one per cent of the individuals with joints which could be observed (13 of 32) showed signs of osteoarthrosis. More of the males than females showed signs of the degeneration of the joints. As with the osteophytes, female degeneration of the joints appears to have started earlier, with more males than females exhibiting it in middle-age. The small percentage of each element affected is not surprising remembering (as discussed above in the section on sex and age) that this population sample is relatively 'young' with few old adults.

There is one case of gout, a metabolic arthrosis. Gout is a disease due to a disturbance of

TABLE 41 DISTRIBUTION OF OSTEOARTHRITIS BY INDIVIDUAL

Age	n*	Present	%
Young adult males	4	-	-
Young adult females	5	1	20
Middle-age males	7	5	71
Middle-age females	7	3	43
Old adult males	1	1	100
Old adult females	1	1	100
Adult males	2	1	50
Adult females	1	-	-
Adult sex unknown	4	1	25
Total males	14	7	50
Total females	14	5	36

*n is the number of individuals for which the element was observable

TABLE 42 DISTRIBUTION OF OSTEOARTHRITIS BY ELEMENT

Elements	n	No. affected	%
L mandibular condyle	18	-	-
R mandibular condyle	12	-	-
Cervical vertebral bodies	128	20	16
Cervical vertebral facets	135	12	9
Thoracic vertebral bodies	265	-	-
Thoracic vertebral facets	251	18	7
Thoracic rib facets	251	1	< .01
Lumbar vertebral bodies	131	2	2
Lumbar vertebral facets	131	4	3

TABLE 42 (cont) DISTRIBUTION OF OSTEOARTHRITIS BY ELEMENT

Elements	n	No. affected	%
Sacrum	28	-	-
Ribs	468	16	3
Sternum	17	1	6
L medial clavicle	23	1	4
R medial clavicle	24	1	4
L lateral clavicle	21	2	10
R lateral clavicle	23	2	9
L glenoid fossa	22	1	5
R glenoid fossa	20	-	-
L acromion	19	1	5
R acromion	17	1	6
L proximal humerus	23	-	-
R proximal humerus	21	-	-
L distal humerus	25	1	4
R distal humerus	27	-	-
L proximal radius	25	-	-
R proximal radius	25	-	-
L distal radius	25	-	-
R distal radius	23	-	-
L proximal ulna	25	-	-
R proximal ulna	26	-	-
L distal ulna	20	-	-
R distal ulna	24	1	4
L carpals	70	3	4
R carpals	82	4	5
L proximal metacarpals	94	1	1
R proximal metacarpals	87	-	-
L distal metacarpals	96	-	-
R distal metacarpals	87	-	-
Hand phalanges	306	10	3
L acetabulum	28	-	-
R acetabulum	28	1	4
L proximal femur	23	1	4
R proximal femur	26	1	4
L distal femur	24	1	4
R distal femur	27	1	4
L patella	15	1	7
R patella	16	-	-
L proximal tibia	23	1	4
R proximal tibia	26	1	4
L distal tibia	23	-	-
R distal tibia	26	-	-
L proximal fibula	12	-	-
R proximal fibula	13	-	-
L distal fibula	22	-	-
R distal fibula	22	-	-
L calcaneus	20	-	-
R calcaneus	20	-	-
L talus	20	-	-
R talus	21	-	-
L other tarsals	58	-	-
R other tarsals	65	-	-
L proximal metatarsals	83	-	-
R proximal metatarsals	90	-	-
L distal metatarsals	81	-	-
R distal metatarsals	95	-	-
Foot phalanges	188	-	-

the purine metabolism characterised by accumulation of uric acid in the body. The deposition of uric acid crystals in the cartilages and epiphyseal bone provoke an inflammatory response and the cartilage and bone are destroyed. Gout rarely is seen in individuals under 40 years old and is mainly seen in males. The first joint affected is usually the metatarso-phalangeal joint of the big toe. A middle-age male (HB 17) exhibits the classic sign of gout, a 'scooped-out' lytic lesion located on the right and left first metatarsal near the margin of the distal articular surface. This is the result of the pressure erosion due to tophi (circumscribed nodules filled with the uric crystals). This complaint often has a genetic component, but can be triggered by ingesting high levels of lead. In Roman times lead was used in water piping, cooking vessels and in wine making (Waldron 1973).

Neoplastic disease

Neoplasma or new growth may be classified as malignant or benign. No cases of malignant neoplasms have been found in this sample. There is one case of a benign neoplasm, an osteochondroma or solitary osteocartilaginous exostosis. Osteochondromas are the most common of the benign bone tumours and over 50% of them involve either the femur or tibia (Steinbock 1976, 319–21). They are produced by growth of aberrant foci of cartilage on the surface of bone; they often begin to form during early childhood and cease growing when the nearby growth plate ceases its growth. A middle-age male (HB 8) has a small osteochondroma (24 mm in length) on the medial side of the left tibia just below the proximal epiphyseal area.

Miscellaneous conditions

An adult female of unknown age (HB 27) has a calvarium which varies in thickness, with undulating areas up to 10.6 mm thick. There is also a middle-age male (HB 22) for which a gallstone was recovered. Inflammation of the gall-bladder and bile passages can lead to a crystalline substance incorporating cholesterol building up in layers forming gall-stones (cholelithiasis).

The cremation

The bones (HB 45) were found inside a fractured pottery urn set into a small pit (F135) from Period 4 in Area II. The cremated bone weighs 325 g. No notes were taken at the time of the sieving of the contents; the saved processed material consists of 10 g of fragments 5–10 mm in size and 315 g of fragments greater than 10 mm. The maximum length of a fragment was 73 mm. The bone appears to come from one individual, an adult, sex unknown. Included with the human bone was one calcined humerus mid-shaft of a bird, possibly from a pigeon. Because of the urn being fractured, it is not possible to be certain whether the pigeon was burned with the human body or was in the surrounding soil and contaminated the pot at a later time.

The colour of the bones varies from neutral white to neutral black and medium blue. The shaft fragments are warped with a glassy quality and the surface is smooth. The colours suggest temperatures from <285°C to around 645 °C (Shipman *et al.* 1984). The range of colours indicate a less-than-thorough firing of the body, possibly caused by a lack of stirring of the pyre.

The anatomical distribution of the identified fragments reveals that a fair representation of the entire skeleton was collected, this includes some smaller bone fragments such as a hand phalange. The amount collected is relatively small. The quantity of bone recoverable from a modern adult cremation is between 1600–3600 g; and archaeological adult cremations usually range from 200 g to almost 2000 g with an average of *c.* 800 g (McKinley 1989). It is likely that a token amount of the body was collected to be deposited in the urn.

Conclusions

The sample of the Romano-British population excavated at Fosse Lane gives a 'snap shot' of what could be a few family groups in a small and relatively healthy community. While a few of the subadults may be missing, the sample shows a relatively normal age distribution for an urban agricultural population, though without as many old adults (those over 50) as might be expected. The adult skeletons are of medium height with mean statures for the males close to the means for other Roman populations in Britain and the females slightly taller than the means of many. This similarity of stature shows that the subadults experienced no more overall stress during development than the subadults from other sites examined. The difference in caries prevalence may hint at a difference in diet for males and females; the lower average of caries for the males implying that these individuals had a diet lower in sugars and carbohydrates. There is not a high number of osseous pathologies. The number of traumatic injuries are relatively low and the majority, if not all, were accidental. The rates of osteoarthrosis and vertebral osteophytes again show this population sample to be weighted more towards youth than old age.

RADIOCARBON DATES

by Gordon Cook and Peter Leach

A series of five radiocarbon determinations was sought from human remains recovered as burials on the site. The majority of burials occurred within small discrete cemeteries and appeared to represent the very latest acts in the continuity of Romano-British settlement. The largest group included a burial (GU 5296) accompanied by a silver amulet cross with a Christogram, which should not have originated much before A.D. 400 in Britain. This and their stratigraphic position indicated the potential for some or all the burials to be of post-Roman date, and thus comparable to other cemeteries of this period which are particularly

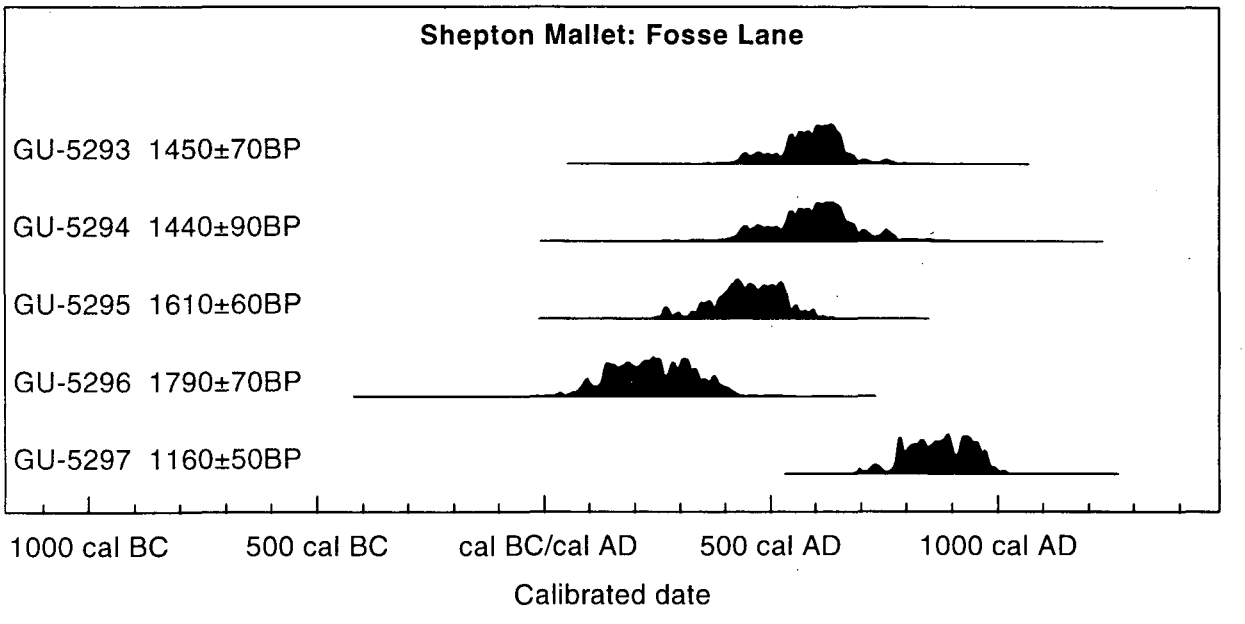


FIG. 76 Probability distributions of radiocarbon dates

TABLE 43 RADIOCARBON DETERMINATIONS

Sample	Radiocarbon age (BP)	$\varsigma^{13}C(\%)$	calibrated age ranges 1 sigma	2 sigma	Context
GU–5293	1450 ± 70	- 24.5	cal A.D. 548–655	cal A.D. 430–680	HB 9, F102
			cal B.P. 1402–1295	cal B.P. 1520–1270	Area IV
GU–5294	1440 ± 90	- 23.1	cal A.D. 543–664	cal A.D. 420–767	HB 12, F106
			cal B.P. 1407–1286	cal B.P. 1530–1183	Area II
GU–5295	1610 ± 60	- 24.2	cal A.D. 390–535	cal A.D. 260–593	HB 21, F113
			cal B.P. 1560–1415	cal B.P. 1690–1357	Area III
GU–5296	1790 ± 70	- 23.2	cal A.D. 128–333	cal A.D. 70–410	HB 22, F50
			cal B.P. 1822–1617	cal B.P. 1880–1540	Area III
GU–5297	1160 ±50	- 25.6	cal A.D. 789–954	cal A.D. 722–990	HB 33, F439
			cal B.P. 1161–996	cal B.P. 1228–960	Building I

well-represented in Somerset (Rahtz 1991). Radiocarbon determinations from different groups of burials at Fosse Lane had the potential for testing this theory, but also to examine the possibility of a chronological sequence in the burials (FIG. 76; each distribution represents the relative probability that an event occurred at a particular time. The data are the result of sample radiocarbon calibration (Stuiver and Reimer 1993)).

The five samples, all of human bone, were selected from four different locations; two from the largest cemetery of east–west-aligned graves in Area III of Period 5 (including the inhumation accompanied by the silver amulet, HB 22), one from the dispersed cemetery of suspected pagan burials in Area IV (also of Period 5), one from the small cemetery in Area II of Periods 4–5, and one from three isolated east–west burials cut into Building I in Period 5. The analysis was arranged through the Ancient Monuments Laboratory of English Heritage and undertaken by the Scottish Universities Research and Reactor Centre (SURRC), Glasgow. The radiocarbon results have been calibrated using the maximum intercept method (Stuiver and Reimer 1993) and the dataset of Stuiver and Pearson (1986). All the calibrated ranges cited in this text and throughout are those for 95% confidence. The results are tabulated as follows:

The sample size eventually submitted for analysis was rather too small for the calibrated dates to be regarded with total confidence as representative of the date of the cemeteries, or to demonstrate a clear chronological sequence. Nevertheless, this group is broadly comparable with two other radiocarbon-sampled groups of burials in the region from potentially contemporary cemeteries. At Cannington, close to the estuary of the River Parret, a large rural cemetery was apparently in use between the third and seventh or eighth centuries A.D. (Rahtz *et al.* 2000), while at Henley Wood in north Somerset, fifth-, sixth- and seventh-century burials succeeded a late Roman temple (Watts and Leach 1996). The Fosse Lane dates certainly support the hypothesis that inhumation burials appeared very late in the life of this settlement. Indeed, in burial terms at least, a continuity of site use here from the late fourth to the late sixth or early seventh century is a strong possibility. Whether or not the latest dated remains (GU 5297) from Building I are strictly an extension of that continuity into the ninth or tenth centuries is more debatable, but they are surely evidence of an otherwise almost invisible continuing tradition and recognition of the site, long after it ceased to be occupied.

3.11: ANIMAL REMAINS

ANIMAL BONE

by Stephanie Pinter-Bellows

Summary

It is suggested that the bones are probably derived from domestic midden deposition, composed of animals which were used for food and most likely not raised on the site. However, the animals eaten were not raised solely for meat, but were multi-purpose animals. Calculating by MNI shows sheep/goats to have been found in the greatest abundance; but beef was the main meat supply supplemented by smaller amounts of mutton, pork and chicken. The ratio of cattle to sheep/goat when calculated by NISP implies a 'Romanized' site, though cattle butchery patterns and the assumed breeds of cattle and sheep/goat show little Roman influence.

Material and methods

The excavations at Fosse Lane produced a total of 5,414 animal bones and bone fragments. Material was collected in the expectation that the sample size from phased contexts would be sufficient to document changes in the representation and possible uses of species over time, as well as to provide data which would contribute (with reference to other published comparanda) to an understanding of the status and economy of the Roman settlement. No sieving was undertaken on site, and a substantial proportion of bone was collected during surface definition cleaning and is unattributable to any phase. The majority of the faunal material, 92% (4,957 fragments), comes from the Roman periods; the other 8% (457 fragments) comes from the post-Roman to modern period. Only the Roman material will be discussed in this report. Of the bones dated to the Roman periods, 33% (1637 fragments) were unphased plotted bones, 2% (111 fragments) were from Period 1, 26% (1266 fragments) from Period 2, 12% (609 fragments) from Period 3, 18% (898 fragments) from Period 4, and 9% (436 fragments) from Period 5. As the numbers of bones from the various Roman periods are relatively small, they are treated as a group throughout the report; period anomalies are mentioned, but interpreting them should be attempted with caution as the small number of bones means that period differences are as likely to be caused by statistical error as real changes.

The following mammal and bird species were identified: horse (*Equus caballus*), cow (*Bos taurus*), pig (*Sus scrofa*), sheep (*Ovis aries*), goat (*Capra hircus*), red deer (*Cervus elaphus*), dog (*Canis* sp. domestic), cat (*Felis* sp. domestic), water vole (*Arvicola terrestris*), domestic fowl (*Gallus* sp.), duck (*Anas* sp.), crow (*Corvus corone*). Bones which could not be identified to species were assigned to higher order categories: sheep/goat, chicken/pheasant, small artiodactyl (sheep/goat-, roe deer- or pig-size), and large mammal (cow-, red deer- or horse-size).

A selective, detailed record was made for the assemblage (appendix in archive), with further work done only where it appeared to add substantially to the results. For a full description of the methods used see Davis (1992). In brief, all mandibular teeth and a restricted suite of articular ends/epiphyses and metaphyses of the girdle, limb and foot bones were always recorded and used in counts. Other parts of the skeleton were only noted selectively, e.g. when a scarcer species could be identified, or when the bone was of particular interest. In order to be able to calculate the proportion of the bones which were unidentified fragments, a count was kept on the number of unrecorded identifiable skeletal elements.

Tooth eruption and wear data, fusion data and a limited range of measurements were recorded systematically for the selected parts of the skeleton; pathology and butchery data were noted where present, but counts of bones affected and not affected were not made for non-selected parts of the body. All the material was recorded following the AML Osteometry Data Capture Manual (Jones 1979). Dental eruption and attrition data were recorded using the wear stages defined by Grant (1982) for cattle and pig, and the stages defined by Payne (1973; 1987) for sheep/goat. Epiphysial union data follow Silver (1969). Measurements follow von den Driesch (1976) with additions as described in Davis (1992). Withers heights were calculated following von den Driesch and Boessneck (1974).

Metrical discrimination between mandibular first and second cattle molars was made following Beasley *et al.* (1993). This study used the same values as were used in their research: <21.5 mm for identifying first molars and >22.2 for identifying second molars. Using this, only one misidentification of a first and of a second molar in jaws was made; this gave an error rate of 15%, within the range that they had in their study.

Three methods of quantification to estimate the relative importance of the major animal species were used: simple fragments counts (often termed number of identified specimens per taxon, NISP), minimum numbers of individuals, MNI (following Gilbert and Steinfeld 1977, 333), and live weight ratios (following Harcourt 1979, 155). MNI was calculated separately for each period and then added together to get an MNI for each species for the combined Roman periods. The calculating of MNI for each period separately, instead of grouping the bones together first and then performing the calculations, significantly affected the number of individuals found in only two species: horse and chicken/pheasant (see the table of MNI counts in the appendix). A very low level of bones of both these species was found in each period, and calculating the MNI for the periods separately doubled the number of individuals found. This effect when using divisions, especially with small numbers, is well known (e.g. Grayson 1984, 67). However, as each of the Roman periods used on this site is over one generation long for the different species under study, the species within each period can be treated as independent units and the large numbers of horse and chicken/pheasant are justified. Harcourt (1979) was used for the live weight ratios because of the similarities in size of the animals on which it was based to the ones from Fosse Lane. The Iron Age Gussage All Saints meat/weight ratios are based on cattle with shoulder heights of 1000–1330 mm, and sheep with withers heights of 530–640 mm. Harcourt suggests that if the meat contribution of sheep and goats is equal to 1, then pigs equal 1.5 and cows equal 10. The cattle from Fosse Lane (see below under Measurements) are within this height range, the sheep are on average slightly smaller, so that it is possible that the meat of pigs and cattle should be weighted slightly more.

Preservation and taphonomy

The animal bones were routinely recovered by hand during excavation, though no sieving was carried out. Condition of the bone was subjectively noted on four characteristics (TABLE 44). Charred bone was noted for colour — black through blue through white — and the

TABLE 44 PRESERVATION AND TAPHONOMY

Conditions	%
Charred	3.11
Eroded	<0.01
Abraded	<0.01
Chewed and swallowed	3.11
Unidentified fragments	31.85
Total number of fragments	4957

amount of the bone affected. Eroded bone was defined as bone which was pitted and battered; the outer surface of these bones was often exfoliating. Abraded bone was defined as bone which had rounded edges instead of retaining sharply angular margins to old breaks and cut surfaces. Gnawed bone was noted for the element and portion of the bone affected and the species believed to have gnawed it. Included with the gnawed bone count were those which showed the effects of stomach acids, having been swallowed. Also noted was the amount of unidentified bone, mostly fragments of long bone shafts.

Preservation of bone in most contexts is good. The bones are typically hard and smooth-surfaced. The percentage of bone showing any of the characteristics noted is small. The affected bones are distributed throughout the contexts. The charred fragments are mainly black in colour (85%, 131 fragments) from a relatively cool fire. Most of the gnawed specimens (95%, 146 fragments) show the blunt pitting and widely spaced tooth marks typical of dogs, though 5% (eight fragments) show the parallel gouges of rodents' incisors. A total of 3% (four fragments) exhibits the form of surface erosion which suggests that they had passed through the gut of a dog (three of these four fragments come from Period 4). The lack of high percentages of abrading, gnawing and unidentified fragments suggest that the bones were rapidly buried. However, the majority of the bones come from inside the various buildings and so are not in primary deposition, but have been moved at least twice.

Species abundance

The species identified from the Roman periods are listed in TABLE 45. The bulk of the identifiable bones belong to the domestic mammal species: cattle, sheep/goat, and pig; with a small number of horse. There is also a small number of domestic fowl and a duck. Red deer is represented only by the pedicle (the base) of an antler; as the pedicle is free of the skull, the antler had dropped off and was harvested without killing the deer. There are also bones of dog, cat, water vole and crow.

TABLE 45 LIST OF ANIMAL SPECIES FOR COMBINED ROMAN PERIODS

Animal species	**NISP**	**MNI**
Horse (*Equus caballus*)	36	6
Cow (*Bos taurus*)	394	28
Pig (*Sus scrofa*)	61	13
Sheep (*Ovis aries*)	56	12
Goat (*Capra hircus*)	9	6
Sheep/Goat	218	38
Red deer (*Cervus elaphus*)	p	
Dog (*Canis* sp. domestic)	13	5
Cat (*Felis* sp. domestic)	1	1
Water vole (*Arvicola terrestris*)	1	1
Domestic fowl (*Gallus* sp.)	2	2
Chicken/pheasant	14	7
Duck (*Anas* sp.)	1	1
Crow (*Corvus corone*)	1	1
Small artiodactyl	1	
Large mammal	2	
Identifiable mammal	2539	
Identifiable bird	29	
Unidentified mammal	1572	
Unidentified bird	7	
Total	**4957**	

While a selected record was made, in order to be able to calculate the proportion of the bones which were unidentified fragments, a count was kept on the number of unrecorded identifiable skeletal elements

The element which was the most numerous and was therefore used to calculate the minimum number of individuals (MNI) of sheep and goats was the fourth deciduous premolar. This shows there to be about one-third young goats and about two-thirds young sheep. The few fused bones which can be differentiated into sheep and goat give about a fifty-fifty split, though because of the small number of bones involved this is hardly statistically significant. Presumably, then, goats make up between a third and a half of the MNI for the indeterminate sheep/goat bones also. However, this is quite a large number of goats to find on a Romano-British site (Luff 1982); and the goat bones come from various parts of the skeleton, not restricted to the extremities as might be expected if the remains represented skin- or horn-processing. At the present time the number of goats present on this site must be left an open question to be investigated further during future excavations.

Estimates of the relative importance of the major animal species are shown in FIG. 77. The number of identified specimens per taxon (NISP) show cattle bone fragments to be more numerous than sheep/goat. However, cattle bones, being larger, are fragmented more often, both for cultural reasons such as carcass and meat cut divisions and taphonomic reasons such as breakage when trampled. For these reasons when the species are studied as MNI, there are more sheep/goats than cattle present on the site. When meat ratio is examined, cattle contribute much more meat than sheep/goats; so cattle are by far the most important animal when considering diet. Using any of these methods of relative importance, pig contributed little to the diet.

The percentage of cattle as calculated by NISP compared to sheep/goat is within the expected range of cattle to sheep/goat (59% to 32% respectively) found on non-military Romanized sites (King 1984, 189–90). The percentage of sheep/goat is on the higher end of the range for Romanized sites. Explanations for this ratio include the Fosse Lane community not being as 'Romanized' in their dietary preferences as those in higher status Romano-British centres; the growing importance of wool; and, most importantly, the environment:

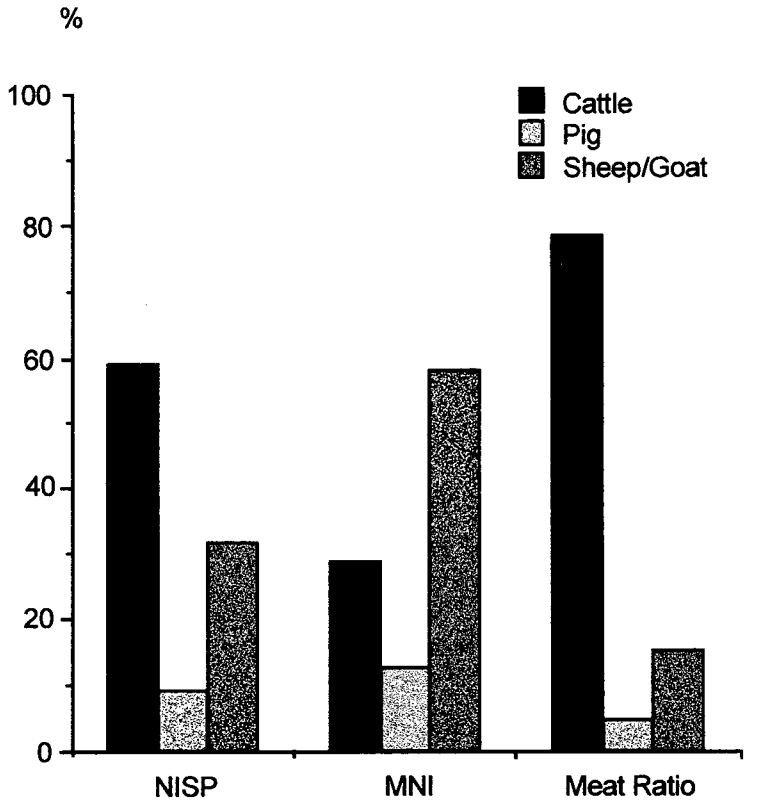


FIG. 77 Importance of main meat animals for combined Roman periods

sites with 30% or more sheep/goat are almost always located in the dry light soils of the lowlands. The percentages are close to those found at nearby Ilchester (Levitan 1982). Sites which catered to the military diet usually have a much higher percentage of cattle as calculated by NISP.

Distribution of skeletal elements

The range of skeletal elements found in the Roman periods is relatively equally distributed throughout the various contexts. The skeletal element distribution for the most common mammalian species is summarised in FIG. 78. The calculations for this distribution follow O'Connor (1991), though using more elements. The elements chosen for this calculation come from different parts of the body and include some smaller parts of the skeleton. The expected total for elements (E) has been calculated by taking the total count of the elements (compensating for elements of which there are more than two in the skeleton: metapodia, first phalanx, and first and second mandibular molars taken together) and dividing by the number of elements involved to obtain an expected total; assuming that all the elements are equally abundant. The observed value (O) is then divided by this calculated expected value to show whether the number of specimens of a given element in the sample was under-represented (O/E <1.00) or over-represented (O/E >1.00) relative to one another.

For each species, various elements are markedly over- and under-represented. Elements such as calcanea, and first and second molars are over-represented; while distal femora and radial carpals are under-represented. Differential preservation of weaker parts of the skeleton and lower recovery rates for smaller bones will explain most of the differences. There is nothing to indicate any specialised pattern of butchery (e.g. an abundance of tibiae which might signify smoked hams) or disposal. The assemblage appears to be consistent with killing and unspecialised butchery carried out on site.

Ageing

TABLES 46–7 and FIG. 79 summarise the age distribution of cattle, pig and sheep/goat in terms of epiphysial fusion and teeth eruption and wear. The ages given for the various stages come from those for modern animals (Silver 1969); it is by no means certain that earlier animals passed through these stages at the same speed as modern animals. These ages should only be used for rough comparisons.

Comparing epiphysial fusion and dental eruption and wear data for cattle, they show basically the same pattern. The majority of the cattle were killed from late adolescence through to adulthood with the largest proportion killed as adult animals, at, perhaps, around six to eight years of age, a smaller proportion at around three to four years, and a sixth killed in the years in between. This slaughter of a broad range of adults implies a multi-purpose role for the cattle. The age distribution does not have the fingerprint of dairying — surplus male calves and mostly old females — and over half of the adults are past the age of prime beef. What is suggested is that while the cattle were used as a source of meat, they were also important for haulage and milk. This comprehensive use of stock is what would be expected from independent small farmers.

There are not many pig bones with fusion information or jaws and mandibular teeth, so relatively little can be said about when the pigs were killed. Most pigs were killed as juveniles, in their first year, with others killed as adolescents, in their second and third years. There is little evidence for pigs of any maturity. Pigs in general are usually slaughtered by late adolescence as they have gained much of their body weight by this age.

The epiphysial fusion and dental eruption and wear data for the sheep/goats are comparable. Slightly over half of the sheep/goats were killed by early adulthood, around the age of three to four, roughly comparable numbers were also killed in late adolescence, around

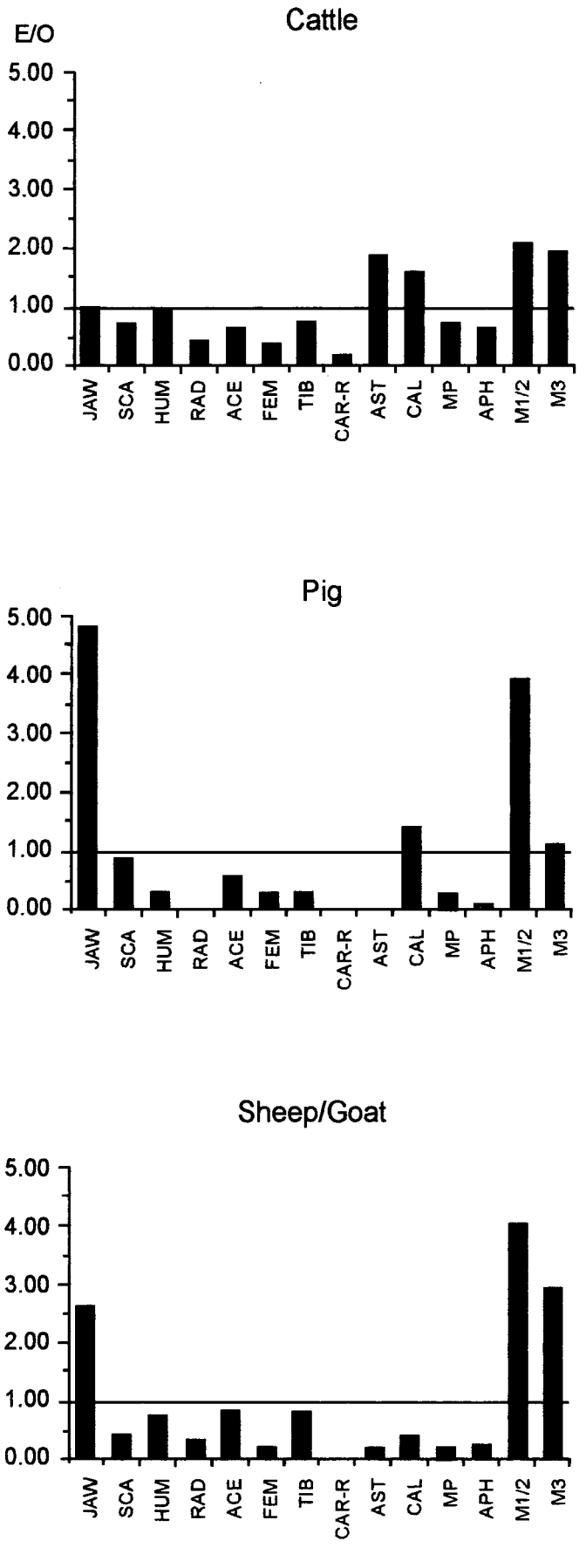


FIG. 78 Distribution of skeletal elements for main meat animals for combined Roman periods

TABLE 46 EPIPHYSIAL FUSION DATA FOR COMBINED ROMAN PERIODS

	Unfused epiphysis	Unfused shaft	Fusing	Fused	% fused
COW					
EARLY FUSING ELEMENTS					
Humerus, distal	-	1	-	17	
Phalanx 1, proximal	-	-	-	47	98
MIDDLE FUSING ELEMENTS					
Metapodial, distal	1	3	-	21	
Tibia, distal	2	-		11	86
LATE FUSING ELEMENTS					
Radius, distal	-	3	-	4	
Femur, distal	1	1	-	4	
Calcaneum, proximal	-	1	-	1	64
PIG					
EARLY FUSING ELEMENTS					
Humerus, distal	-	-	-	1	100
MIDDLE FUSING ELEMENTS					
Phalanx 1, proximal	1	1	-	-	
Metapodial, distal	1	1	-	-	
Tibia, distal	-	-	-	1	
Calcaneum, proximal	-	2	-	-	25
LATE FUSING ELEMENTS					
Radius, distal	-	-	-	-	
Femur, distal	1	-	-	-	0
SHEEP/GOAT					
EARLY FUSING ELEMENTS					
Humerus, distal	-	1	-	12	
Phalanx 1, proximal	-	1	1	15	93
MIDDLE FUSING ELEMENTS					
Metapodial, distal	1	1	-	4	
Tibia, distal	-	3	-	12	80
LATE FUSING ELEMENTS					
Radius, distal	-	3	-	3	
Femur, distal	-	2	-	2	
Calcaneum, proximal	-	2	-	4	56

Note: for unfused elements either the shaft or epiphysis is used depending on which has the greater number

two to three years, and as older adults, around four–six years and around six–eight years. This kill pattern suggests a fairly unspecialised sheep/goat husbandry. As with the cattle, while meat is important, most were kept beyond the prime meat age of two to three years. The adults would have been kept for milk and/or wool, although the majority of the adults are killed earlier than might be expected if wool was the major asset from the sheep. In the section on species abundance it was noted that a third of the deciduous premolars are goat while half of the comparable fused bones (a very small number indeed) are goat; this could indicate that more of the sheep were being killed earlier or it could just be a reflection of the very small number of identified bones.

For all three species there is an almost complete absence of neonatal and elderly individuals. There are only two neonatal cattle dP4 (stage a); and two neonatal sheep/goat bones

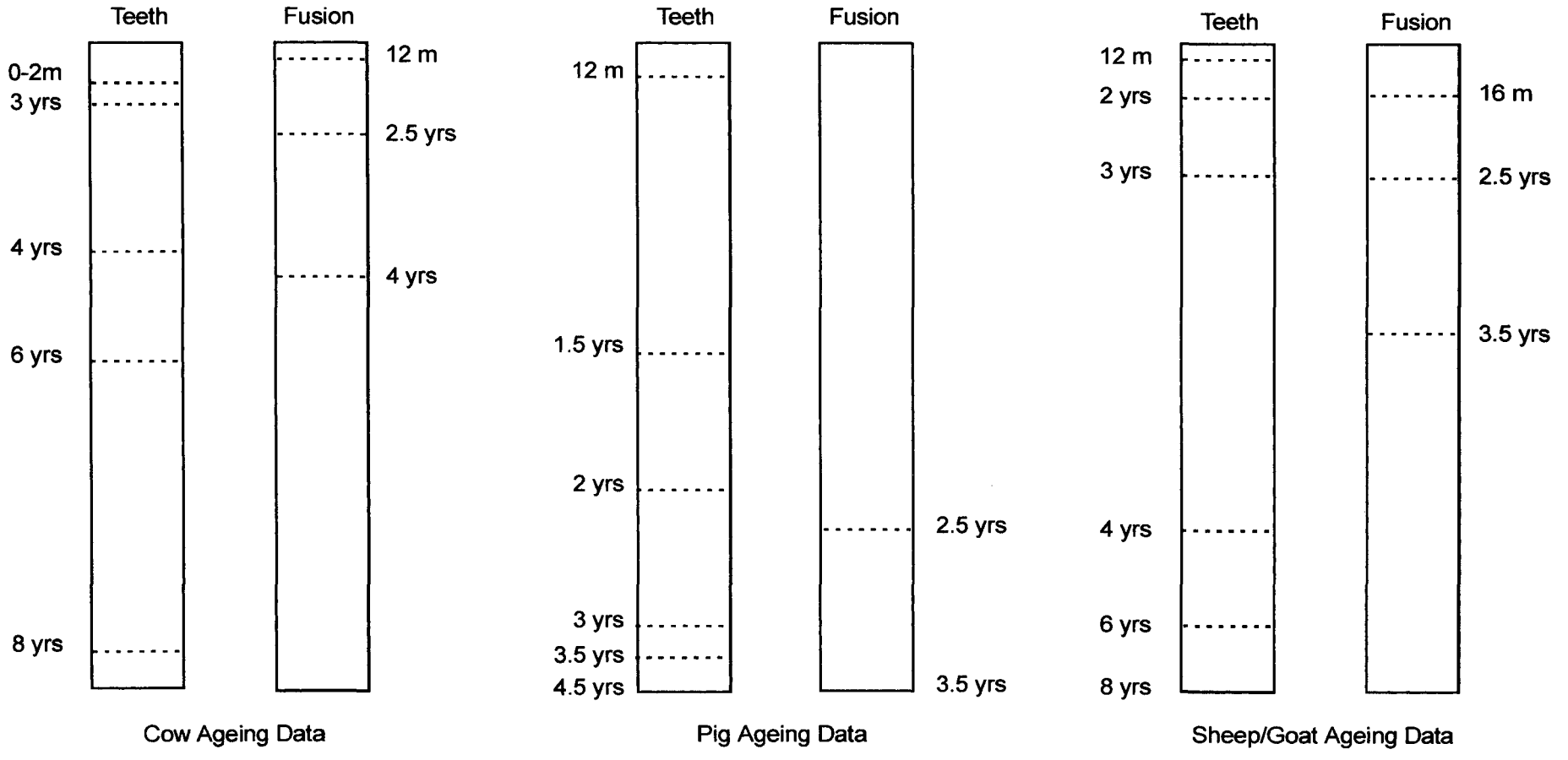


FIG. 79 Epiphysial fusion and tooth ageing data for combined Roman periods

TABLE 47 MANDIBLE AND MANDIBULAR TOOTH AGEING DATA FOR COMBINED ROMAN PERIODS

Tooth wear	Approx. Age	n	%
COW			
Deciduous fourth premolar unworn	0–2 months	2	6
First or second molars unworn	2–18 months	-	-
Third molar unworn	2.5–3 years	1	3
Third molar, dentine wear on mesial cusp	3–4 years	7	23
Third molar, dentine wear on central cusp	4–6 years	5	16
Third molar, dentine wear on distal cusp	6–8 years	14	45
Third molar, heavy wear, stage j or more (Grant 1982)	8 + years	2	6
PIG			
Deciduous fourth premolar unworn	0–2 months	-	-
First molar unworn	6–12 months	1	5
First molar in early wear stages b–d (Grant 1982)	1–1.5 years	8	43
Second molar unworn	1.5–2 years	4	21
Second molar in early wear, third molar unworn stages b–d (Grant 1982)	2–3 years	4	21
Third molar, enamel attrition only	3–3.5 years	1	5
Third molar, minor dentine exposure	3.5–4.5 years	1	5
Third molar, dentine exposure merging of mesial cusps	4.5–6 years	-	-
Third molar, heavy wear stage j or more (Grant 1982)	6 + years	-	-
SHEEP/GOAT			
Deciduous fourth premolar unworn	0–2 months	-	-
First or second molars unworn	2–12 months	1	2
Third molar unworn	1–2 years	3	6
Third molar, distal cusp still unworn	2–3 years	6	12
Third molar, outline of enamel not joined, before stage 11 (Payne 1987)	3–4 years	29	55
Second and third molar, outline of enamel joined, stages 9 and 11 respectively (Payne 1987)	4–6 years	8	15
Second molar post stage 9, third molar still stage 11	6–8 years	5	10
Third molar, heavy wear, post stage 11	8+ years	-	

(as defined on the basis of size). Because of the lack of sieving it cannot be stated for certain whether very young animals are not part of the deposit because of the greater vulnerability of these mandibles and bones due to taphonomic and recovery loss or because they were never present in these deposits. There are also only two elderly cattle jaws (third molars at stage k or more) and no elderly pigs or sheep/goats (pig third molars at stage k or more, sheep/goat third molars at stage 12 or more). This leads to a second possibility, that the assemblage contains almost exclusively the skeletons of animals which became a part of the diet and not animals which were disposed of for other reasons — although the animals were not necessarily raised solely for meat. This in turn leads to the possibility that the animals were not raised on this site.

Wapnish and Hesse (1988) have developed three models for the production and consumption of domestic food animals. Self-sufficient economies, which both produce and consume locally, have age profiles which include all age classes. Producer economies have age profiles which include perinatal mortalities and older animals culled from the breeding stock. Consumer economies have age profiles which include an abundance of market-age animals. It is suggested that what is being observed here at Fosse Lane is this third model of the consumer economy.

Measurements

Summary statistics (mean, range, standard deviation) were calculated for all measurements which could be obtained in five or more cases. The measurements are summarised in TABLE 48,

TABLE 48 LIST OF MORE FREQUENTLY TAKEN MEASUREMENTS FOR COMBINED ROMAN PERIODS

Element	Meas.	n	Mean	SD	Range
HORSE					
APH	Bp	5	52.56	2.53	48.7–55.8
COW					
APH	Glpe	37	52.97	2.65	46.7–59.0
	Bp	41	25.77	1.79	22.6–29.2
	SD	39	21.95	1.45	18.2–24.0
	Bd	39	24.17	1.66	20.8–26.8
AST	GLl	18	58.21	2.95	50.0–62.5
	GLm	21	53.41	3.12	45.3–58.9
	Dl	14	32.68	2.38	28.8–39.3
	Dm	12	29.68	1.89	27.2–33.3
	Bd	24	36.84	2.11	32.1–39.3
HC	44	5	136.00	15.99	120.0–160.0
	45	5	46.94	3.81	43.9–53.0
	46	5	34.78	5.69	29.8–44.0
M1	L	7	20.69	1.44	18.1–22.9
M2	L	8	22.81	1.83	19.2–25.5
M3	L	15	33.84	3.04	32.2–37.1
	W1	19	14.31	0.95	11.6–16.1
MC	B at F	9	47.28	2.38	44.9–51.8
	BFd	8	50.25	3.70	46.8–58.8
	A	8	24.21	2.16	22.6–29.7
	B	8	23.05	1.33	21.8–25.9
	1	8	20.89	1.56	18.9–21.9
	2	6	28.33	1.19	26.6–29.9
	4	8	20.18	0.64	19.0–21.5
MT	B at F	6	45.53	1.63	42.6–47.2
	BFd	5	48.74	2.40	44.8–51.8
	DD	5	21.38	2.10	18.1–23.9
	A	5	23.44	1.70	21.1–26.0
	1	5	20.96	0.85	19.4–22.0
	2	5	27.16	1.47	25.2–29.1
SCA	LG	5	49.00	1.87	46.3–51.9
	BG	5	39.70	3.66	32.5–41.8
TIB	Bd	6	56.50	1.61	55.1–60.0
SHEEP/GOAT					
ACE	LA	7	24.80	1.17	23.2–27.0
APH	GLpe	13	32.15	1.41	29.8–34.3
	Bp	12	10.93	0.65	10.0–12.0
	SD	14	8.54	0.78	7.1–9.8
	Bd	14	10.12	0.45	9.3–11.0
HUM	Bd	7	26.76	2.01	24.7–29.0
	HTC	7	12.13	0.88	11.0–13.8
M3	W1	8	7.13	0.27	6.9–7.8
TIB	Bd	11	23.17	1.33	21.0–24.9

a complete list of measurements can be found in the archive. Measurements from cattle and sheep/goat show them to be similar in size to other Roman sites (TABLE 49).

Maltby (1981) has shown that the greatest lateral length (GLl) of the astragalus is the measurement most commonly taken on prehistoric and early historic cattle limb bones from British sites. The mean for the Fosse Lane cattle of 58.21 mm (n=18) is at the low end of the Roman range; however the range for all these sites is fairly narrow. Withers heights could be calculated for a metacarpal and two metatarsals (TABLE 50). The mean of 1055.1 mm places at least these three animals with the smaller cattle found in Romano-British assemblages. They are comparable with late Iron Age cattle from Gussage All Saints and the Roman sites of Carlisle, Frocester Court and Exeter; but are considerably smaller than those from other

TABLE 49 COMPARISON OF MEASUREMENTS

	n	Mean	SD	Range
COW AST GLl				
Carlisle, A.D. 73/74–100/105[1]	16	57.1	2.94	52.8–64.1
Corstopitum, Roman	9	58.0	-	53.0–63.0
Fosse Lane, comb. Roman	18	58.2	2.95	50.0–62.5
Exeter, A.D. 300–400	18	58.3	-	54.3–62.0
West Stow, Roman[2]	4	60.8	-	59.7–63.0
Baylham House, A.D. 100–200	10	61.3	-	56.0–65.8
Alcester, late Roman	30	61.4	-	53.9–67.9
Shakenoak, late Roman	44	61.6	-	53.0–72.0
Winnall Down, early Roman	16	61.6	-	56.1–68.4
SHEEP/GOAT TIB Bd				
Carlisle, A.D. 73/74–100/105[1]	31	22.6	1.07	20.6–24.8
Balksbury 1973, Roman	7	22.8	-	21.0–27.3
Frocester Court, A.D. 100–300	12	22.8	-	20.0–25.0
Exeter, A.D. 55–100	21	23.1	-	21.3–29.2
Fosse Lane, comb. Roman	11	23.2	1.33	21.0–24.9
Exeter, A.D. 100–300	30	23.3	-	21.4–25.9
Alcester, A.D.100–200	9	23.6	-	21.1–26.0
Exeter, A.D. 300–400	15	23.9	-	22.3–27.0
Winnall Down	8	23.9	-	21.9–25.6
Frocester Court, late Roman	13	24.0	-	23.0–27.0
Shakenoak, late Roman	26	24.5	-	22.0–28.0
Baylham House, A.D. 100–200	22	24.5	-	21.6–28.8
Alcester, late Roman	59	25.5	-	21.2–29.4
West Stow, Roman[2]	9	25.6	1.9	22.1–27.4

[1] Stallibrass 1991, [2] Crabtree 1989, all others Maltby 1981

TABLE 50 COMPARISON OF WITHERS HEIGHT ESTIMATES

	n	Mean	Range
COW			
Fosse Lane, comb. Roman	3	105.5	101.04–110.74
Carlisle, A.D. 73/74–100/105[1]		105.5	
Frocester Court, A.D. 100–300		105.8	
Gussage All Saints, Iron Age		106.9	
Exeter, Roman		107.7	
Corstopitum, Roman		111.7	
Colchester, Roman		115.5	
Ilchester, Roman[2]		118.9	
SHEEP			
Fosse Lane, comb. Roman	4	53.03	52.39–54.08
Gussage All Saints, Iron Age		55.8	
Carlisle, A.D. 73/74–100/105[1]		56.8	
Exeter, Roman		57.8	
Ilchester, Roman[2]		62.3	
Colchester, Roman		65.1	

[1] Stallibrass 1991, [2] Levitan 1982, all others Luff 1982

Romano-British urban or military sites such as Colchester, Corstopitum or Ilchester. Using the classification of horn cores from archaeological sites (Armitage and Clutton-Brock 1976), the two horn cores which are complete come from short-horned cattle. The term 'short horned' is just a description of size and not of breed or type of cattle. However, the horn-

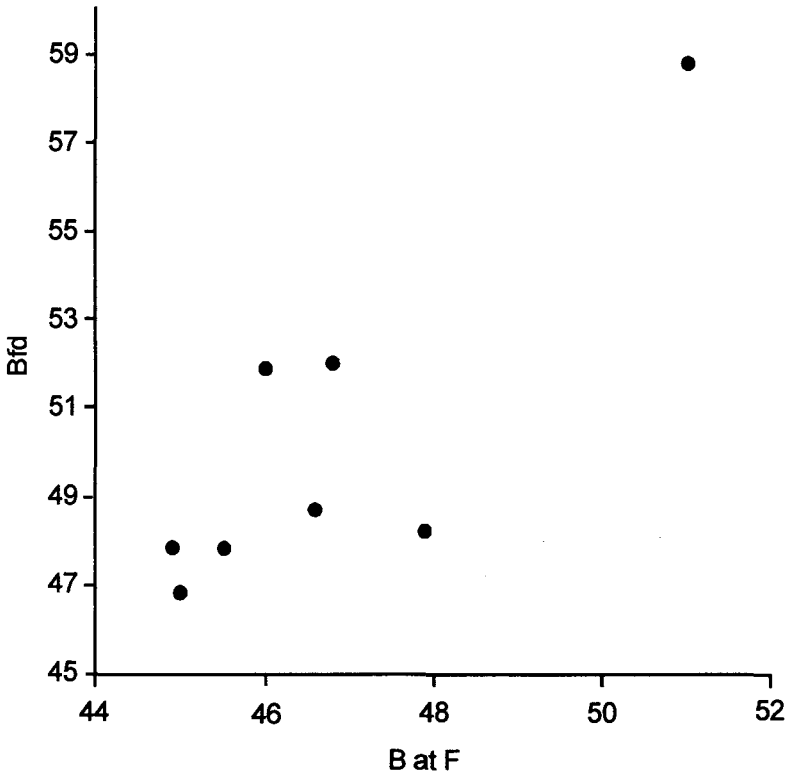


FIG. 80 Plot of the distal breadth (Bd) against the distal fusion point breadth (BFd) for cattle metacarpi

cores and the withers heights suggest that the animals were of the so-called 'Celtic short-horn' type which first appeared in Britain during the Iron Age, and which persisted through to the medieval period.

Horn cores from bulls are believed to be relatively heavy, short compared to their basal circumference, and somewhat flattened in cross-section. Two of the five horn cores possibly fit these criteria. Sex was also inferred from plotting the maximum distal breadth of the metacarpal (Bd) against the maximum distal breadth at the point of fusion (BFd) (Higham and Message 1969). As seen in FIG. 80, seven of the eight distal metacarpals mostly likely came from cows and one from a bull or castrate.

For sheep/goat the most often taken measurement is the distal breadth of the tibia. Again, the Fosse Lane mean of 23.2 mm (n=11) is on the lower side of the range. However, the range for all the sites is relatively tight. Withers heights could be calculated for four different elements. The mean of 530.1 mm is very small. It is smaller than the means found at the late Iron Age site of Gussage All Saints and the more 'Romanized' urban sites of Carlisle and Exeter; and much smaller than the mean at Colchester or Ilchester. However, since for taphonomic reasons, smaller bones stand a better chance of staying complete, a larger sample of sheep bones from this area needs be studied before it can be determined whether the size of the Fosse Lane sheep is significant, and explanations of nutrition or regional variation investigated. There are too few bones to attempt any divisions based on sexual dimorphism.

Non-metric traits

Two non-metric traits were recorded for the cattle: the congenital absence of the lower second premolar, and the absence of the distal column from the lower third molar. Too few proximal mandibles were present to record the absence of the lower second premolar. In

two cases out of fourteen, there was an absence of the distal column from the lower third molar. In sheep/goat the just-mentioned traits were recorded along with the position of the major nutrient foramen on the sheep femur. There were no cases of the absence of the lower second premolar on the nine proximal mandibles present and no cases of the missing distal column from the lower third molar in the nineteen molars observed. Too few femur shafts were present to report on the distribution of the major nutrient foramen.

Butchery

The majority of the butchery marks (81%, 85 out of 105) are on cattle or large mammal bones believed most likely to be cattle. Three mandibles have knife marks, one on the angle of the mandible, probably the result of separation from the skull; and two on the diastema of the mandible on the medial surface, probably the result of removal of the tongue. One horn core shows knife cuts around the base from removal of the horn. One distal humerus and one proximal ulna show knife cuts, the consequence of disarticulation of the elbow joint. Another humerus has a slicing mark, which has removed part of the deltoid tuberosity, from a heavy blade (or possibly a cleaver). One radius exhibits the loss of similar superficial scoops of bone mid-shaft. Forty-three ribs have butchery marks: twenty-six have been chopped into sections and seventeen have knife cuts from the removal of meat. Compared to the ribs where the most butchery marks were found, very few were observed on the vertebrae. One thoracic vertebra has a knife cut near the body on the dorsal spine. The other thoracic vertebra is unusual, it is a dorsal spine, the cranial (anterior) edge of which has been sliced away. One lumbar vertebra has repeated knife marks on a transverse process. (The ribs and vertebrae were identified just as large mammal, and while most of them are probably from cattle, it is possible that a few of them are from horse.) Three innominates have been chopped near the pubic area of the acetabulum, most probably as part of carcass dismemberment. Three innominates have superficial chop marks on the neck of the ilium and two have knife marks in the same area; these occurring during the removal of meat. There were no butchery marks observed on the femora or tibiae. Separation of the feet from the limbs most commonly took place at the tarsals. Six astragalus and five calcaneus exhibit chop marks. There is also one proximal metatarsal with knife marks, probably from removal of the feet. Three proximal phalanges show chop marks from the removal of the hoof; and three have knife marks, these are usually associated with removal of the skin.

One sheep/goat frontal has a transverse chop through the eye orbit and on across. One distal humerus has been chopped as part of the disarticulation of the elbow joint and one has knife cuts mid-shaft from meat removal. A radius also has knife cuts mid-shaft. Five ribs have been chopped into sections and three have knife cuts. (The ribs have only been identified as small artiodactyl, therefore while most of them are probably sheep/goat, some could be pig.) One astragalus and two calcaneus have knife cuts from the removal of the feet.

Only one horse bone showed any sign of dismemberment, a scapula had the supraglenoid tuberosity chopped off. From this one bone it is not possible to say whether the horse was being used for meat or in tool making, or both. Two pig bones had butchery marks: the proximal shaft of a tibia exhibited knife cuts for meat removal and a calcaneus had been chopped for the removal of a foot.

Comparing the butchery patterns for cattle found at Fosse Lane with a study that Maltby (1989) carried out on Hampshire Romano-British cattle bones, the patterns mainly fit a rural pattern going back into the Iron Age. (While it is assumed that the urban/rural patterns are similar for Hampshire and Somerset, no studies have been carried out to check this.) This pattern of dismemberment which favoured knives was usually carried out by individuals who were not full-time specialists in butchery, but individuals who had the time to use finesse as the quantity of cattle butchered was not large. There are, however, some butchery marks which are more akin to an urban pattern of butchery, especially the superficial blade

marks on the humerus and radius and the chop marks on the proximal phalanges. When similar inconsistencies were observed on the Hampshire sites it was suggested that some of the new methods of carcass processing were copied in the country (Maltby 1989, 89).

Pathology

Over half of the pathologies noted on the cattle bones were non-specific infections, mainly involving only the fibrous covering of the bone (the periosteum), an infection termed periostitis. A cow radius has a 20 mm plaque of unhealed periostitis, mid-shaft next to the articular area for the ulna shaft, seen as a thin light-grey layer. Eight rib fragments (out of 258, 3%) show signs of infection. Four show healed periostitis on the visceral surface, showing a grey, fine-grained surface which has been incorporated into the outer table of the rib. Two exhibit unhealed periostitis on the visceral surface, one in a thin layer as seen on the radius and one a thick, patchy layer. These rib lesions were most likely caused by some sort of pulmonary complaint, though at this time it is impossible to determine whether it is pneumonia, tuberculosis, lung worm or a variety of other diseases. The last case of rib periostitis is on the ventral surface of the rib; the unhealed periostitis is raised and has a porous, cribra-like texture. While the lesion is not complete it appears to have a focal area, it is probable that it was caused by an infection through a break in the skin. There is also a rib where the infection has been long-term and has gone deeper, into the trabecular bone. On the visceral surface is a circumscribed lesion, its concave surfaces are almost smooth; it contains a sinus through which the pus that was a part of this infection was carried to the surface. This particular infection was most likely not local, but borne by blood from another area of the body. This type of infection is known as osteomyelitis. (It should be noted, as with the butchery, that the ribs have been identified only as large mammal and while most of them are from cattle, some could be from horse.) An ilium fragment has a large area of reactive bone, probably related to an infection.

There are two arthropathies, both probably attributable to osteoarthrosis. One is an acetabulum (1 out of 14, 7%) showing eburnation on the medial half of the pubic section. This case is severe as eburnation indicates the destruction of the articular cartilage and the abrading of bone upon bone. The other is a proximal metatarsal which was partially fused to a tarsal, which has been broken off. This appears to be a case of spavin; which in this particular specimen is a manifestation of osteoarthritis, as, besides the exostosis, the proximal articular surface is eroded, porotic and pitted. In both cases, the osteoarthritis could have been caused by degeneration due to old age, stress, or trauma. Lastly, there is one deciduous incisor (out of 5, 20%) and three permanent incisors (out of 40, 8%) which have a V-shaped notch on the lateral side at the base of their crown. All of these teeth are in an advanced state of wear. It is thought that this abnormality is due to long grass, perhaps associated with abrasive soil, being drawn between the teeth in grazing (Miles and Grigson 1990, 494–5).

All the lesions found in the sheep/goat and pig bones are periostitis. The most interesting is a young goat jaw which has along the lateral border, in line with the deciduous fourth premolar, a conical lump of bone 8.5 mm across inside a 20.5 mm area of long-term reactive bone. One sheep proximal phalange (out of 17, 6%) has a plaque of unhealed periostitis on the anterior mid-shaft. There is also a sheep/goat radial mid-shaft with a small grey plaque of unhealed periostitis on the lateral anterior side; and a tibia with patchy, unincorporated, unhealed periostitis on both the medial and lateral sides, the entire length of the shaft. A pig mandible (one of 17, 6%) has unhealed periostitis along the buccal side of the alveolar. There is also a small artiodactyl humerus and femur fragment with unhealed periostitis; and five ribs (out of 182, 3%), one in the process of healing and four unhealed, all with periostitis on the visceral side, one of the unhealed cases also being on the ventral side. (Most of the small artiodactyl bones are probably sheep/goat, though some could be pig.)

Conclusions

The general composition and preservation of the assemblage suggests that many of the bones were buried relatively rapidly following deposition. Though few bones were probably excavated from primary deposits, the distribution of anatomical elements suggests that animals were killed and butchered on site.

Calculating from MNI, sheep/goats are found in the greatest abundance. Beef, however, was the main meat supply, with smaller amounts of mutton and pork, and a little chicken. A small number of horse bones was found, but the evidence is not clear as to whether they were used as food. The ratio of cattle to sheep/goat when calculating with NISP totals is within that usually considered to be a 'Romanized' site. The amount of sheep/goat is at the higher end of the range. The most likely explanation for this is related to the lowland environment, though local dietary preferences and the importance of wool should be considered. The degree of Romanization suggested by this assemblage was relatively limited, evidence from the pattern of butchery marks on cattle shows a rural pattern which goes back to the Iron Age with only some urban Romanized influences.

Measurements show the cattle to be Celtic short-horns and the sheep a small breed seen since the Iron Age. Neither show any signs of improvements from imported Roman stock as can be seen perhaps on some sites in the South-East. The lack of very young and old animals, suggests that the assemblage contains almost exclusively the skeletons of animals which were a part of the diet. This in turn implies that the animals were not raised on these specific areas of land; that these households along the Fosse Way were part of a consumer community not agrarian producers. However, the animals they ate came from small independent farmers and were not raised solely for meat. The age profiles show these animals had a multi-purpose role, many first having been used for milk, traction or wool.

3.12: PLANT REMAINS

CHARRED PLANT MACROFOSSILS

by Vanessa Straker

Introduction

A small number of soil samples was collected during the excavation programme and these were sieved in Birmingham and Bristol. The floats were collected on a 500-micron mesh sieve, with the exception of context C6044 where a 250-micron float was also recovered to see whether small seeds such as *Juncus* or small *Gramineae* were present. In the event, the only identifiable material was tiny fragments of *Avena* (oat) awn which was not removed. The residues were retained on a 500-micron mesh. Context C6044, a burnt layer beneath a floor in Building X, contained thousands of macrofossils and a 25% subsample, obtained using a riffle box, was examined. Criteria used for identification of cereals are those recommended by Jacomet (1987). Nine samples were processed, but only six contained plant macrofossils, apart from occasional charcoal fragments. No attempt has been made to discuss the assemblages by period as so few samples were available, but, on the present evidence, the range of cultivated and wild plants appears to be broadly similar throughout.

Results

A summary of each sample is given in TABLE 51 and the identified plant macrofossils are listed in TABLE 52. Nomenclature follows Clapham *et al.* 1989. All macrofossils were charred.

TABLE 51 SUMMARY OF CHARRED PLANT MACROFOSSIL SAMPLES

	Context	Wt of sample	Wt of residue	Wt of flot.	Date
F130, hearth, *Area IV*	1140	2.4kg	18g	10.9g	?C4th
F133, ?cess pit, *Area IV*	1143	10.0kg		0.2g	?C2nd–3rd
F371, *Building VII, Room A*, hearth	1591	2.6kg	200g	35.4g	C3rd
F411, oven structure, *Building 1*		1.25kg	250g	0.2g	C4th
Building VII, Room B, amphora contents	1334	0.2kg	200g	18.5g	C3rd
Building VII, Room B, floor debris	1334	0.8kg	15g	2.0g	C3rd
Building VII, Room A, floor	1518	0.2kg	11g	0.5g	C3rd
Building X, layer of burnt grain under floor	6044	4.2kg	750g	279.0g	late C2nd–3rd
F135, fill of cremation pit	1125	8.0kg	800g	5.0g	?

CONTENTS

1140 bone: 3 fragments, 1 burnt; plant macrofossils
1143 bone: 4 fragments
1591 snails: occasional; plant macrofossils: grain, chaff, weeds
F411 charcoal: 5 small fragments
1334 amphora contents: bone, 1 vertebrum; charcoal, mostly *Fraxinus excelsior*, ash; snails, 19 *Ceciloides acicula* (burrowing, probably modern), 7 others
1334 floor debris: plant macrofossils; charcoal, small fragments, mostly *Quercus* sp., oak
1518 2 snails; charcoal: occasional small fragments; charred plant macrofossils
6044 plant macrofossils: grain, chaff, weeds. Very large amount: 25% float examined
1125 bone: 2 fragments; charcoal, small fragments; plant macrofossils

Contexts C1125, Area II (cremation pit fill), C1140, Area IV (hearth), C1334 and C1518, Building VIII (floor debris) contained occasional cereal grains, some of which were identified further as *Triticum* sp. wheat. One from C1125 had a more rounded dorsal surface and steeply angled embryo characteristic of bread wheat (identified as *T.* cf. *aestivum*). However, wheat grain morphology is very variable and chaff is usually needed to be sure of the range of types represented. The only chaff was a single wheat glume base from C1518. Weeds were confined to a few examples of vetch/tare, sorrel and grasses and all could have been arable weeds. Hazel nut fragments were recovered from the hearth (C1140) and the floor debris in Building VII. There was a fire in this building early in the third century before it was demolished, but the presence of the macrofossils is consistent with the accumulation of occasionally dropped ashes from the hearth, or charring *in situ* of previously unburnt items.

The two most interesting assemblages were contexts C1591, a hearth inside Building VII, and C6044, a burnt layer on the floor in Building X.

A summary of their components is listed below:

Proportions of grain, chaff and weeds

	C1591	C6044 (25% subsample)
grain	46 (21%)	2235 (69%)
chaff	155 (70%)	941 (29%)
weeds	20 (9%)	57 (2%)

Ratio of wheat grain to glume bases

C1591	C6044
1 : 6	2.67 : 1

A total of 70% of the hearth sample (C1591) was composed of cereal chaff, notably glume bases and spikelet forks of spelt wheat (*T.spelta*) and emmer (*T.dicoccum*) or spelt wheat. Some were identified only as wheat, which in theory could imply einkorn, emmer or spelt wheats which are all hulled, but in the present context the most likely candidate is spelt. The cereal grain, which was mostly wheat, was only tentatively assigned to a particular species for the reasons noted above. A few grains of hulled barley were also present. None of the

TABLE 52 CHARRED PLANT MACROFOSSILS IDENTIFIED

	Date	?C2nd	?C4th	C3rd	C3rd	C3rd	late C2nd–3rd
Taxon	**Context**	**1125**	**1140**	**1334**	**1518**	**1591**	**6044**
Vicia/Lathyrus sp.	vetch/tare				1	6	3
Rumex sp.	sorrel		1			1	1
Corylus avellana L.	hazel nutshell		+1	+1			
Lapsana communis L.	nipplewort					1	3+1
Carex sp.	sedge						
Gramineae	grass				1		5
cf. *Festuca* sp.	cf. fescue					3	
Festuca sp.	fescue						6
Bromus hordaceus/secatinus	brome				1	6	21+7
Phleum sp.	cat's tail						1
Avena sp. grain	oats						17
Avena sp. awn fragments	oats						+13
Avena fatua/ludoviciana floret bases	wild oats						2
CEREALS							
Cereal grain, indeterminate		1		+1	2+3	18+9	4+m
Cereal culm nodes						2	
Cereal sp. rachis internode fragments							+7
cf. *Triticum* sp. (?immature grain)	cf. wheat						8
Triticum sp. grain	wheat	1	1		2	15	
Triticum sp. glume bases	wheat				1	58	84
Triticum sp. spikelet forks	wheat					4	6
Triticum sp. brittle rachis internodes	wheat					7	1
T.monococcum/dicoccum spikelet forks	einkorn/emmer						2
*T.*cf *dicoccum* grain	emmer					2	
T.dicoccum glume bases	emmer						2
T.dicoccum/spelta grain	emmer/spelt						2
T.dicoccum/spelta glume bases	emmer/spelt					3	105
T.dicocccum/spelta spikelet forks	emmer/spelt						5
T.dicoccum/spelta terminal spikelet forks	emmer/spelt						4
*T.*cf *spelta* grain	spelt					7	2207
T.spelta glume bases	spelt				3	73	500
T.spelta glume fragments	spelt						109
T.spelta spikelet forks	spelt					2	105
*T.*cf. *aestivum* grain	bread wheat	1					3
Hordeum sp. grain	barley					2	1
Hordeum sp. hulled grain	barley						6+1
Hordeum sp. hulled symmetrical grain	barley					2	4
Hordeum sp. hulled asymmetrical grain	barley						2
Hordeum sp. rachis internodes	barley						3
unidentified seeds						3	
unidentified items, not seeds		1				7	2
total		4	2	0	11	222	3224
weight/volume soil sample		8kg	2.4kg	0.2kg	0.2kg	2.6kg	1.05kg/0.63l
number per kg soil		0.5	0.8	0	55	85.4	3070
number per litre soil		-	-	-	-	-	5109

KEY: m – many; + – fragments, number of fragments listed after + (eg 2+2 = 2 complete and 2 fragments, +2 = 2 fragments). Fragments excluded from totals.

cereal grains showed signs of sprouting. The weeds (9%) were all small and included a number of grasses (*Bromus* and *cf. Festuca*), nipplewort and sorrel as well as small legumes identified as either vetch or tare (*Vicia/Lathyrus*). The legumes measure 1.5 x 1.5 x 1.5 mm and compared well with *Vicia tetrasperma*, but as there are a number of similar taxa, a firm identification was not made. All the above could have grown as arable weeds on the local limestone.

The simplest explanation for a hearth assemblage dominated by chaff is that crop-processing waste had been used to start the fire, and the denser items such as glume bases

had dropped to the base of the fire and not burnt away completely. Spelt chaff has often been recorded in the stoke holes of Romano-British 'corn-drying' ovens as, for example, at Catsgore (Hillman 1982). Alternatively, crop-processing waste could have been thrown onto the fire after the piecemeal processing for consumption of a few ears or spikelets. The barley could have been impurities in the wheat crops or have become mixed with the wheat in the hearth.

Other evidence for the use of chaff as fuel comes from the upper fill of a ditch on the Manor House site at Ilchester (Paradine 1994). This consisted almost entirely of spelt wheat chaff with some fragments of oat awns. It was suggested that this crop-processing waste had been used as kiln fuel.

Context C6044, the layer under the floor in Building X, is very different in character from the hearth. Wheat grain, probably spelt, makes up 69% of the assemblage, with 29% chaff which was largely spelt glume bases, and only 2% weeds.

Grains of hulled barley account for less than 1% of the grain and are probably there as an accidental contamination in the wheat crop. If barley had been grown in the field previously, some contamination is almost inevitable.

A similar range of weeds to that described for the hearth was present, but a larger number of seeds was recorded although, as so much grain was present, the percentage is low.

The oats (*Avena*) have been included with the weeds as it is not possible to be sure, from the grain alone, whether a wild or domesticated species is represented. The size range of wild and domesticated oat grains overlaps, and the two floret bases recovered were both typical of the wild form. Wild oats and *Bromus* are common weeds today as they were in the past, where their presence may have been tolerated to 'bulk' up the crop in poor years. The *Bromus* and *Avena* are large enough to be processed with the grain rather than being separated during sieving to remove fine contaminants.

Part of Building X may have functioned as a barn. There appears to have been widespread burning *in situ*, which may have involved at least partial destruction of the building, including the burning of the grain it stored.

The cereals in the sample from C6044 represent about 300 ears of wheat, possibly as little as two square metres of crop in a field.

Storage of grain in spikelet form is to be expected in damp climates as the grain is better protected from sprouting and insect infestation, but the evidence for this is elusive. This may be partly because, as experiments charring cereals under different regimes have shown, differential preservation in favour of grain is likely to have taken place (Boardman and Jones 1990). The ratio of 2.7 grains to 1 glume base suggests that this is not the remains of a crop which had been largely cleaned of weeds and stored in spikelet form, as a ratio of closer to one grain to one glume base would be expected. However, as it is not known at what temperature the burning within Building X took place, differential preservation, resulting in under-representation of chaff, is a possibility. An alternative would be that partial processing had taken place or some crop-processing waste had become mixed with cleaned grain or grain stored in spikelet form.

There are only two local Romano-British sites with data available for comparison with Fosse Lane. At Catsgore, Hillman (1982) concluded that sprouted spelt was being used for malting and that spelt chaff and straw were an important part of the kiln fuel. At Fosse Lane, not a single instance of sprouting was recorded, though in some cases the embryos had become detached from the grains.

Other comparable evidence comes from Manor Farm, Ilchester (Paradine 1994) and from three other sites there (Murphy 1982). In the latter, the crops identified in the deposits which ranged from first to fourth century in date, were dominated by spelt wheat, but small amounts of emmer (*T.dicoccum*), hulled six-row barley and a free-threshing wheat were also present. Most samples were rich in chaff and weed grasses, but a minority were dominated by grain charred at a late stage in sample preparation. As at Catsgore, sprouted wheat grains

were present in many samples, but at these Ilchester sites there was no suggestion that this was necessarily related to malting.

Conclusions

The assemblage from Fosse Lane is consistent with many Romano-British sites in southern Britain, with spelt as the dominant cereal. As so few samples were available, we cannot be sure that barley was not equally as common or whether other cultivars were also important. The crops were well-cleaned with few weed seeds, and while none of those present is particularly characteristic of limestone soils, they tolerate a range of soil types today, which suggests that the crops could have been grown locally.

ORGANIC MATERIAL PRESERVED ON METALWORK

by Jacqui Watson

The following objects were conserved and selected for further study of the mineral-preserved organic material by Margaret Brooks at Salisbury Conservation Laboratory.

Five iron objects and one of copper alloy were examined, and in all cases only slight traces of organic materials were preserved by iron corrosion products. Mostly these turned out to be wood. Three (marked *) were sampled for examination by scanning electron microscope (SEM), to try and identify their species. Unfortunately all the samples are very granular and poorly preserved, which means that definite identifications are difficult. All the listed species were available in Roman Britain and throughout Europe.

1078, Area V (WX863161)
Iron awl with traces of wooden handle, probably *Fraxinus* sp. (ash). FIG. 71.2

1382, Area IV (WX863162)
*Iron knife with remains of wooden handle, but too degraded to identify the species. SEM B661.

3709, Area V (WX863110)
Copper-alloy mount with iron pivot bar. The iron is covered in various random organic material, possibly straw.

4522, Area III (WX863169)
*Iron cleaver with the remains of a wooden handle, it is in very poor condition, but is possibly *Salix* sp (willow) or *Populus* sp. (poplar). FIG. 69.1

5092, Area VI (WX863167)
Fragments of 3 iron straps with studded terminals. These have very slight traces of wood on the inside which is possibly *Quercus* sp. (oak).

C6032, Building IX, Period 2 (WX863158)
*Ox-goad with mineral-preserved wood in socket, possibly *Salix* sp. (willow) or *Populus* sp. (poplar). SEM B662. FIG. 71.10

4.0: DISCUSSION AND REVIEW

DISCUSSION

The following discussion is framed as a set of themes which attempt to interpret the site evidence and the settlement as a whole within a wider context.

DATING

Despite the relatively limited scope of detailed excavations at Fosse Lane, the more extensive spatial collection of finds and recording of structural data permit a fair account of the settlement's chronology and development overall. This evidence was presented in Section 2 and summarised in 2.10, demonstrating a continuity of settlement history for a site which was probably founded in the last decades of the first century A.D. and continued through into the first decades of the fifth, if not beyond.

DEVELOPMENT AND MORPHOLOGY

It is clear from other evidence, obtained both during and after these excavations, that the area investigated in 1990 lay to the rear of a main road frontage (the Fosse Way) along which the greatest concentration of properties and principal focus of settlement would be expected. In Period 1 this focus may have comprised virtually the entirety of settlement, the excavation site lying within a peripheral zone where the rear compounds of properties were beginning to be defined from the late first and early second century, though detectable contemporary activities within them were barely recognised. Given the sparseness even of residual finds of this period over most of the area, the extent of occupation or related activity was perhaps equally slight, although use of this zone for stock or crop cultivation (a likely complement to the early phase of roadside settlement) would leave little trace. The relationship of a major side street to adjacent boundary layouts suggests the presence of one other primary element in the area, extending diagonally north-east from the Fosse Way. This possibly marked the course of an earlier route with links beyond the site to the east, but whose origin might have been the pre-Roman Iron Age settlement explored more recently at Cannards Grave (FIGS 3 and 5; Birbeck 1997).

A radical reorganisation of this zone, and perhaps of the settlement as a whole, was apparently undertaken in the first half of the second century. Despite certain irregularities, a unitary scheme of boundaries comprising drystone walls and possibly some ditches defined a series of elongated rectilinear compounds which extended back eastwards, and at roughly 90°, from the Fosse Way. The main irregularity to this pattern was a result of the earlier side street separating Areas I/II, III and V to the south from Areas IV and VI to the north. More extensive sampling of the boundary features might have strengthened this hypothesis, but a unitary scheme implies an element of overall direction and authority within the settlement at a crucial early stage in its development. Whatever the motivation, these arrangements, other

structures, and an increase in the volume and distribution of contemporary finds across this zone imply growth and an expansion of the settlement as a whole during the second century. Linked with this was the appearance of several substantial stone (and possibly timber) buildings, with perhaps implications for the function and status of these back properties (FIG. 28).

The best-preserved and most extensively excavated, Building VII, could mark the appearance of an independent property sub-division, occupied by a separate dwelling. Initially perhaps a hall, this was later subdivided into three main rooms, possibly on two floors, with an additional corridor to the west and with one or more outhouses (2.7). From the evidence which survived a disastrous fire in the two southern rooms, one may have been a kitchen and the other a store, while the larger northern room may have been primarily a living area — perhaps doubling for other purposes. For a local parallel of similar size and perhaps overlapping date see Building 2.1 at Catsgore (Leech 1982a, 10, fig. 29). Lying within one of the elongated compounds which should extend westwards as far as the Fosse Way, Building VII might, alternatively, have been a subsidiary element of a property on that frontage, but since no further excavation was possible within this enclosure its precise status cannot be determined. A contemporary structure, Building X, apparently lay within the next compound but one to the north. From its more limited investigation, this was a larger, possibly aisled hall with a rounded apse-like southern end, though little else of its interior or north end was seen. A completely exposed example of this unusual building type was Building V at Hibaldstow, Lincolnshire (Smith 1987, 191–2), and, closer to home, Building 2.10 at Catsgore (Leech 1982a, 18). From its shape and the evidence of a large deposit of charred spelt wheat at the north end, Building X may have been a barn, although the presence of other, more obviously domestic, material suggests a multi-functional use. Such a building could well have been subordinate to an establishment on the main road frontage, but there is some evidence for another contemporary building beneath or just north of the later Building IX, and a link between the two within an independent property might thus be postulated.

Although the relationship between these structures and properties on the Fosse Way is unclear, Building X and its western companion look to be served by a narrow side street or alley approaching from the main road. Much closer to the road frontage part of another ?contemporary building, located in Evaluation Trench E, would front this whole strip of compounds. Another possible side street in Evaluation Trench B to the south, could have provided a separate link from Building VII to the Fosse Way. North of this street the remains of Building XI signify another main-road frontage property, though not obviously associated with Building VII or its compound. While not conclusive, the presence of these two alleys, apparently serving Buildings VII and X, strengthens the argument for their independence as establishments from those on the main road. Though barely explored, the complex of occupation deposits and structural features in Areas III, V and east of Building I could be further evidence for other potentially independent properties being founded in this back zone of the settlement during Period 2. Further afield, the pattern of plot layouts extends to the north, as revealed in a series of subsequent evaluations covering the Mendip Business Park (Leach *et al.* 1990; Leach 1992a). Stone-founded buildings and second-century material, from within compounds located well back from the Fosse Way, indicate a similar pattern of development. The evaluation of sites to the east of the 1990 excavations (Leach 1991c and 1992b) reveals its continuation there also, as far as the probable limit of settlement along the Frog Lane brook and up to 300 m back from the Fosse Way (FIG. 3).

Essentially, Periods 3 and 4 represent an intensification of activity and maintenance of the settlement pattern which became established in this zone during Period 2. That this will not have been a smooth progression is demonstrated by the loss of Buildings VII and X; the former then cut through by a major boundary ditch at the transition between Periods 2 and 3. Whether such evidence can be cited in support of a suggested earlier third-century hiatus in the Fosse Lane settlement as a whole is debatable. Nevertheless, by the later third and

apparently throughout the fourth century, an increase in the volume of finds and structures attributable to those periods attests to an era of maximum development and prosperity (FIGS 28 and 29).

The most prominent structure was Building IX, which developed as a multi-functional establishment throughout Periods 3 and 4 from a basic aisled hall, with, later, a suite of rooms on two floors to the south, combining domestic habitation with other unspecified activities (PL. XXI and FIG. 30). This was the only building from which painted wall plaster was recovered, along with a good assemblage of domestic personal and household items, as well as concentrations of coins and pottery, principally from the upper levels of cleaning. Hearths and cobbled surfaces were exposed but not excavated in the hall (Room E), and an oven, possibly a corn-drier, was inserted at a late stage into the room at the north end of the building. Outside were cobbled yards, a drain, and evidence of several separate outhouses or other timber-framed structures. All this evidence, along with the style and size of the building, suggests a prosperous and independent establishment, a successor to Building X and the earlier structure partly beneath Building IX, whose bounds now exceeded the original second-century compound layout.

In some contrast, the destruction of Building VII and the cutting of a large drainage ditch through its remains in Areas VII/VIII in the third century may signal a change of fortune and status there. Renewed activity from early in the fourth century saw the more modest erection of Building VIII, partly in stone, above the earlier ditch, to house a large oven or furnace, with a smaller hearth in what may have been another room to the south. This building was modified later in the century, perhaps to a timber-framed structure of similar size, but no longer housing ovens. Part of what may have been a new enclosing compound was defined by segments of stone boundary walls to the north and west. Close to the site of Building VII were traces of at least one other contemporary structure, while, nearby, the original southern compound boundary wall was redefined here by a ditch. Whether or not this area had now become subsidiary to some other independent establishment nearby, or was attached to an original road-frontage property, the function of Building VIII seems to have been predominantly industrial rather than domestic.

In the southern half of the site the only large stone building investigated (Building I) was less well-preserved than those to the north, but seems to have been built on a new site early in the fourth century (FIG. 29). The main building may have originated as an aisled hall with a smaller room or entrance porch centrally placed at the south end. In its second phase the hall was sub-divided into two large rooms; the northern room containing a sequence of hearths and ovens whose precise function was not determined. What may have been a new entrance with a porch was created at the north end, encroaching upon the principal side street, F440. Although the evidence for industrial activity was most prominent, the building probably doubled as a dwelling, perhaps at its south end or on an upper floor. For a better appreciation of its context it should be recognised that Building I appears to lie towards the western end of a compound (Area I/II), bounded to the north by the main side street, which continued east for an unknown distance. It appears to lie on the periphery of a more extensive structural complex with earlier origins, represented by the apsidal end of an earlier stone building to the east. Geophysical prospection beyond the excavation boundary in 1990 (FIG. 4, Area 3), and traces of buildings and occupation deposits seen there in the course of the subsequent development seem to confirm this. Although incomplete, the evidence suggests that Building I may be the latest representative of another establishment founded independently of road-frontage properties on the Fosse Way in Period 2, comprising a complex of structures and enclosures which developed over several centuries. Evidence for the use of the western end of this compound was sparse, although shallow quarrying for stone may have taken place here prior to the erection of Building I (2.2).

South of Areas I and II, the Area III compound may have begun as part of a much larger enclosure which contained all three, but it was almost certainly defined with a boundary

ditch by the second century. Until Period 5, most activity was concentrated towards its south-east corner, where surfaces representing remains of timber-framed structures, areas of cobbling and other occupation deposits were recorded but not excavated. No evidence for any substantial mortared stone building was detected, and it may be that Area III was a subsidiary of the structural complex focused just to the east of Building I. Whatever its status and function in Periods 3 and 4, the compound was eventually utilised in Period 5 for a small cemetery, possibly for Christian burials, an event which probably marked the end of any other use or occupation here.

Despite a minimal excavation sample, the exposure of Area V at the south end of the zone (as seen) gave one of the clearest views of compounds and boundary arrangements on the site (FIGS 28 and 29). Sequences of the latter showed alternations of ditches with drystone walls within a system which retained its broad east–west trend throughout episodes of modification over three centuries or more. What may have begun as one large elongated compound, extending back from the Fosse Way frontage in Period 1, appears to have been sub-divided north–south in Period 2 into at least three major blocks. This arrangement was maintained with minor modifications throughout much of their subsequent development. Internally, two foci of activity and occupation were identified; the most extensive to the north-east. As exposed in its latest manifestation, the remains of cobbled yards, stony soil deposits and the suspected sites of timber-framed structures merged with similar remains in the south-east corner of Area III by Period 4. Once again, these remains give the impression of an area with structures and activities subsidiary to the core of a building complex located further east. The former presence of a narrow street separating Areas III and V (of ?Period 2) suggests that it originally served separate establishments. By Period 4, if not before, this had been obliterated by the later occupation deposits, which suggests some merger of arrangements and thus perhaps of ownership here. On the western margin of Area V, part of another concentration of finds associated with structural and occupation deposits marked the rear edge of activity on the Fosse Way road frontage. Its separation from the remainder of Area V to the east by a long-lived boundary sequence, may indicate a different property and perhaps ownership or tenancy on the road frontage, although for a time there was access at the north end through into the adjacent compound.

The pattern of compounds continued across the dividing side street, F138, to the north, with arrangements seen most clearly in Area IV identifiable as the east extremity of a compound which may have fronted directly onto the Fosse Way. Finds, deposits and remains (including a well) relating to the latest phases of use here were concentrated to the west, continuing thence beyond the limit of excavation. Prominent were Structures A and B, two substantial, timber-framed buildings, each of at least two rooms and containing hearths or ovens, which probably originated in Period 4 although their occupation may have continued for much longer. The eastern extremity of the compound was almost devoid of features, although, once again, the final act in the history of Area IV was its use for burial in Period 5. In the incompletely exposed neighbouring compound to the north (part of Area VI) were the remains of two rather similar and probably contemporary timber-framed structures, one with a hearth or oven where a lead ingot had been abandoned (Tomlin, 3.8; PL. XXIIa). As already indicated, the character and disposition of remains in these two compounds suggest that their foci were unseen main-road frontage properties, of which they were subsidiaries. Relatively little more of Area VI was subjected to first-definition cleaning, although portions of the extensive linear boundaries defining further elongated rectilinear compounds were traced. There was no sign of any other major stone-founded building in this zone, which probably featured remains of less substantial structures (including further hearths) and a lower intensity of activity away from the building complexes in Areas VII and VIII, and IX and X further east (FIGS 28 and 29).

The advent of Period 5 marks the beginning of major changes in settlement morphology and in the continuity of arrangements which had evolved from the end of the first century,

culminating in a final abandonment sometime after the fifth century. These events are illustrated most graphically by changes in building style and the appearance of inhumation burials within several compounds.

Timber-framed buildings will always have been present in the settlement and would have dominated its architecture in Period 1. The increasing popularity of mortared stone buildings from the second century, frequently replacing timber predecessors, is a widespread phenomenon in Roman Britain, particularly where building stone sources were readily available, as in this region. By the fourth century stone buildings would have been predominant at Fosse Lane, characterising the settlement. Subsidiary timber structures would nevertheless still have been abundant, their remains often only detectable where compacted cobbled floors and a concentration of associated finds survived. Several groups of such remains were recorded, usually in areas where a focus of stone buildings and associated activity was located. These included Areas IX and X, Areas VII and VIII, Area IV and the adjacent corner of Area VI, among others; the presence of some suggested almost exclusively by finds concentrations and highlighted through the AutoCAD plots. Even where assemblages of finds can be linked with reasonable certainty to the sites of such buildings, it is more difficult to determine their origin or duration of use.

In two instances, for Building I and Building VIII, a succession from mortared stone to timber construction was documented. In both cases the original layout and some components appear to have been reused with modifications, implying direct replacement and continuity, although certain functions may have changed. The re-use of stone from previously demolished structures in the latest phases of these buildings, including architectural elements, is also notable. Dating such changes is more problematic, although coin evidence from both suggests that their reconstructions did not take place before the last quarter of the fourth century. Far more difficult to estimate was their operational life, particularly when there are occasional hints of further modifications. Several other potential building locations are associated with finds (notably coins) which also suggest their continuing use beyond the end of the fourth century (e.g. Structures A and B in Area IV).

The arrangement or fate of boundaries and compounds associated with structures and activity of Period 5 was more difficult to ascertain. Where sampled in Areas III, V or VII, late fourth-century material was present in the upper fills of ditches, although the final date of such filling could be considerably later. The apparent respect for certain compounds by groups of burials suggests that much of the earlier pattern of plots was retained or at least remained visible throughout Period 5. To what extent ownerships or tenancies were maintained into this period is far less clear.

Perhaps an even more radical change in the function and status of this zone is implied by the appearance of inhumation burials. The small cemetery in Area III may have been the earliest group, representing a ?Christian community. Burial perhaps commenced in the final decades of the fourth century, as suggested by the 'chi-rho' cross amulet and an associated radiocarbon determination (GU 5296, Cook and Leach, 3.10), at which time any other use of this compound had presumably ceased. However, another determination (GU 5295) indicates the possibility of this cemetery continuing well into the fifth or sixth centuries. The smaller cemetery in Area II may have links with the latest phase of Building I alongside, although a single radiocarbon determination from a burial within a lead coffin suggests that at least one interment did not occur until the sixth or seventh century (GU 5294). In Area IV some members of a more scattered group of burials had encroached upon the remains of structures here, implying that the latter were now out of use. Once again, a single radiocarbon determination (GU 5293) indicates the possibility of sixth- or seventh-century activity. The handful of burials found elsewhere across the site was mostly of similar character, though not closely dated and possibly isolated, but may indicate the locality of one or two more small cemeteries, broadly contemporary with those recognised.

Overall, these episodes of burial give the impression of almost the final act in the history

of the Fosse Lane settlement. Burial and human habitation were normally well segregated in the Roman world (though rather less so in smaller settlements such as this), and unless this tradition had lapsed in Britain from the fifth century onwards, the appearance of these small cemeteries should mark the cessation of occupation, at least in much of the zone excavated. While it may be unwise to rely too heavily upon such a small radiocarbon sample, there are hints that burial may have begun quite late in the fourth century and continued sporadically until at least the seventh. Both pagan and Christian burial characteristics are evident, in different burial groups, and there are features including stone and lead coffins, nailed coffins, and the deposition of pottery or animal remains in graves which seem to fit more readily into a late Roman (fourth- to early fifth-century) context. Whatever the true picture, there is surely a strong presumption in favour of some level of settlement persisting at Fosse Lane well beyond the conventional end of Roman Britain and quite possibly into the seventh century. More problematic is the nature of any such settlement, given the sparseness of attributable remains and evidence on this site for the abandonment of virtually all of the preceding Romano-British structures and arrangements. Whatever its character the latest episodes of activity at Fosse Lane represent a very real break with what had gone before.

From an early medieval perspective there are further hints of continuity given by a number of pieces of evidence. Firstly, there is the former existence of a manor (Charlton) separate from Shepton at Domesday, the course of whose parish boundary (now part of Shepton Mallet) apparently marks the site of the Roman settlement. Secondly, there are the suspected Anglo-Saxon burials from over Building I (GU–5297). Thirdly, there are possible early links with Glastonbury Abbey and, lastly, there is the tradition of St Aldhelm's association with the neighbouring parish of Doulting, suggesting a possible late and post-Roman community at Fosse Lane. These, and perhaps other historical and documentary clues may merit further investigation. What seems certain is that however post-Roman continuity at Fosse Lane may be defined, the settlement was effectively abandoned well before Domesday and before its successors at Charlton, and in particular at Shepton Mallet, were established.

STATUS AND FUNCTION

At Fosse Lane, the evidence now available from a variety of recent investigations unequivocally identifies the site as one of the nucleated roadside settlements of Roman Britain. Even on the basis of previous discoveries such a hypothesis had already been advanced (Smith 1987, 198); its confirmation now makes this one of the most extensively explored sites of its type in the province. But what motivated its existence, how did it function and who were its inhabitants?

The Fosse Way, built within the first decade of the Claudian Conquest and one of the principal thoroughfares of Roman Britain, was, from the beginning, central to the existence of this site (FIG. 81). One of the original functions of this road may have been to supply military garrisons on or close to its line, although many forts along the Fosse Way were probably abandoned within ten years or so of their foundation. Partly, no doubt, for this reason, details of such establishments in the South West are sparse. The nearest to Fosse Lane were probably at Camerton (Wedlake 1958), *c.* 15 km up the Fosse Way towards Bath, and down the road at Ilchester over 22 km to the south-west, at an important river crossing and major Iron Age centre (Leach 1982 and 1994a). No such site is known in the vicinity of Shepton Mallet although one might have been positioned somewhere between Ilchester and Camerton. One possible location would be at Beacon Hill, *c.* 3 km north of Fosse Lane, where the Fosse Way is crossed by a road from the Charterhouse lead mines (the site of another early fort), but there is no trace of one at that junction. Other possibilities are Cannards Grave or Fosse Lane itself, though at neither have there been any discoveries (structural or artifactual) indicative of a fort site.

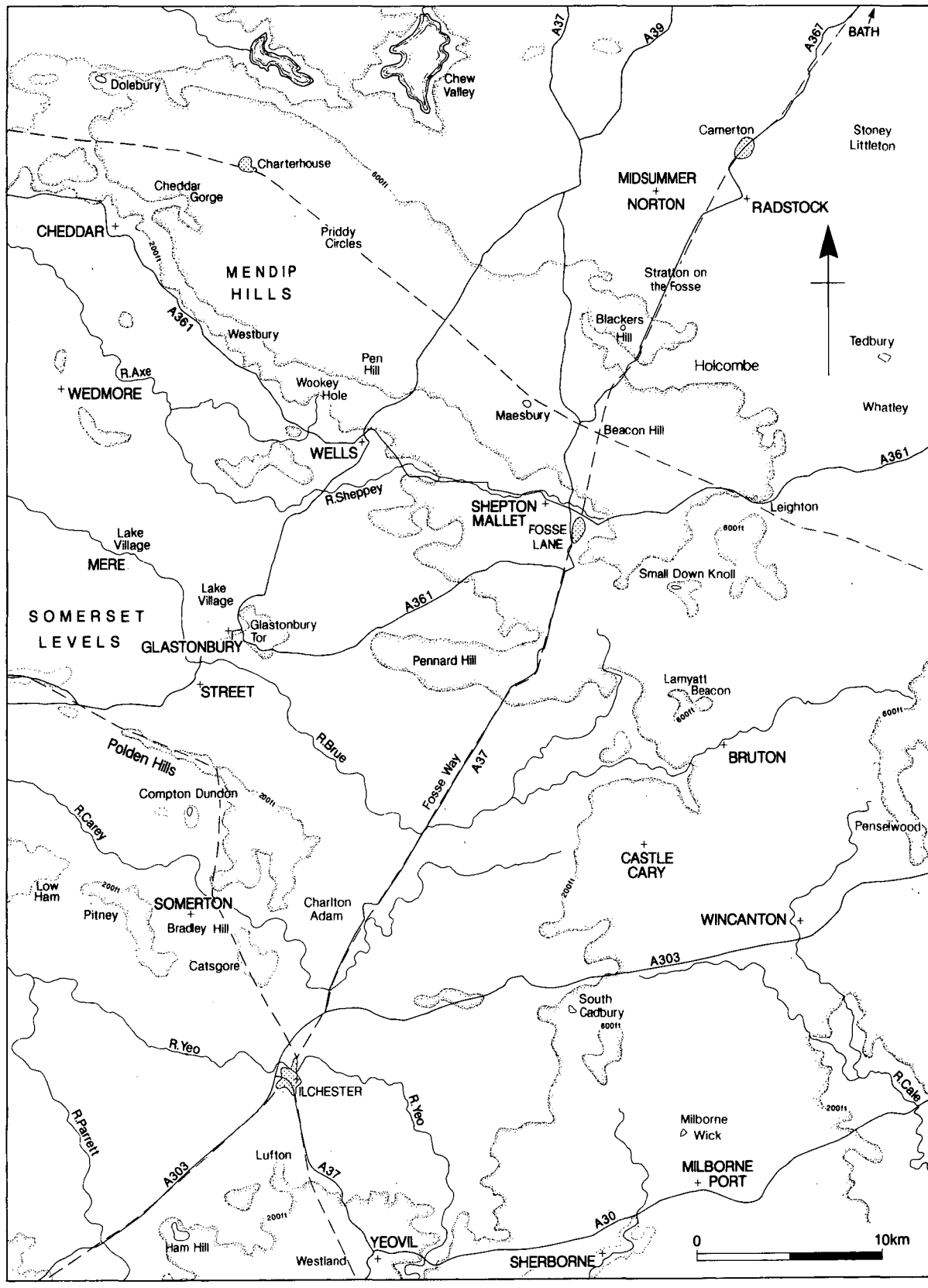


FIG. 81 The Fosse Lane hinterland and principal archaeological sites

Whatever the role of the military authorities in this region following the Conquest, virtually all army garrisons and units had moved on within thirty years, and the origin of the Fosse Lane settlement should therefore almost certainly be sought elsewhere. Throughout its existence the great majority of inhabitants will have been of native origin and thus it is necessary to consider their contribution. By contrast with neighbouring areas to the south (e.g. Glastonbury, South Cadbury or the Ilchester region within Durotrigan territory) relatively little is known of the local pre-Roman Iron Age inhabitants or their settlements. At the time of the Roman Conquest this area lay within the tribal sphere of the Belgae, though perhaps historically linked with the Dobunni (Cunliffe 1982). Two defended hilltop sites — hillforts — lie almost equidistant (5–6 km) from Fosse Lane: Small Down Knoll to the east and Maesbury to the north-west (PL. XXIII). Almost nothing is known of their original character or occupation sequence, although their presence probably indicates a local hierarchical social system. Some evidence of the local population has been revealed nearby in recent excavations at Cannards Grave (Birbeck 1997) and at Field Farm (Leach and Dingwall 1991), in finds made during several evaluations around Fosse Lane (Leach 1990; Leach *et al.* 1990), and in the few sherds of Iron Age pottery and certain brooches recovered during the 1990 excavations. These reflect the presence of at least two prehistoric settlements close to Fosse Lane, although apparently occupied and then disused possibly several centuries earlier than the origin of the latter. On the road frontage at the settlement core, evidence for somewhat later pre-Roman settlement could yet survive, perhaps hinted at by early residual finds from the 1990 excavations. Finally, a likely pre-Roman origin for the general route of the Fosse Way must be considered, as an ancient highway following the Jurassic limestone uplands across England from Yorkshire to the south-west peninsula, which was regularised as a major cross-provincial Roman highway quite soon after the Conquest.

Without the benefit of excavation evidence from localities immediately adjacent to the Fosse Way it is difficult to speculate further on the precise origins or character of the post-Conquest settlement, although the evidence which is available favours a foundation several decades after that event. The discovery of pottery kilns in 1864 at Shepton Mallet itself (FIG. 2) represents another site in the locality with a later first-century origin (Scarth 1865–6); coins, pottery and inhumation burials found at various times in the locality of the Anglo-Bavarian Brewery there suggest that occupation may have continued to at least the fourth century (Davies 1994, 7–9). Pottery manufacture probably accounts for the origin of that site, but its location and development separate from the main settlement could be explained by the availability of a better clay or fuel source some distance from the Fosse Way. Given the likely presence of an existing native population and some former local political significance, contact and communication opportunities represented by the new road were surely a stimulus to early development along its frontage. Trade and commerce will have attracted small-scale manufacturing and the processing or collection of agriculturally based products as well as other raw materials, within a newly emerging social system.

Whatever the precise reasons for a settlement developing at this particular spot, it is possible that patronage by the local land-owning aristocracy also played a part in that development (Millett 1990). It has long been noted that single extra-mural villas sometimes lie just outside small urban settlements, possibly the residences of their patrons (Todd 1970). At Fosse Lane geophysical prospection on the west side of the Fosse Way has identified what appears to be the remains of a winged corridor villa building, a type more familiar as the centre of a rural estate (Leach 1990). Although still within the bounds of the settlement, this establishment could well have been the residence of just such an owner or patron, the descendant of a local member or family of the pre-Roman Iron Age aristocracy. A potentially comparable situation exists at Catsgore near Ilchester, where a large villa is sited within 600 m of a rather smaller roadside settlement, which also had an Iron Age predecessor (Leech 1982a; Ellis 1984).

At its maximum extent the Fosse Lane settlement covered some 30 hectares. Many of its

PL. XXIII Measbury hillfort, aerial view from the north. (P. Leach)

buildings were probably concentrated along both sides of the street frontage, the majority perhaps relatively simple strip houses of the type seen more completely at settlements like Catsgore or Hibaldstow, and located within bounded plots or compounds. A sample of such properties was encountered in an evaluation on the west side of Fosse Lane in 1991 (Leach 1991b). The main area of excavation in 1990 sampled over 2 ha of a back plot area east of the road (PL. XXIV), revealing extensive, though more disparate, development here from the early second century onwards. Clusters of buildings and other structures evolved at separate localities within a fairly regular and, possibly, planned layout of compounds. Most of the stone buildings probably combined domestic with semi-industrial or storage functions and by the fourth century at least were accompanied by a range of smaller timber-framed structures. None of these buildings achieved the level of sophistication seen in certain country houses (villas) or the larger town houses of the time, such as underfloor heating, mosaic pavements, elaborate wall painting, etc., though some, like Building IX, must have been relatively comfortable and well-appointed. On the west side of Fosse Lane the larger building suggested by geophysical survey, and possibly a building destroyed by the railway in 1887, may have been of somewhat higher status. There is no sign of anything which might be classed as a public building, although this cannot be entirely ruled out. A settlement of this size might be expected to contain at least one temple, although no significant clusters of artifacts or structural remains with potential religious significance have yet been identified.

Morphologically, Fosse Lane evolved as a small roadside town along a single main road frontage with side lanes and zones of development to the rear; one of the most characteristic types within Roman Britain and defined as a Group II settlement by Burnham (1987). Apart from the definition and apparent distinction between the road frontage and a system of rear compounds, evidence for functional zoning within the settlement as a whole is less clear. The suggestion of plot layouts being reorganised as a unitary act sometime in the second

PL. XXIV Fosse Lane excavation site July 1990, aerial view looking south-east. (P. Leach)

century would accord with the idea of a single owner with an interest in seeing the site develop. Both the road frontage and land to the rear was available early on, development of the latter perhaps dependent upon links via side streets to the Fosse Way, though at least one street was a primary element on the site. It has been suggested (above) that the complexes revealed in the main excavation area (and beyond through other site evaluations) evolved independently from properties on the road frontage, although perhaps initially dependent. Without the benefit of access to that frontage it was impossible to explore these relationships further, while the status of occupiers, whether tenants or freeholders, is quite unknown. This pattern of particular compounds associated with the focus of a main dwelling and subsidiary structures may well be widespread in settlements of this type, though excavations on a sufficiently large scale are still all too few. The main buildings probably housed single nuclear or extended families with servants or slaves; their style and associated finds assemblages indicating varying levels of prosperity (Hingley 1989). The proportions of coins, domestic and dress metalwork, glass vessels and objects, and to some extent finer ceramics, were significantly higher in the vicinity of stone buildings than elsewhere on the site (see also the discussion in Evans 3.3).

On the evidence available there is good reason to suppose that commerce played a major role in maintaining this settlement, which would then have functioned as a market for its hinterland community. This aspect is reviewed in more detail below, but other factors could have played a role in encouraging its existence and development. Some small towns in Roman Britain were heavily dependent upon a major religious focus for their existence, as at Bath or Nettleton, further up the Fosse Way. Other centres were closely linked with a major industry such as ironworking (Worcester) or pottery production (Water Newton), while in northern Britain the more permanent army garrisons often attracted an adjoining civil settlement. None of these factors seems to apply at Fosse Lane, and there is little sign that the settlement or its locality had any particular administrative status, at least during its earlier

years. There is no evidence, for example, that any kind of defensive circuit was ever provided here, a feature which presumably implied some kind of status for the many enclosed nucleated settlements known within the Province. Like many other smaller roadside sites, Fosse Lane had no strongly defined boundaries, though it could still have fulfilled some official functions. On a major route such as the Fosse Way, posting stations for official travellers and the imperial post would be located at centres such as this, as well as in larger towns, and although as yet there is no evidence here for it, the presence of such a facility would be another stimulant for settlement.

It has been suggested that while most of the major towns of Roman Britain were in decline by the fourth century, if not earlier (Reece 1980), many smaller 'urban' settlements flourished, although the evidence is variable and not always sufficiently well documented (Burnham and Wacher 1990). This conforms with the picture at Fosse Lane, whose prosperity was surely based primarily upon local commerce and its market functions. A study by Hodder (1975) first demonstrated that administrative, social and economic needs for urban centres were often not adequately fulfilled well away from the central *civitas* capitals, stimulating smaller settlements towards the periphery, particularly as the centres declined. Fosse Lane, on the southern margin of its *civitas,* would be well placed to benefit in such circumstances; furthermore, its frontier position close to the neighbouring *civitas* of the Durotriges may also have been a stimulant to the settlement. Related to this was an evident and widespread later Roman regional prosperity, manifested in particular by a *floruit* of settlement in that *civitas.* The neighbouring town of Ilchester, a suspected *civitas* capital of the northern half of the *Civitas Durotrigum,* also flourished in the fourth century, somewhat against the national trend (Leach 1982; 1994a). Whatever its municipal status, Ilchester may always have operated more like a 'small town', but the number and scale of villa estates in its hinterland is testimony to exceptional wealth and prosperity in this part of later Roman Britain, a prosperity in which the settlement at Fosse Lane probably shared.

TRADE AND ECONOMY

The central role of trade and commerce at Fosse Lane was proposed in the previous section. Before the discovery and recognition of this site in 1990, Shepton Mallet was best known as the location of pottery kilns manufacturing oxidised wares in the tradition of an industry based in the Severn Valley. Several kilns were discovered in 1864 during the building of the Anglo-Bavarian Brewery in the town, the best of which was preserved for a time in its basement (Scarth 1865–6). Regrettably, neither this nor many of the finds now survive, although a selection of the pottery is held in the Somerset County Museum at Taunton. From this it is evident that the oxidised wares may only have been produced for a relatively short period towards the end of the first century. Grey wares are also present however, and other finds from this locality suggest that there was still a separate settlement here in the fourth century. At Fosse Lane, less than 2 km to the east, examples of the distinctive 'Severn Valley-type' mortaria and tankards, as well as other forms, are only present in small quantities. A much greater proportion of pottery from the site is grey ware, dominant in all periods, and including some wasters indicative of local production (Evans, 3.3). At the kilns site, in the valley of the River Sheppey, a bed of clay noted at the time of their discovery was presumably a key factor in their location here, along with a good water supply and the likelihood of plentiful fuel for charcoal in a deep, well-wooded valley. There appears now to be strong evidence for the continuity of pottery production in the locality throughout much of the Roman period, supplying a wide range of vessel types in reduced rather than oxidised fabrics for much of the time. Many of these reduced wares evidently found their way to the settlement site, whereas the finer oxidised wares are poorly represented, suggesting that the majority were traded outside the area.

Although the Fosse Lane settlement developed primarily with reference to the main road rather than the location of a pottery manufacturing centre, not only must it have been supplied from the kilns, but it surely acted also as their distribution point; in particular for the oxidised wares. Evidence for this has been cited in a consideration of marketing models for some Romano-British coarse pottery (Hodder 1974) which shows how the more distinctive oxidised wares follow the Fosse Way north and south, the Charterhouse road across Mendip, and possibly waterways to the Bristol Channel coast. The distribution of more commonly produced reduced coarse wares is more difficult to assess, although it is likely that these had a more restricted range. The presence of these potteries, particularly at their inception, may indeed have been another early stimulus to the roadside settlement. Thereafter, the distribution of locally manufactured coarse ware, albeit to more local markets, will have continued to support the economy of Fosse Lane. Some pottery also came into the settlement, notably the products of the Dorset Black-burnished industry around Poole Harbour, the second largest group represented and evidently favoured in certain circumstances over the local coarse ware. Later came finer table and kitchen wares from pottery industries in Oxfordshire and the New Forest, and occasional products from other producers in southern Britain, all doubtless via the Fosse Way. From much further afield came fine red samian tableware from southern, central and eastern Gaul, an industry which ceased before the middle of the third century (Dickinson, 3.3). Even a few amphorae from Spain and the Mediterranean reached the settlement, mainly types of the later first and second centuries, with or without their original contents of wine, fish oil or other preserves (Williams, 3.3).

The Fosse Lane settlement is located upon almost horizontal beds of Lower Lias limestone, used extensively as a building material. Some of this may have been extracted from within the settlement, close to the sites of walls or buildings as in Area II, but an extensive quarry was located at the northern edge of the settlement overlooking the valley of the River Sheppey (FIG. 3) in an area subsequently developed by Persimmon Homes (Hollinrake and Hollinrake 1992). Smaller-scale stone quarrying has also been recorded alongside the Frog Lane brook (Leach 1995). A more renowned building stone available in the locality (later used extensively at Wells Cathedral) was at Doulting (FIG. 2). Some of this limestone was present on the site, but more common was an equivalent Jurassic formation from Downside on the northern fringes of Shepton Mallet. This was used later in the life of the settlement as ashlar and for some architectural details, as well as for the stone coffin in Area II. From much further afield, to the south of Ilchester, came a few pieces of Ham Hill stone, also used for finer dressings in building work, and presumably transported via the Fosse Way. From the other direction came the Bath oolite used for the altar fragment (Roe, 3.6; 3.9).

One of the most distinctive foreign stones found on the settlement was the Old Red Sandstone conglomerate, used primarily for querns and millstones (Roe, 3.7). These probably came from a quarry site on Beacon Hill, over 3 km up the Fosse Way to the north (FIG. 2), some remains of which are still visible (Leach 1993). Interestingly, this material appears to have been utilised for a similar purpose in the later Iron Age, querns from this source having been identified at the Glastonbury Lake Village and South Cadbury Castle. In the Roman period querns of this stone have been found at Ilchester, Catsgore and Camerton, and this suggests another locally based industry which may have been marketing its products through Fosse Lane. A finer Old Red Sandstone, possibly from elsewhere on Mendip, was also used for querns and for whetstones, as was Coal Measure sandstone (Pennant). The latter probably came down the Fosse Way from the Radstock area near Camerton, and was used more extensively for sandstone roof tiles. Despite the local stone source, occasional greensand querns from the Pen Pits quarries near Penselwood on the Somerset/Wiltshire border also found their way to the site (FIG. 81). Contacts even further afield are demonstrated by whetstones made of Kentish Rag, and a palette or touchstone made of volcanic rock from Wales or Cumbria (Roe, 3.4; 3.7).

While many finds testify to relatively widespread links with other areas of Roman Britain,

much closer to hand was the marketing and exchange of local agricultural products, whether as crops and livestock or their secondary products. Since so many of these are perishable, they leave little trace in the archaeological record, but surviving at Fosse Lane were animal bones, a few samples of carbonised crop remains and some of the more durable tools and equipment. The deposit of spelt wheat from Building X may have been grown locally in an outfield belonging to one of the inhabitants of the settlement, though it could equally have been brought in through purchase, exchange or taxation in kind. Emmer wheat, barley and oats, as well as various weeds of cultivation were also recorded in small quantities, and may suggest other crops grown in the locality (Straker, 3.12). Today, livestock farming is still the dominant agricultural regime in this locality, and a similar pattern may have held in Roman times. The animal bone assemblages collected were not very large or always well dated, but suggest overall that although most of the animals were used ultimately for food, they had not been bred on this site and that many were probably exploited first for secondary products (e.g. wool, traction, milk/cheese production, etc.). The assemblage suggests a consumer rather than a producer community, which conforms with the impression given by other characteristics of the settlement. Apart from supplying the local community, animals may have been brought to the site for purposes of collection or redistribution, potentially utilising some of the compounds revealed in excavation and survey. Sheep and goats were most numerous, although cattle would have supplied a higher proportion of meat, and both were evidently bred from native stock, showing little sign of improvement from imported breeds. A few pigs were kept along with chickens, and cats, dogs and horses or ponies are also recorded (Pinter-Bellows, 3.11).

Among various tools and pieces of equipment, related activities are hinted at by ox goads and shoes, horse harness fittings, shears, and a pruning hook. The querns and millstone demonstrate processing of grain for flour, the spindlewhorls weaving, and there were several butchers' cleavers, although reliable evidence for such activities as tanning, leather working or cloth manufacture was not found. Tools for woodworking, stonemasonry and metalworking have already been mentioned and many of these implements were probably made in the settlement. Slags, furnace and other ironworking debris become most common and widespread in the later periods of occupation, particularly in the southern compounds, although the quantities are not great and none can be confidently associated with a proliferation of small hearths and some larger ovens which appear in several buildings of Periods 4 and 5. Some of these might have been utilised for smithing or smelting other metals, but this could not be confirmed by analysis of waste materials (Starley, 3.8). Such hearths and ovens probably had a variety of functions, many relating to domestic or other small-scale industrial processing of food, plant or animal products which leave few identifiable residual traces. Small-scale ironworking and the production of implements was probably relatively common in many small 'urban' settlements, as here, supplying not only the needs of its own community, but also those of a rural hinterland.

The Mendip Hills may have been a source for the iron ore smelted on the site, but of greater renown was their lead, mined throughout the Roman period at Charterhouse, where silver was also extracted (FIG. 81). The presence of a so far unique type of late Roman lead ingot, found near a hearth on the site (Tomlin, 3.8), as well as a few pieces of galena (lead ore), might signify some working of the raw material at Fosse Lane. Lead was used here as solder, roof flashing and for occasional artifacts such as weights, pipes or coffins, but was also utilised for the manufacture of pewter vessels. Evidence for this was found at Camerton (Wedlake 1958), and the presence of a pewter plate as well as the lead ingot could signify another production site at Fosse Lane. Many small items of dress and adornment, as well as implements, were made of copper alloy, frequently bronze, and some could have been manufactured on site, although there was no conclusive evidence for this. Some items, notably brooches, certainly came from further afield, in a few instances from as far as the Isles of Scilly, but most went out of fashion and production after the second century

(Mackreth, 3.4). One other relatively exotic import was glass, used for tableware and small storage vessels; some of the earliest pieces coming from Italy or Gaul, and later from the Rhineland or production sites elsewhere in Britain. Glass was also used for glazing windows, present in Buildings I, VII and IX at least, as fragments seem to testify. None of this glass was of local manufacture, although the broken waste (cullet) may have been made into beads or pendants here (Price and Cottam, 3.3; 3.4).

Finally, the presence of relatively abundant coinage from Fosse Lane signifies the operation of a market economy, as well as participation in the imperial taxation system. Exchange and barter must always have played a major role in this process, particularly during periods when the coin supply was inadequate or smaller denominations were hardly available. This appears to have been the case for most of the first two centuries of Roman administration, as on the majority of Romano-British sites. Coins are rare before the later third century following inflation and their devaluation throughout the Empire. Thereafter, they may have figured more prominently as low denominations in day to day transactions, as the volume of coin loss from this period and through much of the fourth century testifies. Over 1400 coins are catalogued in this report, the great majority issued in these later periods, and many thousands more were doubtless in circulation here at this time (Esmonde Cleary, 3.5). Coinage issued by the state may have had more to do with taxation and army pay, than facilitating commerce in the Empire, although it undoubtedly did so. However, even taxation seems to have been increasingly exacted in kind rather than money as time went on; a process from which it has been suggested that smaller settlements like Fosse Lane might have benefited (Millett 1990, 149).

REGIONAL CONTEXT

Fosse Lane and its hinterland, particularly by the third and fourth centuries, lay within one of the wealthier and more populous regions of Roman Britain (Leech 1977). Ilchester and Bath were notable foci, to judge by the concentrations of villa estates in their hinterlands, and the character of the settlements themselves. Within the province, however, these two centres were situated in different cantons or *civitates*. Ilchester may have been a sub-capital of the Durotriges, governed otherwise from Dorchester, whereas Bath and, probably, Fosse Lane lay within the *civitas* of the Belgae whose centre was at Winchester. The *civitas* territories of Roman Britain were based broadly upon pre-existing tribal divisions, though north Somerset and Mendip seem originally to have had closer links with the Dobunni centred on the lower Severn Valley (FIG. 1). Whatever their Romano-British cantonal allegiances, people living along the southern flanks of Mendip were effectively on what was probably a pre-Roman tribal frontier of long standing.

Geographically, it might be supposed that an affiliation with people to the south would make more sense, however there are archaeological reasons to suppose that Fosse Lane and its locality had closer links to the north. Pottery styles certainly suggest this — early Roman ceramic styles here have more in common with material at Camerton or the Chew Valley than further south, where Dorset Black-burnished industry products become dominant in the first century A.D. at sites like Ilchester or South Cadbury, even before the Conquest, but appear later and are never so dominant on sites from Fosse Lane northwards. Not enough detail is yet available of the local Iron Age cultural assemblages, but ceramic styles and coinage north of the Brue Valley indicate closer links with the Dobunni (Cunliffe 1982). The Glastonbury and Mere Iron Age settlements have been seen as occupying a similar frontier position, and probably had strong links with the Mendip region, if not Maesbury (D. Clarke 1972), although this emphasis may have been overstated (Coles and Coles 1986). In the Romano-British period the very location of a settlement at Fosse Lane could signify the proximity of a *civitas* boundary (see Status and Function, above) separating it from the Durotrigan *civitas* to the south.

Relatively little is known of the settlement's local context. Within a 5 km radius, only the Shepton Mallet pottery kilns and an associated settlement are clearly identified. Along the Fosse Way, finds from Prestleigh to the south and Boulters Lane to the north may represent the sites of other farmsteads close to the road, and there may have been some permanent habitation at the stone quarries on Beacon Hill (FIG. 2). One reason for the paucity of known sites may be a predominance of permanent pasture in the district, which restricts opportunities for chance discoveries through arable cultivation, fieldwalking or aerial photography. Even at Fosse Lane the presence of a settlement was barely apparent before its disturbance by modern development. In these circumstances there is undoubted potential for discovering a greater density of Romano-British settlement in the locality, an area where little systematic fieldwork has yet been undertaken. There are no known wealthy villa estates very close by, although a little further away are known or suspected sites at Holcombe, Whatley, Chesterblade, Lamyatt, Ditcheat, and possibly at Wells. On Lamyatt Beacon, *c.* 10 km to the south-east, the Romano-Celtic temple was doubtless patronised from time to time by supplicants from Fosse Lane, while the risings at Wells could also have been the site of another temple. Lamyatt Beacon almost certainly lay within Durotrigan territory, its location perhaps another indicator of the proximity of both the pre-Roman tribal and later *civitas* territorial boundary (Leech 1982b; 1986).

Whatever its political affinities or the character and extent of its hinterland, Fosse Lane fits well within the pattern of what was to become the extensively Romanized landscape of southern Britain, and was typical of a widely recognised settlement type (Burnham 1987; Smith 1987). Relative to the *civitas* capitals this was hardly a town, though with some urban characteristics, yet it was rather more than a village. Its closest neighbour, Camerton, some 15 km north and also aligned alongside the Fosse Way, seems to have been a very similar settlement in scale and character (Wedlake 1958), and there were doubtless numerous links between the two sites. Another small town at Charterhouse-on-Mendip, along the Roman road to the west, was a rather different type of settlement, although very little is known of its chronology or detailed character (Burnham and Wacher 1990, 208–11). Here, the main focus was the lead mining industry, which began as a military (imperial) enterprise, but almost certainly continued production throughout the Roman period, later perhaps under civilian control (Elkington 1976), and whose products were reaching Fosse Lane at least in the fourth century. Over 22 km to the south was the town of Ilchester, suspected as a *civitas* sub-capital and administrative centre of the neighbouring region. Although of no great size, it lay at the centre of an exceptional concentration of wealthy villa estates, and recent excavation campaigns have provided a good range of comparative data, particularly from the suburbs (Leach 1982; 1994a). Close to Ilchester was the roadside village of Catsgore, where, thanks to further extensive excavations and very similar physical and geological circumstances, some closely comparable data with that recorded at Fosse Lane is also available (Leech 1982a; Ellis 1984).

Much of the evidence for early post-Roman continuity of settlement is circumstantial and difficult to date. As yet there are no artifacts that may be reliably dated later than *c.* A.D. 400, a familiar problem in Roman Britain. Structural and stratigraphic evidence hints more strongly at occupation continuing well beyond that date, and is supported by the small but significant sample of radiocarbon determinations from burials on the site. The archaeology of this often elusive period between Roman decline and Anglo-Saxon take-over is relatively well served in Somerset, thanks largely to pioneering excavations and research by Alcock (1995) and Rahtz, among others. The recognition of distinctive imported pottery types, and of cemeteries attributable to this period within the region, has been central to such research (Rahtz 1991). Pottery of the types defined by Thomas (1959) and reaching Britain mainly in the late fifth and sixth centuries has not yet been identified at Fosse Lane. If those few radiocarbon determinations obtained from different groups of burials are a reliable guide, however, these would be contemporary both with sites where imported pottery occurs in

the region (e.g. South Cadbury, Glastonbury Tor and Cadbury Congresbury) and the use of other cemeteries (e.g. Cannington and Henley Wood). The character of burial at Fosse Lane is perhaps closer to other conventionally dated late Roman cemeteries, whatever the religious affiliations of their interments, than say Henley Wood (Watts and Leach 1996), but this need be no more than a reflection of local circumstances. The implication, surely, is for some form of settlement continuity at Fosse Lane possibly into the seventh century as a community inheriting directly from its Romano-British forebears, albeit in much reduced circumstances and within the context of a new social and political structure.

REVIEW

Fosse Lane is now placed firmly on the map of Roman Britain, one of a class of widely distributed, nucleated roadside settlements. Sometimes referred to as 'small towns', though normally lacking such features as defences, public buildings, or any great development of street systems, they represent an intermediate stage between truly urban and rural society; primarily as service centres for the latter. Though far from comprehensive, either for this zone or the settlement as a whole, the sample investigated in 1990 has given one of the most extensive views of the arrangements, character and chronology of this type of settlement in Britain. The picture of developments and activity to the rear of a main-road frontage is particularly illuminating, although it was unfortunate that this could not be complemented by an adequate sample of that frontage. To some extent however, the results achieved in 1990 have since been matched by a programme of site evaluations, which together give a more rounded picture of the whole settlement, and in both instances point the way for future research.

Without modern development along Fosse Lane in 1990 and subsequently, our appreciation of the remains there or their significance would be minimal. Such a real gain in knowledge has, however, been bought at a price. The failure to obtain an adequate archaeological evaluation in plenty of time of areas to be affected by the first phases of development was costly, both to the archaeology and to its developers. In the circumstances, the latter rose well to the occasion though with no legal compulsion to do so, but with more foreknowledge and opportunity to find alternative solutions, the archaeological and perhaps financial cost could have been much reduced. Despite the money and resources subsequently expended, a great deal has been lost with little record or opportunity to assess its significance. While it has been possible to seal and preserve parts of the 1990 development area within and around the excavation site, levelling and foundation works still destroyed much of what is now occupied by a warehouse building (FIG. 4). North of the former railway embankment the provision of roads and services for the Mendip Business Park and the realignment of Fosse Lane has destroyed or damaged further portions of the settlement (FIG. 3), although subsequent evaluations undertaken here now permit a more controlled response in the face of continuing development (Leach *et al.* 1990; Leach 1992a; Leach 1994b; Esmonde Cleary 1998). At the northern limit of settlement, opportunities for an adequate pre-development assessment were non-existent and most of this area has now been damaged or destroyed by housing with only minimal recording (Hollinrake and Hollinrake 1992). The eastern and southern margins of the settlement were located and evaluated by a combination of geophysical prospection and trial trenching (Leach 1991c; 1992b), where otherwise well-preserved remains are only locally disturbed or destroyed, but future development may still have some impact. West of the Fosse Way, central parts of the settlement had already suffered from the nineteenth-century convergence of railway lines, some quarrying, and more recent housing development. Evaluation north and south of that area, again by geophysical survey and trial trenching, has revealed stone building remains preserved on the main road frontage to the north (Leach 1991b), and to the south what is

potentially at least one very large stone building (see Status and Function, above). Towards Cannards Grave, evaluations and further, more detailed, excavations in 1995 revealed the southern perimeter of Romano-British settlement and part of an earlier Iron Age settlement (Leach 1990; Birbeck 1997). To the north-west, the very first site evaluation in the area, within the medieval settlement at Charlton, may also have located part of another late cemetery, peripheral to the Romano-British settlement (Ellis 1987; FIG. 3).

With the benefit of all the data so far gathered, and a context of continuing development which encroaches further upon what still survives of the settlement, the remaining open areas within its bounds are now scheduled under the provisions of the Ancient Monuments and Archaeological Areas Act of 1979 (Somerset SAM no. 22803). Further excavation and discoveries continue, mainly through development pressure, but, with more effective planning control and proactive strategies for dealing with archaeological remains, there is now a much better framework within which to pursue more informed and targeted research as opportunities arise. In view of this and the results obtained so far it is appropriate to conclude with a brief review of potential objectives for future research, and some of the recording and analytical approaches which have already been employed and may yet be applied. This is not the vehicle for detailed proposals or research designs, but a research agenda which sets out priorities and objectives is essential, some of which can usefully be outlined here.

ORIGINS AND EARLY DEVELOPMENT

The Fosse Way and the prehistoric land use and settlement background are key factors in advancing our understanding of the Roman settlement and its inception, neither of which could be directly researched in 1990. Furthermore, there are hints both in the chronology and character of the site that its origin owes much to deliberate encouragement and perhaps even some planning, in a climate of expansion during the early decades of the newly settled province. An opportunity to investigate the contribution of such factors at the core of the Roman settlement would be a high priority, but a site towards the periphery could be almost as valuable. The Iron Age settlement remains just south of Cannards Grave are cut through by the Fosse Way, although recent excavation suggests that they were mainly of the Middle Iron Age and thus vacated well before the Roman Conquest and construction of the road (Birbeck 1997). There remains, however, the potential of a major villa-style building located by geophysical prospection on the west side of the road (FIG. 3). It has been suggested that this site had a major role in the Roman settlement's subsequent development, and potentially its origin (see Status and Function, above), and could thus be a key locality for understanding the Fosse Lane site as a whole. Protected now as a scheduled Ancient Monument, any future investigations here could only be undertaken within the context of a detailed and well-resourced research programme.

CHRONOLOGY AND CHARACTER

Much was gained from an opportunity to expose and record so large a sample of a settlement of this nature in 1990, even if this was not achieved to the level intended in the original research design (Section 1.3). Subsequently, however, the value of this record was enhanced through analysis of the character and spatial distribution of finds and structural data employing AutoCAD with GIS (Biswell *et al.* 1995). A further deficiency, though with certain exceptions, was the scope of the complementary sampling programme of detailed stratigraphic excavation. The restricted scale of this has limited the range and reliability of chronological interpretations of the site and its development, although the framework

created is generally valid and should be applicable to new discoveries and research. An urgent requirement for future work is more intensive sampling of good stratigraphic sequences, linked to extensive area exposure and recording in zones with more limited stratigraphy or where remains are sparse and evidence for activity less apparent. Of particular value would be transects of one or more building plots, extending from the main road frontage back into the rear zone of settlement. Opportunities to expose large areas, if not on quite the scale required in 1990, will provide comparative first-definition exposures, and enable a more targeted approach to data collection. Specifically, the recovery of material at that level from collection grids of a pre-ordained size, rather than by individual EDM plot; a better integration between site recording systems and the requirements of programmes for spatial as well as material analysis; and refinements including the employment of larger format cameras to procedures for vertical photographic coverage; are some of the improvements in technique which might be employed (see also Review of methodology in Evans, 3.3). Continuing development of the Mendip Business Park is already presenting new opportunities to pursue some of these objectives, including a large-scale excavation in 1996 (Leach and Ellis forthcoming).

POPULATION AND PURSUITS

The former inhabitants may be studied as much by their artifacts as by their remains. The daily lives and pursuits of the populace, whether it be their structures and habitations, or the items of everyday life, dress, ornaments, food, utensils or tools of trade, have been greatly illuminated by the wealth of artifacts, and some ecofacts, already recovered and recorded. Some of the benefits of the collection policy adopted in 1990 are already apparent in the analysis and interpretations of many classes of finds, enhanced by the application of GIS analysis. To gain further from this methodology it is clear that additional refinements in collection and recording will need to be applied (above). As a complement to further intensive work within the core area of the settlement, some attention should also be paid to the peripheries. Not only may these have been locations for specific activities (e.g. tanning, potting, quarrying, etc.), they could also hold clues to the relationship between the urbanised core and its rural environs, the fields, pastures and agricultural economy which surrounded and doubtless supported the settlement to a large degree. Here too should be found more remains of the inhabitants, whose latest representatives are so far almost the only burials found. Their appearance in the more central areas of the settlement suggests both functional changes and eventual decline; on the face of it a relatively short-lived phase involving a much reduced population base. On the other hand the implications of an admittedly small sample of radiocarbon determinations may be for some continuity of occupation (or at least burial) into the sixth or seventh centuries; a pattern which has been particularly well demonstrated elsewhere in Somerset.

A WIDER CONTEXT

Some of the potential for further research within the bounds or immediate environs of the Fosse Lane settlement has been outlined, but what of its wider context? A high priority should be to systematically explore and document its hinterland, by such techniques as aerial photography, geophysical prospection, fieldwalking, map and documentary research, and excavation sampling where appropriate. We are rather better informed of the position and context of this settlement in Roman Britain as a whole, than of its specific place in the local political, social or economic hierarchy. Intensive field studies elsewhere have demonstrated just how fully the Romano-British landscape was utilised in the more favoured

areas of the province (Gaffney and Tingle 1989; Hayfield 1987). Fosse Lane was part of that background, not just an isolated outpost astride a main highway. Equally important is the need for a greater understanding of the pre-Roman background, surely, that from which ultimately this site sprang. Of no less interest is the fate of this settlement in the immediate post-Roman period, one of especial fascination in this region. At Fosse Lane there are hints, in structures and burials, that some occupation was continuing through to at least the seventh century, a circumstance which may have applied far more widely on late Roman settlements than is often appreciated, reoccupation of hillforts was by no means the only option in this period!

In many respects Fosse Lane in its mature phase of development is a type site, representative of a class of roadside settlement widely recognised in Roman Britain. Inevitably, it possessed its own unique character and place in that society, in its particular regional context, but need not have stood out or been especially renowned. This typicality is perhaps one of its strengths, since for the purposes of archaeological research it assumes rather greater importance on account of the scale of investigations undertaken on and around its site over several years. Paradoxically, its very discovery and recognition have been synonymous with widespread disturbance and destruction, although measures are now in place to restrict this in future and preserve what is left. The scale of archaeological exploration so far, relative to many other comparable sites, and the application of a variety of advanced recording and analytical techniques, give the remains and their potential for further research an enhanced status. Despite the emphasis now upon preservation, opportunities for further research will certainly arise out of necessity, and conceivably with the motives of academic inquiry and public presentation. Whatever the circumstances, such opportunities must employ targeted research designs, to complement and exploit some of the questions raised by these excavations and their publication in this volume.

Above all perhaps, Fosse Lane has an importance to the present-day community of Shepton Mallet at the beginning of the twenty-first century. Both places probably developed in similar ways, were inhabited by similar people with similar anxieties and aspirations, sharing an environment which essentially has changed little until the twentieth century. Shepton Mallet, even today, is still a small country town, serving the needs of its inhabitants and locality in ways not unlike those of its predecessor. Surprisingly few generations separate us from the people of Roman Britain; we are their inheritors, and for some of us their direct descendants.

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